E v o l D i r

January 1, 2019

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

Foreword

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.

Instructions for the EvolDir are listed at the end of this message.

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Conferences

Barcelona EvolutionChoanoflagellates May24-27

"We are happy to invite you to take part in the 7th International Choanoflagellates & Friends meeting https://-/choanomeeting2019.wordpress.com/, held from May 24th to 27th 2019 in Barcelona (Spain) and organized by the Multicellgenome Lab (MCG) (http://-multicellgenome.com/) at the Institute of Evolutionary Biology (CSIC-UPF) (https://www.ibe.upf-csic.es/).

This meeting is organized every two years and always attracted researchers working on choanoflagellates and other close unicellular relatives of animals, creating a friendly and creative growing community. The goal of the meeting will be to build the choanoflagellate research community by fostering collaborations, disseminating new techniques and resources, and providing a forum for presenting cutting-edge research on choanoflagellate biology. Because the meeting will be organized by the MCG lab, this will also be a great opportunity to expand the focus of the meeting to other unicellular holozoans.

Early registration is now open until February 15th. We invite registrations from researchers at every stage of their careers, with interests in choanoflagellates, filastereans, ichthyosporeans and other unicellular holozoans. We will use the registration information to request sponsorship and arrange the meeting programme. In previous years, the funding obtained from sponsorship has led to relatively low registration fees, and we expect the registration fee to be symbolic. More details will come soon, so stay tuned!±

N^{2}ria Ros i Rocher PhD student Multicellgenome Lab www.multicellgenome.com Phone: +34 93 230 95 00 (ext: 6037)

Institute of Evolutionary Biology CSIC - Universitat Pompeu Fabra Passeig Martim de la Barceloneta 37-49 08003 - Barcelona

N^{2}ria Ros <nuria.ros@ibe.upf-csic.es>

CarletonU InfectiousDiseaseEvolutionaryGenetics Apr4-5

We'll be hosting a conference on the Evolutionary Genetics of Infectious Disease at Carleton University in Ottawa, Canada, on April 4-5 2019, made possible with

support from the Fields Institute. We have an excellent set of invited speakers, and we will select ˜8 additional talks from submitted abstracts. Please find more information, and registration, at:

http://www.fields.utoronto.ca/activities/18-19/-evolutionary-genetics Our invited speakers are:

Lindi Wahl (Western University)

Eduardo Taboada (Public Health Agency of Canada)

Nicolas Rodrigue (Carleton University)

Art Poon (Western University)

Susanne Pfeifer (Arizona State University)

Nicole Mideo (University of Toronto)

Jeffrey Jensen (Arizona State University)

Aleeza Gerstein (University of Manitoba)

Hope to see you there!

Alex Wong

Associate Professor Department of Biology Carleton University

carleton.ca/eme twitter.com/wong_lab

AlexWong@cunet.carleton.ca

Hull UK FishEnvironmentalDNA Jul15-19

Conference announcement:

Advances in eDNA-based Approaches to Fish Ecology and Management (Annual Symposium of the Fisheries Society of the British Isles; FSBI2019): Place: University of Hull, UK, Time: 15-19 July 2019

https://www.fsbi.org.uk/annual-symposia/symposium-2019/ Confirmed Keynote speakers: Chris Jerde (USA); Alice Valentini (France); Kristy Deiner (Switzerland); Michael Traugott (Austria); Didier Pont (France); Dianne Gleeson (Australia) Scientific Advisory Committee: Bernd Hänfling (UK, Convenor); Lori Lawson-Handley (UK), Stefano Mariani (UK); Kerry Walsh (UK); Neil Gemmell (NZ); Jens Carlsson (IRE); Florian Leese (GER); Ian Winfield (UK), Sarah Helyar (UK)

Deadline for Abstract Submission: 11th January 2019 https://www.fsbi.org.uk/abstract-submission/ Over the last ten years the use of environmental DNA (eDNA) has become one of the most promising new approaches to obtain biodiversity data in aquatic environments, especially for fish. The technologies which underpin eDNA research evolve constantly, leading to a rapidly increasing quality and quantity of data. This has opened up exciting new opportunities for applied and fundamental research alike, but also challenges in terms of data analysis and interpretation. eDNA methods are rapidly penetrating biomonitoring for management purposes and increasing our understanding of ecological interactions within communities and of the drivers for biodiversity decline. Sessions on eDNA have become a regular feature of fisheries and ecological conferences but to date there has been no dedicated conference for eDNA research.

This symposium will, for the first time, bring together the international community of fish eDNA research and provide an overview of the field. We are adopting a broad definition of eDNA to include DNA which has not been sampled directly from the targeted organism, including DNA extracted from water and sediment as well as from faecal and gut samples. Topics will range from the development of methods to addressing fundamental ecological questions, as well as applied aspects of biodiversity monitoring and include:

- Fisheries and conservation issues in freshwater and marine fish communities

- Monitoring and predicting the spread and impact of invasive fish

- Molecular food webs and trophic interactions

- Fish pathogen and parasite detection

- The dynamics and ecology of fish eDNA in the environment

- Methodological advances, incl. metagenomics, population level analysis, new technologies

- eDNA based monitoring and translation into policies

Mariani Stefano <S.Mariani@salford.ac.uk>

Hungary EvolutionSexRoles Jan10-13

FINAL CALL

NEW DIRECTIONS IN EVOLUTIONARY RESEARCH OF SEX ROLES - II. ELVONAL Conference, 10-13 January 2019, DEBRECEN, HUNGARY

Registration closes 10 December 2018

The Conference will take place between 10th and 13th January 2019 in Debrecen (Hungary). The Conference will start on Thursday 10 January with a slide-show and a Hungarian traditional dinner, will include two days of scientific talks by top scientists, post-docs and students (Friday and Saturday), and an optional bird watching trip on Sunday 13 January to Hortobagy National Park, a UNESCO World Heritage Site, with a social event.

The conference will focus on behavioural aspects of sex role evolution: courtship, display behaviour, competition for mates, pair bonding and parenting. Speakers will cover a range of organisms and will use a variety of research tools and methodologies. We invited elite scientists to discuss recent advences in evolutionary studies of sex roles. Invited speakers include Dr Luc Bussiere (University of St Andrews), Dr Claudia Fichtel (German Primate Center, Gottingen), Dr Elisabet Forsgren (Norwegian Institute for Nature Research, Trondheim), Dr Laszlo Garamszegi (Donana Biological Station, Seville), Prof Oliver Kruger (Bielefeld University), Dr Natalia Pinchuk (Belarus Academy of Sciences, Minsk), Dr Alejandro Serrano-Meneses (American University, Puebla) and Dr Liu Yang (Sun Yat-sen University, Guangzhou).

The conference will also offer opportunities to young scientists and students to present their work, and discuss potential projects with senior scientists. The Conference will be hosted by the Debrecen Academy of Sciences.

Registration is free. Registration deadline: 10th December 2018. Contact: elvonalconference@gmail.com

We look forward seeing you in Debrecen.

Karola Szeman, Fanni Takacs & Tamas Szekely

Tamás Szekely, Professor of Biodiversity Royal Society Wolfson Research Merit Award Holder Dept of Biology and Biochemistry, University of Bath, Bath BA2 7AY, UK 01225 383676 (phone), 01225 386779 (fax), T.Szekely@bath.ac.uk (email) http://www.bath.ac.uk/-bio-sci/contacts/academics/tamas_szekely/ ResearcherID I-7089-2016, ORCID 0000-0003-2093-0056 Founder, Maio Biodiversity Foundation, Republic of Cape Verde http://www.maioconservation.org T.Szekely@bath.ac.uk

LaReunion IslandBiology Jul8-13

La Réunion.IslandBiology2019.July8-13

SAVE THE DATE for IB2019

After Hawaii and the Azores, we are pleased to announce that the third Island Biology conference will be held in July 2019 (8 - 13) on La Réunion in the heart of the Malagasy Region biodiversity hotspot, in the Southern hemisphere.

At the crossroad of three major biogeographical regions of the World (Afrotropical, Indomalayan, Australasian), the Indian Ocean hosts islands of highly contrasting climate, from Âtropical down to Antarctic conditions, and of highly contrasting size, from immense islands facing environmental challenges of continental scale down to small islands paving the way for restoration and rewilding projects. The conference will gather scientists and practitioners from all over the world working on islands with particular emphasis on ecology, evolution, conservation and biogeography of terrestrial and marine biotas. Confirmed plenary speakers include Steven Goodman (Field Museum), Christophe Guinet (CNRS), Lori Lach (James Cook University), Tim Blackburn (University College London), Vojtech Novotny (Czech Academy of Science) and Susanne Renner (University of Munich).

The Island Biology 2019 conference will be entitled “Connecting small and large island hotspots for biodiversity research and conservation”, more information can be found on our website: https://ib2019.sciencesconf.org - Call for abstracts deadline: 14 February 2019.

- Online early bird registration is open and will close 31 January 2019.

Best wishes

Chairs: Dr. Claudine Ah-Peng and Pr. Dominique Strasberg, University of La Réunion

Contact: ib2019@univ-reunion.fr

AH PENG CLAUDINE <claudine.ahpeng@univ-reunion.fr>

Marseilles EvolutionaryBiology Sep24-27

Dear all the early dead line for the 23rd evolutionary biology meeting at Marseilles September : 24-27 2019 is January 31 2019 see http://aeeb.fr/evolutionary-biology-meeting-2/ the programs of the 22 previous meetings are available < http://aeeb.fr/evolutionary-biology-meeting-2/ >

see also https://twitter.com/pontarotti and

https://www.facebook.com/groups/203530083353767/ all the best

Pierre

PONTAROTTI Pierre <pierre.pontarotti@univ-amu.fr>

Montpellier AgriculturalEvolution Jun3-7

Dear colleagues,

We are pleased to announce the Third Jack Harlan International Symposium, Dedicated to the Origins of Agriculture and the Domestication, Evolution, and Utilization of Genetic Resources, in Montpellier (France), June 3-7, 2019 - www.harlan3symposium.org Focusing on classical thematics of the symposium, i.e. the history of agriculture and domestication and the evolution, conservation and use of genetic resources, this third Edition will highlight the major advances in knowledge and draw attention to emerging issues. It will maintain the originality of the Harlan symposium series by emphasizing the multidisciplinary aspects of the science (from archeology to genetics and agroecology), the variety of biological models (plants, animals, microorganisms) and the broad temporal scale (from the origin of agriculture to the current problems of use of agricultural biodiversity).

Sessions will cover: History of agriculture Diversity and adaptation (session 2) Mobilizing genetic resources(session 3) Agroecosystem services and functioning (session 4)

All details are available on our website : www.harlan3symposium.org We are counting on your presence and your help in spreading this announcement,

On behalf of the organizing committee,

Anne-Céline THUILLET, PhD IRD, Montpellier (France)

anne-celine.thuillet@ird.fr

Netherlands NLSEB Apr16

Dear colleague,

We would like to invite you to the second conference of the Netherlands Society for Evolutionary Biology (NLSEB) on Tuesday 16 April 2019 in Ede, The Netherlands.

Registration and call for abstracts are now open: http://-/nlseb.nl/meetings/ With this yearly NLSEB conference, we aim to bring together scientists from all disciplines working on evolutionary questions, and build a broad community of evolutionary biologists based in the Netherlands. Therefore, the conference offers a broad overview of the topics and questions within evolutionary biology, presented in three exciting plenary talks.

- Geert Kops (Hubrecht Institute-KNAW) “Weird divisions: Evolutionary dynamics of eukaryotic kinetochores” - Frietson Galis (Naturalis Biodiversity Center) “Developmental constraints and body plan evolution” - René Geurts (Wageningen University) “Evolution of nitrogen-fixing symbiosis: why have so many plant species lost it?”

You can also contribute to the conference! Talks and posters are organised entirely bottom-up: we want to know what YOU are working on, without any subject limitation. We will select at least 16 oral contributions (15 min. including discussion) and there will be ample room and time for posters.

Registration of abstracts for talks and posters (max. 1500 characters) is open until 31 January 2019.

The NLSEB 2019 Conference organising committee Eveline Verhulst | Martijn Egas | Katja Peijnenburg | Marian Bemer | Bertus Beaumont | Sijmen Schoustra

e-mail: meeting@nlseb.nl

Paris EvolutionInsects Mar12-14

Dear colleagues and friends;

We are pleased to announce the conference "Insects: friends,foes, models", organized by the French Academy of Sciences from March 12 to 14 in Paris. We designed this conference, which will be free of charge (with mandatory registration here: http://www.academie-sciences.fr/en/Colloquia-Conferences-and-Debates/-insects-friends-foes-models.html) for a wide audience, both students, teachers and researchers, interested in all aspects of modern biology, with the aim of promoting discussions. We are very happy that the French Academy of Sciences has chosen the theme of insects for the first of its Grand Conferences, which will take place in the brand new auditorium of the Institut de France. We are counting on your presence and your help in spreading this announcement to show to our colleagues the vitality of the insect community.

The organizers, Pascale Cossart, Jules Hoffmann

The co-organizers, Philippe Grandcolas, Jean-Luc Imler

Nelson Martins <nelson.e.v.martins@gmail.com>

Phoenix AZ UngulateEvolution Apr13-15

2019Association for Zoos and Aquariums (AZA)UngulateMeeting

The Association for Zoos and Aquariums (AZA) is holding its annual Mid-Year Meeting from April 13th -18th in Phoenix, Arizona (midyear.aza.org/2019). As part of this larger meeting, the AZA's Ungulate Taxon Advisory Groups (TAGs) host a 3-day working meeting. During these open sessions, the TAGs review ongoing ungulate management and conservation initiatives, develop new projects to enhance ungulate sustainability, and encourage innovation in the field of ungulate management, both in zoos and in the wild.

The AZAUngulateTAG conference committee is now accepting abstract submissions for the2019meeting on the topics of zoo and field-based scientific research as it pertains to ungulate captive management. The TAG is looking for submissions for theUngulateReports from the Field Session, andUngulate Scientific Management Session- these sessions will be held on Saturday, April 13 - Monday, April 15,2019. The full schedule will be determined as the sessions develop. To present during one of these sessions, please submit an abstractfor consideration. Abstracts should be 300 words or less and include the presentation title, author(s), author(s) affiliations, and a description of the research to be presented. Please also include a 150 words or less speaker bio. The submission deadline is February 1,2019.

Please read the following information regarding presentations at theUngulateTAG sessions: * Time allotted for presentations will be 15 minutes, with 5 minutes available for a question and answer session (total 20 minutes). Allotted time will be strictly enforced to avoid impacting other scheduled events. * Presentations for theReports From the Field Sessioncan include reports on field work being conducted with anyungulatespecies. * Presentations for theScientific Management Sessionshould focus on any aspect of scientific research involvingungulatesincluding, but not limited to reproduction, contraception, nutrition and genetics. These presentations must be relevant to the captive management of ungulates. * Please keep in mind that the primary audience is at a managerial level and so presentations should demonstrate broader applications. * Should you choose to submit an abstract for consideration, please keep in mind not all abstracts will be accepted for presentation. * Abstracts may be submitted until the submission deadline: February 1, 2019, you will be notified whether or not your abstract submission has been accepted for presentation by February 15, 2019. * All presenters are required to register for the conference as well as pay for other conference expenditures and incidentals at their own expense.

Please send submissions to the following session moderators/reviewers: Reports from the Field Session- send submissions to Michele Stancer,mstancer@hoglezoo.org Scientific Management Session- send submissions to Jamie Ivy,jivy@sandiegozoo.organd Andrea Putnam,aputnam@sandiegozoo.org

Jamie A. Ivy, Ph.D. SeniorPopulation Biologist San Diego Zoo Global

Jamie Ivy <jivy@sandiegozoo.org>

PorquerollesIsland MathCompEvolution May26-30

MCEB - Mathematical and Computational Evolutionary Biology ' 2019, May 26-30 Porquerolles Island, South of France

Webpage: http://www.lirmm.fr/mceb2019/ Pre-registration and abstract submission deadline: 2019, February 10 Notification to applicants: 2019, March 10 Final list of attendees: 2019, April 14

Scope: Mathematical and computational tools and concepts form an essential basis for modern evolutionary studies. The goal of the MCEB conference (at its 11th edition) is to bring together scientists with diverse backgrounds to present recent advances and discuss open problems in the field of mathematical and computational evolutionary biology. The theme of this year's edition will be "Towards better trade-offs between speed and accuracy for the analysis of very large data sets in evolutionary biology". We will discuss the current solutions and stimulate a larger debate on the most appropriate ways to make sense of the wealth of genomic data currently available. General concepts, models, methods and algorithms will also be presented and discussed, just as during the previous conference editions.

Where and when: Porquerolles Island, near Hyères, in the South of France, May 26-30, 2019. The conference will begin Sunday evening with an aperitif and dinner, and will end at about 2pm on Thursday.

Cost: around 500€(Includes accommodation for four nights, meals, coffee breaks, etc.).

Keynote speakers:

Michael Blum http://membres-timc.imag.fr/-Michael.Blum/index.html Genome wide association studies and polygenic models

Dannie Durand https://www.cmu.edu/bio/people/-faculty/durand.html Genome Evolution

Laura Eme http://www.ettemalab.org/laura-eme/ Phylogenomics at the Origin of Life

Andrew Francis https://www.westernsydney.edu.au/-staff_profiles/uws_profiles/professor_andrew_francis The Mathematics of Phylogenetics Networks

Guy Sella https://systemsbiology.columbia.edu/-faculty/guy-sella Advances in Population Genetics

Alexis Stamatakis https://cme.h-its.org/exelixis/web/-personal_page/alexis/index.html Computational Phylogenetics

For more information, visit the website at: http://-www.lirmm.fr/mceb2019/ PLEASE FORWARD THIS ANNOUNCEMENT!

Olivier GASCUEL <olivier.gascuel@pasteur.fr>

Portugal EvolutionaryBiology May26-Jun1

The 25th edition of EMPSEB (European Meeting of PhD Students in Evolutionary Biology) will take place from May 26th to June 1st, in Pedrógão Pequeno, Portugal.

This meeting promotes a unique atmosphere for all its participants, giving them the opportunity to share and debate their projects with peers and with a group of invited international scientists, recognised as leaders in their scientific fields.

Additionally, this event also provides an excellent opportunity for early-carrer scientists to develop important soft skills and be exposed to distinct professional aspects that are intrinsically related to a carrer in science.

Abstract submission for EMPSEB25 is now open and will close on February 3rd 2019!

For more information please visit the official website for the event EMPSEB25 < http://-www.empseb25.wixsite.com/pedrogao > and follow us on Twitter (@empseb25 < http://www.twitter.com/-empseb25 >).

Kind regards,

The EMPSEB25 organizing committee

< https://www.avast.com/sig-email?utm_medium=-email&utm_source=link&utm_campaign=sig-email&utm_content=webmail > Sem vírus. www.avast.com < https://www.avast.com/-sig-email?utm_medium=email&utm_source=-link&utm_campaign=sig-email&utm_content=-webmail > <#DAB4FAD8-2DD7-40BB-A1B8-4E2AA1F9FDF2>

EMPSEB 25 <empseb25@gmail.com>

UCambridge EvolutionEvolving Apr1-4

The final day to submit abstracts for the Evolution Evolving conference is THIS SATURDAY (1st December). Don't miss out!

Evolution Evolving: Process, Mechanism and Theory Churchill College, University of Cambridge, UK 1-4 April 2019 — Evolutionary biology is a vibrant field with a theoretical framework that itself evolves. The Evolution Evolving conference will focus on some emerging themes in the relationship between development and evolution. Topics include the evolutionary causes and consequences of —developmental bias, plasticity, niche construction and extra-genetic inheritance —' all of which contribute to an understanding of evolvability. The conference will feature a balanced program of talks and poster sessions spanning three days, and be a mix of empirical and theoretical work, as well as contributions to the history and philosophy of evolutionary biology. — Invited speakers include Alex Badyaev, Renee Duckworth, Laurel Fogarty, Jukka Jernvall, Alan C Love, Joanna Masel, Armin Moczek, Angela Potochnik, Sean Rice and Jessica Riskin.

Abstract submission closes 1 December 2018 Early bird registration closes 4 January 2019 — Conference website: https://evolutionevolving.org/ Conference twitter: @EvoEvolving Conference email: evoevolving@st-andrews.ac.uk Organising committee: Prof Paul Brakefield, Prof Kevin Laland, Prof Tobias Uller, Dr Andrew Buskell & Dr Katrina Falkenberg

Katrina Falkenberg <kjf5@st-andrews.ac.uk>

UHongKong CrustaceanEvolution May26-30

WHERE: Hong Kong

WHAT: The Crustacean Society Mid-Year Meetings are held in a different city every year and will take place at The Chinese University of Hong Kong in 2019. Research themes range from conservation, ecology, fishery, systematics, physiology and developmental biology. Papers on evolutionary studies in crustaceans are also welcome especially under the symposium for parasitic and symbiotic crustaceans.

WHEN: 26-30 May 2019

For more information, please visit our website

http://tcs2019.net/ Call for abstracts is now open

Deadline for abstract submissions: 20 January 2019

Zachai@cuhk.edu.hk

GradStudentPositions

BangorU AdaptationGenomics

NERC funded PhD studentship in School of Natural Sciences, Bangor, UK

Understanding parallel origins of industrial metal tolerance in Silene uniflora

Climate change, urbanisation and exploitation of natural resources increasingly alter the environment, posing significant challenges for plants and animals. For species to adapt to such fast paced change, they will either need to draw on new genetic variation, which is likely to emerge very slowly, or on existing standing variation, which is potentially very fast. Another possibility is that adaptive alleles will be acquired via hybridisation with closely related species, facilitating rapid adaptation through the re-use of existing adaptive variation. Repeated evolution of the same adaptive trait offers unique opportunities to investigate genetic underpinning of rapid adaptation, ultimately informing us about the extent to which evolutionary responses to a changing climate might be predictable.

This project will advance our knowledge of the ecological and genetic mechanisms underpinning multiple origins of adaptation to heavy metal contaminated soils in Silene uniflora (sea campion) and whether hybridisation has facilitated or hindered adaptation. Sea campion is a predominantly coastal species, native to the UK and Ireland. It has also colonised and adapted to contaminated, disused mines on at least three separate occasions in Wales, England and Ireland within the last 250 years. Silene uniflora also occurs in mainland Europe (Sweden, France and Spain) and it hybridises with its sister species, S. vulgaris, which has also evolved heavy metal tolerance in European sites. Training in laboratory techniques for High throughput DNA sequencing, statistical analysis in R, bioinformatics, genomics and adaptation genetics will be provided. Hosted in the vibrant Molecular Ecology and Fisheries Genetics Laboratory in Bangor (http://mefgl.bangor.ac.uk/index.php.en) the student will join a new team led by Alex Papadopulos (http://labadopulos.co.uk) researching the genetics and genomics of adaptation in plants.

Applicants should hold a minimum of a UK Honours Degree at 2:1 level or equivalent in subjects such as Environmental or Natural Sciences. Applicants with first class degrees and/or high-quality Masters qualifications are especially encouraged to apply.

See https://tinyurl.com/ycq2de5j for further details about the ENVISION DTP program and how to apply. Closing date for applications: 27/01/19.

For informal enquiries, please contact Alex Papadopulos (email V a.papadopulos@bangor.ac.uk, twitter V @Metallophyte, web - http://labadopulos.co.uk/)

Mae croeso i chi gysylltu gyda'r Brifysgol yn Gymraeg neu Saesneg

You are welcome to contact the University in Welsh or English

Alexander Papadopulos <a.papadopulos@bangor.ac.uk>

BielefeldU BehavEvolEcol

PhD Student Position- Behavioral Ecology and Evolution

Application deadline 15th Dec!

Department of Animal Behaviour, Bielefeld University, Bielefeld, Germany

PROJECT DESCRIPTION: How much are individual odors determined by genetics? The goal of this project is to investigate if genetics, particularly loci at the Major Histocompatibility Complex (MHC), govern identity cues that are used for social communication in banded mongoose populations. Banded mongooses have been studied in detail as part of the Banded Mongoose Research Project at a long-term field site at the Mweya Peninsula, Queen Elizabeth National Park, Uganda. Behavioral, fitness, and genetic data have been collected from wild habituated mongooses continuously for over 20 years, and the study is ongoing (see the project website at http://socialisresearch.org). This project is part of an international collaboration and will combine behavioural data, field experiments, chemical odor profiles, microbial profiles, and high-throughput sequencing genetic methods to comprehensively investigate the mechanisms of genetic-based social signaling in a natural population.

TASKS: The PhD student will investigate the genetic basis of odor-based social communication in wild banded mongooses. Methods will include genotyping of MHC-loci, conducting field experiments on wild banded mongooses at Queen-Elizabeth National park in western Uganda, statistical analyses, and writing scientific publications for international, peer-reviewed journals.

REQUIREMENTS: (1) a university bachelor or Master degree in Biology, Ecology, or a related discipline, (2) experience with field and lab work, (3) experience with statistical software, preferably R, (4) interest in behavioural, genetic, and evolutionary questions, (5) ability to work both independently and as part of a team, (6) excellent oral and written communication skills in English.

PREFERRED EXPERIENCE: (1) papers in peer-reviewed international journals, (2) experience with high-throughput sequencing techniques, (3) experience working with multiple, large-scale data sets.

POSITION: The position runs from early 2019 for three years and is funded by the German Research Foundation (DFG). The successful candidate will be based at the Department of Animal Behaviour at Bielefeld University (www.uni-bielefeld.de/biologie/animalbehaviour/-home.html) and will be supervised by Dr. Jamie Winternitz and co-supervised by Dr. Hazel Nichols at Swansea University. Salary will be paid according to Remuneration level 13 (65%) of the Wage Agreement for Public Service in the Federal States (TV-L).

APPLICATION INSTRUCTIONS: To apply, please provide: (1) a letter of motivation including a statement of your research interests and skills and experience relevant to the position; (2) a CV including publication list; (3) names and contact details of two referees willing to write confidential letters of recommendation. All materials should be emailed as a single PDF file to: jamie.winternitz@uni-bielefeld.de. The application deadline is December 15th 2018 and interviews will take

place shortly thereafter. After the decision, the position should start as soon as possible. For further information on the project and the department, please contact Jamie Winternitz (jamie.winternitz@uni-bielefeld.de) with any informal inquiries.

ADDITIONAL INFORMATION: The Department of Animal Behaviour at Bielefeld University is the oldest of its kind in Germany and currently hosts seven principal investigators, eight postdocs and 20 PhD students. It offers a stimulating international environment and an excellent research infrastructure including new molecular laboratories. The working language of the Department is English. Together with the Evolution and Animal Ecology research groups housed in the same building, there are some 50 scientists and PhD students from over ten different countries working on related topics in behaviour, ecology and evolution.

Bielefeld is a city of 325,000 inhabitants with all expected amenities and easy access to the Teutoburger Wald for hiking and other outdoor pursuits. It offers a high standard of living and is well connected to most major European cities.

Bielefeld University has received a number of awards for its achievements in the provision of equal opportunity and has been recognized as a family friendly university. The University welcomes applications from women. This is particularly true with regard both to academic and technical posts as well as positions in Information Technology and Trades and Craft. Applications are handled according to the provisions of the state equal opportunity statutes. Applications from suitably qualified handicapped and severely handicapped persons are explicitly encouraged.

"Nichols H.J." <h.j.nichols@swansea.ac.uk>

ClarkU MA ReptileLocomotion

Dr. Philip Bergmann's Evolutionary Functional Morphology Lab at Clark University is recruiting a Ph.D. student to begin in Fall 2019. The Bergmann lab studies form-function relationships in an evolutionary and ecological context, primarily using reptile and amphibian locomotion as a study system. The main research foci are (1) how form-function relationships work and are affected by factors such as ontogeny and substrate, and (2) the evolution of snake-like body shapes from phenotypic, functional, and ecological perspectives. Tools used by the lab to address these questions include high-speed video and X-ray video, force plates, EMG, dissection, behavioral observations, field work, and modeling/simulation approaches.

Graduate students should be self-motivated and have prior research experience. They will be encouraged to develop their own projects within the context of the lab research. Interested students should contact Dr. Bergmann (pbergmann@clarku.edu) prior to applying with any questions they may have, a cover letter that includes their research interests, CV, and names and e-mail addresses for two references. The Biology Department at Clark University is small but vibrant, providing students the opportunity to gain experience in research, teaching, mentoring, and outreach. Support by way of Teaching Assistantship is guaranteed for five years, and includes tuition waiver. The application deadline is January 15, 2019.

For more information, visit: Bergmann Lab: http://-www2.clarku.edu/faculty/pbergmann/ Biology Department: http://www2.clarku.edu/departments/biology/- Graduate Admissions: http://www.clarku.edu/-admissions/graduate-admissions Philip J. Bergmann Associate Professor Biology Department Clark University 950 Main Street Worcester, MA 01610

Philip Bergmann <PBergmann@clarku.edu>

CWilliamMary Virginia PlantEvolution

Graduate position: Plant Evolution and Development

The Puzey lab (http://puzeylab.weebly.com) at the College of William and Mary (Williamsburg, VA) is recruiting a graduate student (M.S Biology) interested in using genomics to understand the evolution and development of complex spatial patterns in plants. Positions for MS program start Fall 2019. Please contact Josh Puzey (jrpuzey@wm.edu) for more information.

The successful applicant will be passionate about evolution, interested in plants, and keen to use genomic techniques to address their research questions. Students working the Puzey lab get exposure to a wide range of analyses and techniques including next-generation sequencing, population genomic analyses, and molecular ecology.

Details about the M.S. program in Biology at W&M can be found here (http://www.wm.edu/as/biology/-graduate/). Full-time students are supported by teach-

ing assistantships and full tuition waivers. Most students complete their master's degree in two years and go on to pursue a PhD.

Josh Puzey <jrpuzey@gmail.com>

CzechAcademySci AntPlantInteractions

A *PhD Studentship* is available to work on

Testing impacts of ant-plant protection mutualisms on plant community dynamics in Papua New Guinea

A highly motivated postgraduate student is sought to join a project exploring the effects of ant inhabitation of trees on plant community dynamics. Usually proximity to adult conspecifics reduces survival of plant seedlings due to sharing of natural enemies between adult trees and seedlings. We seek to test the hypothesis that for plants regularly inhabited by ants that protect them from herbivory, proximity to adult trees is beneficial due to ant partner sharing. We will also explore whether this process is likely to affect the dynamics of entire plant communities. The student will conduct field surveys for ant-inhabited trees, measure ant and plant fitness correlates, and perform experimental seedling transplants. There will also be opportunities to develop the project in a direction of the students own choosing. Duties will include spending extensive periods of time in the field in Papua New Guinea.

The successful applicant will join the Ant Research Group (http://antscience.com/) at the Institute of Entomology, Biology Centre Academy of Sciences, Ceske Budejovice, Czech Republic, under the supervision of Tom Fayle (http://www.tomfayle.com/-index.htm), Petr Klimes (https://www.entu.cas.cz/-en/staff/profile/424/), and Vojtech Novotny (https:/-/www.plantanimalinteractions.com/). The laboratory is a dynamic, multinational group studying ant ecology, evolution and biogeography, and is embedded within the Department of Ecology and Conservation Biology, a world-class centre for interaction network research with regular publications in *Science*, *Nature* and other leading journals. The deadline for applications is *December 28th 2018*, with a start date of March 1st 2019. The student will receive a scholarship from the University of South Bohemia and employment on an ongoing grant for the 4-year PhD course, sufficient to cover living expenses in Czech Republic. Applicants from all countries are eligible.

Required

A masters degree (non-negotiable requirement for PhD study in Czech Republic).

Interest in the ecology of insects and/or plants.

1st or upper second (2.1) undergraduate degree in ecology or related subject (or equivalent).

Enthusiasm for working in the field for extended periods of time in challenging conditions in tropical rain forest.

Ability to work independently and manage small teams of assistants.

Fluency in spoken and written English

Experience in the use of ecological statistical analyses.

Desirable

Previous experience of tropical field work.

Research experience with plant or insect ecology.

Experience with basic ecological molecular lab work relating to use for species identification

Experience with scientific publishing in the above field

To apply please send a CV, contact details for three references, and cover letter stating qualifications, previous work and motivation to Tom Fayle (tmfayle@gmail.com). Please also feel free to get in touch to discuss the project further.

Tom Fayle <tmfayle@gmail.com>

Durham StAndrews Ecol Evolution

I am currently seeking applicants for several PhD projects in ecology and evolution involving phylogenetic comparative methods, through the IAPETUS Doctoral Training Partnership. IAPETUS studentships are fully funded and include an extensive training package. Please see the IAPETUS website for further information about the scheme, including eligibility, funding and how to apply: http://www.iapetus.ac.uk/ Together with diverse supervisory teams, I am looking in particular for applicants interested in working on the following projects -

The evolution of extractive foraging in mammals and birds (based in Durham): http://-www.iapetus.ac.uk/wp-content/uploads/2018/11/IAP2-18-149_Durham_Barton.pdf The evolution of birds nest design in relation to climate (based in St Andrews):

http://www.iapetus.ac.uk/wp-content/uploads/2018/-10/IAP2-18-78_St-Andrews_Healy.pdf Drivers of reintroduction success in mammals and birds (based in Durham): http://www.iapetus.ac.uk/wp-content/-uploads/2018/10/IAP2-18-24_Durham_Street-2.pdf Applications are due by *18th January 2019* for projects starting in Autumn 2019.

Only UK/EU candidates are eligible to apply for IAPETUS studentships. International candidates interested in similar projects may consider applying for a Durham Doctoral Studentship instead (see link for further information: https://www.dur.ac.uk/anthropology/-postgraduatestudy/funding/).

I would also be interested in hearing from potential applicants interested in projects using phylogenetic methods to investigate the cultural evolution of music.

Potential candidates should get in touch with Sally Street (Durham University) by email (sally.e.street@durham.ac.uk) to make informal enquiries before applying.

"STREET, SALLY" <sally.e.street@durham.ac.uk>

DurhamU 2 Adaptation

Durham Doctoral Training studentship opportunity at Durham University

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Next generation conservation genetics at sea: detecting and conserving adaptive potential

This project is supported by the Durham Doctoral Studentship. The students will test hypotheses about the mechanisms that generate distinct patterns of diversity at functional loci across marine environmental gradients using high resolution data and working with reference genomes.

Supervised by Prof. A. Rus Hoelzel, Durham University;

Application details and deadline: Full funding is available to all nationalities. To apply please send c.v., cover letter, transcripts and letters of reference to Rus Hoelzel at a.r.hoelzel@dur.ac.uk. For further information (including a flyer describing the project in detail) contact Rus Hoelzel. APPLICATION DEADLINE: 12 January 2019

Whitehead Trust studentship opportunity at Durham University

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Tracking the impact of the Eemian interglacial on the ecology and evolution of British ungulates

This project is supported by Drham University's Whitehead Trust. The student will use ancient DNA to test hypotheses about the change in genetic diversity over time comparing Eemian and modern populations of deer species indigenous to the British Isles throughout the relevant period, and about the environmental context for evolutionary change.

Supervisory team: Prof. A. Rus Hoelzel, Durham University; Dr. Melanie Leng, British Geological Survey; Prof. Adrian Lister, Natural History Museum

Application details and deadline: Full funding only available to UK nationals. To apply please send c.v., cover letter, transcripts and letters of reference to Rus Hoelzel at a.r.hoelzel@dur.ac.uk. For further information (including a flyer describing the project in detail) contact Rus Hoelzel. APPLICATION DEADLINE: 12 January 2019

"HOELZEL, RUS A.R." <a.r.hoelzel@durham.ac.uk>

DurhamU 2 MarineAdaptation

NERC IAPETUS studentship opportunity at Durham University

Eco-evolutionary processes affecting biodiversity in British kelp forest communities

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This project is supported by NERC DTP IAPETUS (http://www.iapetus.ac.uk/). The student will use genomic methods to compare the host kelp species with three dependant herbivore species to better understand the mechanisms that determine community structure in coastal marine ecosystems.

See: http://www.iapetus.ac.uk/iap2-18-19-eco-evolutionary-processes-affecting-biodiversity-in-british-kelp-forest-communities/ Supervisory team: Prof. A. Rus Hoelzel, Durham University; Prof. Oscar Gaggiotti, St. Andrews University; Alejandro Gallego, Marine Scotland

Application details and deadline: Full funding only available to UK nationals. To apply please send c.v., cover letter, transcripts and letters of reference to Rus Hoelzel at

a.r.hoelzel@dur.ac.uk. For further information contact Rus Hoelzel or Oscar Gaggiotti (oeg@st-andrews.ac.uk). APPLICATION DEADLINE: 12 January 2019

Durham ARCTIC Leverhulme Trust CDT studentship opportunity at Durham University

Predicting risk and planning mitigation against regional impact from climate change on populations of Arctic char (Salvelinus alpines)

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This project is supported by the Durham Arctic CDT (https://www.dur.ac.uk/arctic/). The key objective will be to use genetic, fatty acid and ecological analyses to compare high Arctic populations from Svalbard with lower latitude populations in the UK to better understand the adaptive differences and potential for adaptation or acclimation to a changing climate in the Arctic environment.

See: https://www.dur.ac.uk/arctic/projects/ Supervisory team: Prof. A. Rus Hoelzel, Dr. Martyn Lucas & Dr. Erin McClymont, Durham University;

Application details and deadline: Full funding only available to UK nationals. To apply please send c.v., cover letter, transcripts and letters of reference to Rus Hoelzel at a.r.hoelzel@dur.ac.uk. For further information contact Rus Hoelzel. APPLICATION DEADLINE: 12 January 2019

"HOELZEL, RUS A.R." <a.r.hoelzel@durham.ac.uk>

EarlhamInst UK AndesSoilGenomics

Earlham Institute has a NERC-ARIES PhD offer to work on soil management in the Colombian Andes, using cutting edge genomics to inform farming policy and practices for biodiversity protection in Colombia.

The proposal targets the Colombian Andean pastures used for livestock grazing in the regions close to Bogota and Cali. The student will evaluate how different farming practices impact soil diversity there, focusing in nitrogen-fixing bacteria (NFB) communities that interact with legume plants. And assessing the effect of these NFB and interactions in soil fertility and consequently for agricultural production. The project will deliver impact by recommending policy incentives that promote the adoption of farming practices that consider the impact they have on soil and other natural resources.

The ideal candidate would have a degree in Environmental/Biological Sciences, a strong interest/experience in computational or statistical data analysis (Either genomic or socioeconomic), and availability to travel to Colombia (Approximately 3 months total) for data acquisition and evaluation.

This project has been shortlisted for funding by the ARIES NERC Doctoral Training Partnership. The closing date for applications is 23:59 on 8th January 2019. Shortlisted applicants will be interviewed on 26th/27th February 2019.

For further information contact: Jose DeVega Jose.DeVega@earlham.ac.uk

Further information about the project and application process: https://www.aries-dtp.ac.uk/studentships/-sustainable-management-of-soil-nitrogen-fixing-biodiversity-in-the-andean-pastures/ https://www.aries-dtp.ac.uk/study-with-us/eligibility-and-applications/

Wilfried Haerty Group Leader Norwich Research Park Norwich Norfolk NR4 7UG +44 (0) 1603 450 974 wilfried.haerty@earlham.ac.uk www.earlham.ac.uk Wilfried.Haerty@earlham.ac.uk

Eawag ETHZurich DefensiveSymbiosis

PhD position: Host-parasitoid interactions and defensive symbioses

A PhD position is available in Christoph Vorburger's lab at Eawag and ETH Zurich, Switzerland (https://-homepages.eawag.ch/~vorburch/). We seek an enthusiastic student to work on a project entitled "Defensive symbiosis in the wild - the role of symbiont-conferred resistance in natural host-parasitoid communities". The project is funded by the Swiss National Science Foundation for four years. Using a study system comprising aphids, their protective endosymbionts and parasitoid wasps, we aim to investigate the importance of symbiont-conferred resistance in natural populations.

The ideal candidate will have a strong interest in host-parasite coevolution, excellent quantitative and communication skills, as well as experience in the application of molecular methods. A MSc in biology or a comparable qualification is required. The expected starting date is 1 March 2019, but can be negotiated.

Eawag offers a unique research and working environment (http://www.eawag.ch/en/aboutus/working/-researchenvironment/) and is committed to promoting equal opportunities for women and men and to support the compatibility of family and work. Applications from women are especially welcome. For more information about Eawag and our work conditions please consult www.eawag.ch and www.eawag.ch/en/aboutus/-working/employment . For further information please contact Christoph Vorburger (+41 58 765 51 96; email christoph.vorburger@eawag.ch). Deadline for applications is 31 December 2018.

Please submit your application including a motivation letter with a description of pertinent experience, a complete CV (incl. publication list), the names (with e-mail addresses) of three potential referees, and copies of certificates of academic qualifications via the Eawag Jobs & Career webpage, any other way of applying will not be considered. The link below will take you directly to the application form.

https://apply.refline.ch/673277/0672/pub/1/-index.html *** Christoph Vorburger Eawag, Swiss Federal Institute of Aquatic Science and Technology & Institute of Integrative Biology, ETH Zurich Überlandstrasse 133 8600 Dubendorf Switzerland

Phone: +41 58 765 5196 e-mail: christoph.vorburger@eawag.ch or vorburgc@ethz.ch group homepage: http://homepages.eawag.ch/-~vorburch/ ***

Christoph.Vorburger@eawag.ch

Europe EvolutionaryBiology

MEME: Application Cohort 2019 open

MEME (mobility European Master in Evolution) is a two-year research oriented master program for talented and motivated students who are interested in understanding evolution in all its facets. It intends to provide an optimal preparation for subsequent doctoral studies and eventually a career in academic research.

The MEME program addresses the driving forces of evolution at all levels of organismal organization (from cells and individuals to populations and ecosystems), and allows students to study all kinds of organisms (microorganisms, plants, animals) in all kinds of habitats (marine as well as terrestrial) with a diversity of approaches (field, lab, theory). The focus of the program is not only on how evolution shaped life on our planet in the past, but also on how understanding the principles underlying evolution can provide new insights and help to cope with present-day challenges in a variety of fields, including ecology, epidemiology, physiology, immunology, genetics/genomics, bioinformatics, economics and the social sciences.

To offer a program of such broad scope, four European universities (University of Groningen, Netherlands; University of Montpellier, France; Ludwig Maximilians University of Munich, Germany; Uppsala University, Sweden), have joined forces with Harvard University (USA). Together, this consortium has put together an attractive multidisciplinary program that meets highest standards. All students have to study at (at least) two partner universities, and they will receive a double degree from two partner universities they have attended.

Details on the program and the selection procedure can be found on www.evobio.eu . Starting date: 1 September 2019

Application deadline: 1 February 2019

Please alert your students to this great opportunity!

More information and how to apply - please see www.evobio.eu Questions about the contents of the program: Leo Beukeboom (l.w.beukeboom@rug.nl)

Questions about the requirements and the application procedure: Femke Schouten (f.a.schouten@rug.nl)

“Schouten, F.A.” <f.a.schouten@rug.nl>

GoettingenU HostShiftWolbachia

<pre> The Johann-Friedrich-Blumenbach Institute of Zoology and Anthropology at the Georg-August-Universität Gottingen is looking to fill the position of a

Doctoral / Ph.D. Student

for research on Analysing host-shift patterns of Wolbachia strains (Alphaproteobacteria) using comparative genomics.

The position is funded by the German Science Foundation (DFG) for a period of three years, with a salary according to the German salary scale TV-L E13 (65%), and should be filled by March 2019.

Wolbachia is a group of maternally inherited intracellular Alphaproteobacteria found in arthropod and nematode

hosts and based on meta-analyses, up to 52% of all terrestrial arthropod species are estimated to be infected. However, pathways of horizontal transfer between different hosts remain to be elucidated. Within the proposed project we will use a phylogenomic approach to compare the relative contribution of phylogeny, ecology, and biogeography on horizontal transmission of Wolbachia strains among arthropods. For this purpose we will screen the infection status of arthropod communities of four selected plant species in Germany and the USA. Using NGS techinques, metagenomes comprising host and Wolbachia DNA will be sequenced and assembled for selected individuals of infected arthropod species. Finally, comparative phylogenetic approaches will be used to test hypotheses regarding horizontal transfer of Wolbachia between different arthropod hosts.

Applicants need to hold a diploma or MSc degree in biology or a related field and to have solid experience with molecular methodology, particularly with respect to molecular systematics. Experience in generating and/or analysing next generations sequencing data is desirable. A background in entomology would be helpful, but is not necessary. Working language is German and English. Doctoral students are supposed to take part in seminars and supervising students. This position is designed to foster young researchers and scientists and give the successful applicant the opportunity to pursue a doctoral degree.

The University of Gottingen is an equal opportunities employer and places particular emphasis on fostering career opportunities for women. Qualified women are therefore strongly encouraged to apply in fields in which they are underrepresented. The university has committed itself to being a family-friendly institution and supports their employees in balancing work and family life. The mission of the University is to employ a greater number of severely disabled persons. Applications from severely disabled persons with equivalent qualifications will be given preference.

Applications containing the common documents should be sent by *December 27, 2018 in electronic form or by ordinary mail to Prof. Dr. Christoph Bleidorn, Johann-Friedrich-Blumenbach-Institut fur Zoologie und Anthropologie, Animal Evolution and Biodiversity, Georg-August-Universität Gottingen, Untere Karspule 2, 37073 Gottingen, Germany, e-mail: cbleido@gwdg.de.

Please note: With submission of your application, you accept the processing of your applicant data in terms of data-protection law. Further information on the legal basis and data usage is provided in the Information General Data Protection Regulation (GDPR) <https://www.uni-goettingen.de/de/document/download/e0b7459b97d917e68e3464b8683b4e73.pdf/DSGVO - Zusatz 2018_06_05.pdf>

The advertisement can be found at https://www.uni-goettingen.de/de/305402.html?cid000 – Prof. Dr. Christoph Bleidorn Georg-August-Universität Gottingen Johann-Friedrich-Blumenbach Institute for Zoology & Anthropology Animal Evolution and Biodiversity Untere Karspuele 2 37073 Gottingen Germany

Follow me on twitter! https://twitter.com/C_Blei "Bleidorn, Christoph" <cbleido@gwdg.de> </pre>

Guangxi 2 TreeEvolGenomics

Two PhD positions are available with the Plant Ecophysiology and Evolution Group at Guangxi University in Nanning, China to study (1) temperature stress memory in mangroves and (2) conservation genomics of endangered tropical trees. The candidates will be part of a team studying the ecological genomics of tropical trees in the Indo-West Pacific. Other research topics are available for discussion following an accepted application.

Applicants to this position should have a Masters degree with a strong background in plant population genetics, biogeography, epigenetics or ecophysiology. Experience in genomics and/or bioinformatics are considered a major advantage when applying. Successful applicants will be fully-funded by governmental scholarships. The working language of our research group is English, however knowledge of Mandarin will be useful. The PhD students will be part of a creative and stimulating research environment consisting of both Chinese and international researchers.

To apply, please contact Alison Wee at alisonwks@gxu.edu.cn. In your application, please include a cover letter, CV, brief research statement, and a list of references. For further information about our group please see: http://www.ecologicalgenomicslab.com/ aidanwshort@outlook.com

Hungary 2 AvianEvolution

PhD studentship in behavioral ecology and conservation of shorebirds Supervisors: Prof. András Liker

(Veszprém, Hungary), Prof Tamás Székely (Bath, UK), Dr VojtÄch Kubelka (Debrecen, Hungary)

Project objectives:

Social interactions are among the most fascinating aspects of animal behaviour. In an international project, we study the diversity of mating and parental behaviour in birds. The PhD project we are to initiate will focus on the demographic drivers of sex role reversal in shorebirds (plovers, sandpipers and allies), when females compete for mates and males provide parental care. Our team is carrying out cutting edge research in ecology, behaviour and evolution (see references below, and our websites), our recent studies suggest that sex role reversal occur in species where males are the more common sex, however, the processes that generate such male-skewed sex ratios are largely unknown. The successful candidate will carry out field study of the sex role reversed, polyandrous Bronze-winged Jacana in India, and join an international team of scientists working on shorebird ecology, behaviour and conservation.

This exciting project will collect data on the breeding behaviour, offspring sex ratio, and survival of males and females in a closely monitored population of jacanas. Based on these data the Student will use demographic modelling to estimate the adult sex ratio of the population, and test which demographic parameters are the most important determinants of the sex ratio. The project will also contribute to our largescale comparative studies that will investigate yet untested aspects of breeding behaviour and demography in shorebird species worldwide. The Student is also expected to promote biodiversity conservation using shorebirds as key organisms, see the ÃLVONAL SHOREBIRD SCIENCE at https://elvonalshorebirds.com/ Expected motivation and skills for candidates:

We are looking for a highly motivated and enthusiastic person with a background in biology, zoology or relevant discipline, a good understanding of evolutionary biology and interest to learn field biology and laboratory methods. The candidate should have sufficient English language skills, and the ability of organising and conducting field work in remote areas in an international team. He/she also needs to have a solid background in data analyses preferably in R, and statistical modelling.

Funding:

We welcome applications from self-funded students and students seeking their own funding from external sources. The studentship will be based at University of Pannonia, Veszprém, Hungary, and involve inputs from colleagues at University of Bath (UK) and University of Debrecen (Hungary).

Students from India are eligible for the "Stipendium Hungaricum" program which offers a scholarship for suitable students (www.stipendiumhungaricum.hu). Interested students should send an application to Prof Liker (andras.liker@gmail.com) which includes a CV (max 3 pages) and a max 2 pages cover letter with personal motivation and the name and contact details of two references (both in English).

Deadline of application: 31 December 2018.

References:

Butchart, S. H. M. et al. 1999. Polyandry and competition for territories in bronze-winged jacanas. Journal of Animal Ecology 68: 928-939.

Eberhart-Phillips, L. J., , T. Székely et al. 2018. Demographic causes of adult sex ratio variation and their consequences for parental cooperation. Nature Communications 9: 1651.

Kubelka V., Åálek M., Tomkovich P., Végvári Z., Freckleton R. P. & Székely T. 2018: Global pattern of nest predation is disrupted by climate change in shorebirds. Science 362: 680'683.

Liker, A., Freckleton, R. P., & Székely, T. 2013. The evolution of sex roles in birds is related to adult sex ratio. Nature Communications 4: 1587. Photo credit: Wikipedia, Shantanu Kuveskar

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Sex role evolution in shorebirds

PhD studentship based in Debrecen, Hungary 2019-2023

Supervisors: Prof Tamas Szekely (Debrecen, Hungary), Dr AndrÃ's Kosztolanyi (Budapest, Hungary), Dr VojtÄch Kubelka (Debrecen, Hungary)

Sex roles (i.e. courtship, competition for mates, pair bonding and parenting) are among the most diverse social behaviour. Recent research is uncovering key elements of sex role variation, but significant gaps remain. Appropriate sexual behaviour is essential for reproduction, and thus understanding the causes and implications of sex roles are at the core of evolutionary biology and fundamental for the study of life history evolution, physiology and population biology. Understanding sex roles is also important for biodiversity conservation since disruptions to normal sexual behaviour due to environmental changes reduce the viability of wild populations.

Our team was recently awarded an project of Hungarian Science Foundation,

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mcmaster.ca/~brian/evoldir.html

KULeuven Belgium WaspSocialEvolution

PhD: Behavioral Ecology and Social Evolution of Wasps

Application deadline: December 31th, 2018

Start date: as soon as possible (but negotiable depending on KU Leuven application procedure and visa)

We invite applications for a 3-year PhD position on the evolution of eusociality in wasps. We will focus on the co-option and modification of the hormonal and reproductive cycles that were present in solitary species during the evolution of primitive and advanced eusocial wasp species. Specifically, we will compare European and Brazilian primitively and advanced eusocial species of wasps with closely related solitary ones to test whether and how endocrine JH (juvenile hormone) cycles in presocial ancestors regulated reproduction, reproductive signalling and division of labour. The PhD candidate will investigate these questions using behavioural experiments, chemical analyses, and molecular analyses.

We are looking for a highly motivated candidate, not afraid of collecting wasps nests, with an MSc degree (or equivalent) in Biology or a related field. The successful applicant should have a strong background in ecology, animal behaviour and/or evolutionary biology. The candidate must have an excellent command of both spoken and written English. Experience with social insects and statistics are advantageous. Training that the candidate will receive include among others (1) chemical analyses with our Thermo ISQ GC/MS, (2) carrying out bioassays, (3) carrying out molecular phylogenetic work and (4) performing advanced data analysis in R.

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his project is a bilateral collaboration (FWO-FAPESP) with Prof. Nascimento (USP-Ribeirão Preto, Brazil); most of the time the PhD student will stay in Leuven, but there will be field trips to Brazil.

We are a multidisciplinary lab (https://bio.kuleuven.be/ento/index.htm) working on questions related to social evolution and use insects, microorganisms and humans as model systems. Our lab employs a variety of techniques, including theoretical modeling, behavioral observation, chemical ecology and genetics, genomic and proteomic analysis. The working language of the laboratory is English. KU Leuven is among one of the most prestigious universities in the world (48o in the ranking of THE 2019) and offers good employment conditions (https://www.kuleuven.be/personeel/jobsite/en). Leuven is a historic university city with a vibrant student life. Leuven is a 15-minute train ride away from Brussels International Airport (which is well-connected to destinations all over the world) and a 20-minutes train ride from Brussels itself (https://www.kuleuven.be/english/living). Brussels is one of the best-connected cities in Western Europe; Amsterdam, Paris and London are all reachable within 2 hours by train.

If you are interested, please send an application as a single pdf file containing your CV, a 1-page motivation letter, your previous research activities, BSc and MSc grades, publications (if applicable), 1 reference letter, and the names and email addresses of two potential referees. Applications should be sent to Dr. Cintia Akemi Oi (cintiaakemi.oi@kuleuven.be) with the subject [PhD application_NAME]. Funding is available, but we would also stimulate you to apply for your own scholarship -the research unit will fully support you in this application procedure. Shortlisted applicants will be interviewed via Skype.

Do not hesitate to contact us if you would have further questions.

Prof. Tom Wenseleers & Dr. Cintia Akemi Oi Laboratory of Socioecology and Social Evolution Dept. of Biology, KU Leuven Naamsestraat 59 3000 Leuven Belgium https://bio.kuleuven.be/ento/wenseleers/twenseleers.htm ?

Cintia Akemi Oi <cintiaakemi.oi@kuleuven.be>

MaxPlanckInst Cologne PopGenetics

A PhD position is available for 3 years in the group of Dr. Stefan Laurent at the Department of Comparative Genetics and Development, MPI for Plant Breeding Research in Cologne, Germany (www.laurentlab.org; http://www.mpipz.mpg.de/laurent). We are seeking a candidate with a strong interest in population genetics, bioinformatics, and statistical inference to join our group. The successful candidate will have a M.Sc. in a related discipline (ecology and evolution, population or statistical genetics, bioinformatics). Students with

solid skills in R or other programming languages are especially encouraged to apply.

Adaptive evolution requires that living populations are able to occasionally modify the spatio-temporal patterns of expression of some of their genes. Such adaptations can be achieved by means of positive selection acting on the genetic variation naturally occurring within gene regulatory regions. New data sets describing intra- and inter-specific genetic variation and the localization of cis-regulatory elements now allow evolutionary biologists to reveal the genetic determinism of gene regulatory adaptations. However, non-adaptive forces too, are expected to shape the genetic variation at cis-regulatory modules and to drive the evolution of gene expression. Therefore, mechanisms such as genetic drift and background selection have to be carefully considered when reconstructing the evolutionary history of regulatory systems. The successful applicant will develop statistical and bioinformatics tools to evaluate the respective contributions of adaptive and neutral forces in shaping the genetic diversity at gene regulatory regions. Potential for applications and collaboration exist with our colleagues from the group of Prof. Miltos Tsiantis, the Director of the Department who recently sequenced full genomes of the selfing plant Cardamine hirsuta.

This project is supported by the International Max Planck Research School on"Understanding Complex Plant Traits using Computational and Evolutionary Approaches". Applications can be submitted via the website http://www.mpipz.mpg.de/imprs-application (deadline 04-01-2019) but the position will remain open until a suitable candidate is found. Informal enquiries can be made to Stefan Laurent (laurent@mpipz.mpg.de)

Salary and working hours are in accordance with the funding guidelines of the Max Planck Society for junior scientists. Working hours are fulltime; salary is 50 % of E13 TVoD-Bund. The Max-Planck society is committed to increasing the number of individuals with disabilities in its workforce and therefore encourages applications from such qualified individuals. Furthermore, the Max Planck Society seeks to increase the number of women in those areas where they are underrepresented and therefore explicitly encourages women to apply.

Stefan Laurent <laurent@mpipz.mpg.de>

MonashU PlantEcologicalGenomics

PhD studentship available on the role of hybridization during biological invasions

The Hodgins lab (Monash University, www.hodginslab.com) and the Cousens lab (The University of Melbourne) are currently seeking an outstanding PhD candidate interested in studying plant ecological genomics. Funding is provided by an Australian Research Council Discovery grant, in collaboration with Dr Loren Rieseberg (University of British Columbia).

Hybridisation has been thought to aid invasion by introducing genetic novelty, but traditional approaches have been ineffective at evaluating alternatives. This deficiency will be addressed by capitalising on replicate hybrid zones of the same species, applying new methods on an expansive genomic dataset, and developing novel simulations to resolve how hybridisation and colonisation interact. The expected outcome will be a rigorous empirical evaluation of three candidate processes. This project has the potential to significantly advance our understanding of how colonisation and hybridisation shape the evolutionary trajectory of species in general.

The project can commence any time during 2019 and will be developed in collaboration with the student. Teaching is not required for the duration of the PhD (3.5 years in Australia). Research funding as well as attendance in one conference per year is guaranteed.

Successful candidates will be fully funded for 3.5 years with an annual tax-free stipend of approximately $26,000 AUD, which includes tuition and medical cover. A fully funded PhD stipend is available for either an international student or a domestic student.

Melbourne is diverse and thriving city with a desirable climate. It is one of the most livable cities in the world and is a cultural and recreational hub.

Monash University and The University of Melbourne are members of the Group of Eight, a coalition of top Australian universities recognized for their excellence in teaching and research.

All applicants must have the equivalent of at least six months full time independent research experience (e.g., an honours or a masters) and excellent grades. A publication in an international journal is an asset. Quantita-

tive, bioinformatics, and computational skills are also an asset.

Please send your CV, a transcript, a brief statement of your research interests and the contact details of two referees to kathryn.hodgins@monash.edu.

Kathryn Hodgins <kathryn.hodgins@monash.edu>

QMUL-London ConservationGenomicsSulawesi

Dear All,

We are currently seeking highly motivated PhD student for a fully-funded project to start in 2019. The project will focus on analysing molecular data from museum and modern samples to unravel the population histories of endemic vertebrates in SE Indonesia.

The Wallacea region of Indonesia hosts an exceptionally distinctive vertebrate diversity, with endemics such as anoa, babirusa and maleo. Yet this biogeographically-complex region is emerging as a new frontier in Indonesia for agribusiness, and land-use change may have detrimental impacts on this regions large endemic forest vertebrates.

To predict future population changes under different land-use scenarios, we will study past changes. The availability of range-wide georeferenced anoa, babirusa and maleo specimens in museums means that we can obtain genomic information from samples that pre-date recent changes in land-use. The aim of this project is to model changes in population size using nuclear and mitochondrial (mtDNA) genome-wide levels of genetic diversity from past and present samples, to reconstruct the population history of these species and assess whether signals of population declines, detected by our previous study [1] were induced by recent deforestation.

[1] Frantz et al. (2018) Synchronous diversification of Sulawesi's iconic artiodactyls driven by recent geological events. Proceedings of the Royal Society of London 285, 20172566.

This studentship is fully-funded by Queen Mary University of London (QMUL) and is aligned to the UKs overseas development strategy. The PhD student will be trained in working with historical samples at the Natural History Museum of London under the supervision of Dr Selina Brace, and in population genetics and bioinformatics by Dr Laurent Frantz and Prof Stephen Rossiter (QMUL). This studentship forms part of a larger NERC funded project involving conservation biologists, spatial modellers, and social scientists, and the student will have opportunities to visit Indonesia and interact with team members.

The successful candidate is expected to have a strong academic background with a at least a 1st class or 2.1 Bachelors degree (or equivalent). An MSc in a relevant field (genomics, evolutionary biology, bioinformatics), and an interest in conservation issues, would also be advantageous. Candidates are encouraged to send a cover letter and CV in the first instance to either Laurent Frantz (laurent.frantz@qmul.ac.uk) or Stephen Rossiter (s.j.rossiter@qmul.ac.uk).

To apply online: https://www.qmul.ac.uk/sbcs/-postgraduate/phd-programmes/projects/display-title-648638-en.htm laurent.frantz@arch.ox.ac.uk

TechnischeU Dresden SexualSelection

SEXUAL SELECTION AND LOCAL ADAPTATION

A PhD position on the role of sexual selection in adaptation to novel environments under the supervision of Dr. Tim Janicke (https://www.cefe.cnrs.fr/fr/recherche/ee/-gee/800-c/866-tim-janicke) and Prof. Klaus Reinhardt (https://tudaz.net/people/head-of-group/) is available at the Chair of Applied Zoology, Institute of Zoology, Technische Universitaet Dresden, Germany (https://-tudaz.net/).

Theory predicts that sexual selection on condition-dependent traits promotes adaptation to challenging environments by purging deleterious alleles more efficiently than natural selection alone. This project aims to test this hypothesis and its underlying assumptions by combining experimental evolution, quantitative genetics, genomics, and meta-analyses. Experimental work will be carried out using the red flour beetle (Tribolium castaneum) as a model system.

We are searching for a highly motivated candidate with a MSc degree in biology (or equivalent) and a keen interest in evolutionary biology, behavioural ecology or zoology. Experience with statistical modelling, quantitative genetics and/or genomics would be a plus but is not required.

We offer a stimulating working atmosphere with other young enthusiastic researchers studying related aspects

of animal reproductive biology with other insect model systems. Working language in the group is English with notions of German being not essential but advantageous in daily life. The PhD candidate will be co-supervised by Dr. Tim Janicke and Prof. Klaus Reinhardt with scope for extensive collaboration with colleagues at the ETH Zurich, CNRS Montpellier, and the University of Cambridge. Within the predefined project aims, the successful candidate will have the flexibility to use different experimental approaches depending on his/her experience and interest in developing new technical skills (such as behavioural experiments, meta-analysis, molecular work, bioinformatic analysis of genomic data), and is welcome to develop and pursue his/her own ideas.

This is a three-year position funded by the German Research Foundation (DFG). Monthly net salary will be around 1400 EUR (after taxes and health insurance) according to Remuneration level 13 (65%) of the Wage Agreement for Public Service in the Federal States (TV-L).

Dresden is a vibrant city with more than 500 000 inhabitants including about 40 000 students. Called "Florence at the Elbe", Dresden is known for its architecture and world-renowned art museums, theatres, and opera house. Moreover, its beautiful surroundings are among the most spectacular hiking and climbing areas in Germany.

If you are interested, please send (i) a cover letter outlining your research interests together with a statement of why you are applying for this position, (ii) your CV, and (iii) contact information of two referees willing to write a letter of recommendation, all collated into a single PDF to tim.janicke@cefe.cnrs.fr. For any further questions regarding the position and/or application, please do not hesitate to contact me.

Application deadline is January 15th 2019 and interviews will take place shortly after. The ideal starting date of the position is May 1st 2019 but is negotiable.

Tim Janicke

Centre d'Ecologie Fonctionnelle et Evolutive CNRS-UMR 5175 1919 Route de Mende 34293 Montpellier Cedex 05 France

Phone: ++33 (0) 4 67 61 32 17 Fax: ++33 (0) 4 67 61 33 36

email: janicke.tim@gmail.com home: http://timjanicke.wordpress.com/ Tim Janicke <janicke.tim@gmail.com>

UAntwerp CichlidAdaptationGenomics

PhD position in Cichlid Fish Evolutionary Genomics in the Svardal lab at the University of Antwerp

Application deadline January 13, 2019

The Svardal lab at the University of Antwerp (Belgium) has a PhD position available in evolutionary genomics of Lake Malawi cichlid fishes and is looking for talented and highly motivated candidates to start in April 2019 (starting date negotiable).

The hundreds of closely related but ecologically diverse species of Lake Malawi cichlids provide an exceptional model to study the genomic mechanisms involved in rapid adaptation and diversification. We are working on understanding both the fundamental evolutionary processes involved in the formation of new species and the molecular basis of adaptive phenotypes. Our main scientific approach is the analysis of large-scale genome sequencing data using population genetic and statistical genomic techniques. Recently, we have also established experimental populations of Lake Malawi cichlid fishes, aiming to study physiological and behavioural phenotypes involved in rapid adaptation to heavy fishing pressure. PhD topics include:

- Understanding the role of old genomic variation in rapid adaptation. We have recently found that Lake Malawi cichlids harbour genomic regions of exceptionally high genetic diversity (Svardal et al., in preparation). This project focuses on analysing recent whole-genome sequencing data of hundreds of Lake Malawi cichlid fish species to infer the evolutionary origin of genomic regions of high genetic diversity. Accordingly, we seek to test whether the ancestor of Lake Malawi cichlids obtained these genetic variants by hybridisation with a divergent lineage of cichlid fish and whether this variation has been maintained by balancing selection. Secondly, population genetic methods will be used to identify the role of these genetic variants in ecological adaptation and speciation.

- Uncovering the genetic basis of recent adaptation to intensive fishing using museum genomics. Besides their role as a model system in speciation research, Lake Malawi cichlids are food for millions of people, and suffer a recent and strong increase in fishing pressure. Some cichlid populations have seemingly adapted their life

histories to intense fishing by maturing at substantially smaller sizes compared to less intensively fished populations. This project involves analysing genome sequencing data from museum collections spanning 130 years in order to identify genetic variants, genes, and molecular pathways evolving in response to fisheries-induced selection. Together with differential gene expression analysis and trait mapping in laboratory populations (optionally as a separate project) this will yield unprecedented insight into the molecular and phenotypic responses to fishing, a question of global importance.

Desired qualifications - Master's degree in Biology, Mathematics, Computer Science, or a related field - Understanding of the basic principles of population genetics and strong motivation to develop further quantitative skills in this field - Some experience with computational data analysis, statistics, and programming (e.g., R, Python, command line) and strong motivation to acquire further skills in these fields

We offer - An attractive doctoral scholarship for 4 years (contingent on positive evaluation after 2 years) - Great genomic and computational resources and fish facilities - Funds for conference travel and the option to engage in field work in Africa - A stimulating, international working environment

To apply, use the UAntwerpen Job portal following this link:

https://www.uantwerpen.be/en/jobs/vacancies/ap/-2018bapdocproex349/ – Hannes Svardal Research Professor in Evolutionary, Ecological and Environmental Omics Department of Biology University of Antwerp

Campus Groenenborger, room U758 hannes.svardal@uantwerpen.be

Svardal Hannes <Hannes.Svardal@uantwerpen.be>

UArizona HostParasiteEvolution

Last chance: Graduate student opportunities in the evolutionary genetics of host-parasite interactions at the University of Arizona

The Schlenke Lab studies host-parasite interactions using Drosophila (fruit flies) as model hosts. We are developing parasitoid wasps, which lay their eggs in fly larvae and consume their hosts from the inside out, as model parasites. Flies mount cellular and behavioral defense responses against wasps, but wasps have adaptations for finding host fly larvae, suppressing host cellular immunity, and manipulating host behavior. We use a variety of "omics" tools to understand the molecular genetics of fly cellular immunity and wasp virulence, as well as patterns of host immunity and pathogen virulence coevolution across fly and wasp phylogenies. For more information, visit our lab website at: https://cals.arizona.edu/research/schlenke/ If you are interested in our lab please contact Todd Schlenke (schlenke@email.arizona.edu). Candidates may apply through the Entomology and Insect Science (EIS) Graduate Program (https://insects.arizona.edu/) or the Ecology and Evolutionary Biology Graduate Program (https://eeb.arizona.edu/grads). The application deadline for both programs is December 1st.

Dr. Todd Schlenke Associate Professor University of Arizona Department of Entomology Department of Ecology and Evolutionary Biology https://cals.arizona.edu/-research/schlenke/ 520-621-7167

Todd Schlenke <schlenke@email.arizona.edu>

UCologne PlantEvolutionaryGenomics

Dear all, we are currently looking for a highly motivated PhD student interested in plant evolutionary genomics at the University of Cologne, Germany. The newly establishing "Crop Evolution" group at the Botanical Institute and the Cluster of Excellence on Plant Sciences (CEPLAS) studies the evolution and adaptation of crops. We use population and quantitative genetics to understand how wild plants became crops and how these crops

spread across the globe. Our models are maize and amaranth. More on www.cropevolution.org In this project, we will study the reasons for incomplete domestication of grain amaranth, an ancient crop from the Americas. Amaranth is an interesting model to study domestication, genome evolution, and crop adaptation. The crop has been cultivated for millennia, but the genomic and phenotypic signatures of amaranth domestication differ from highly domesticated crops that originated from single domestication event. The history of cultivated amaranth includes multiple incomplete domestication events with frequent and ongoing gene flow from wild relatives. We will develop and study experimental populations as well as analyze whole genome sequencing data from germplasm collections to understand the evolutionary history of amaranth. We will employ population genetic and quantitative genetic methods to study the domestication history of amaranth.

Your tasks: Analyze genomic and phenotypic data of wild and domesticated amaranth, carry out greenhouse experiments and produce experimental populations, participate in the development of the project and contribute ideas, write and publish scientific articles.

Your profile: M.Sc. in Biology or related discipline, background in population genetics, quantitative genetics, bioinformatics or equivalent, interest in evolutionary questions and plants research, bioinformatics skills (Unix and at least one programming language, e.g. R, Python) are highly desired, experience with genomic data analysis (preferred), excellent oral and written communication skills in English (working language is English, no German skills required).

The position is available from April 1st, 2019 on a part-time basis (65%). It is limited to 3 years. If the applicant meets the relevant wage requirements and personal qualifications, the salary is based on remuneration group 13 TV-L of the pay scale for the German public sector.

The University of Cologne promotes equal opportunities and diversity in its employment relations. Women are expressly encouraged to apply and given priority in accordance with the Equal Opportunities Act of North Rhine-Westphalia (Landesgleichstellungsgesetz V LGG NRW). We expressly welcome applications from individuals with severe disabilities or people of equivalent status. Severely disabled applicants of equal merit and qualifications will be given priority.

Please send your application, including a letter describing your interests and motivation, your CV, and contact information of at least one referee, by email (as single PDF) with the reference number 1812-16 to Dr. Markus Stetter (crop-evolution@uni-koeln.de). Reviewing will start after January 20th, 2019, but the position remains open until filled.

Markus Stetter <mgstetter@gmail.com>

UDebrecen EvolutionAvianFlight

The evolution of avian flight: an aerodynamic perspective

PhD Studentship at the University of Debrecen, 2019-2021 Supervisors: Dr. Adam Z. Lendvai & Dr. Gareth Dyke

The aim of this interdisciplinary research project is to understand the aerodynamic constraints and conditions that have shaped the evolution of avian flight and will draw on palaeontology, evolutionary biology, ecology, and engineering. The PhD candidate is expected to use a combination of theoretical modelling, empirical work (including wind-tunnel experiments) and phylogenetic comparative analyses to understand the aerodynamics of non-avian theropod dinosaurs and early birds. The PhD candidate will collect data across the theropod-early bird phylogenetic tree, sampling taxa from within the diverse radiations of non-avian theropods and basal birds to assess: (i) the function of feathering on the wings, legs, and tails of theropods and basal avians; (ii) the sequence in which these characteristics were evolved, modified, and then finally lost within the basal avian radiation, (iii) the aerodynamic function of diverse lifting surfaces in relation to phylogeny and ecology in modern birds.

This project combines a variety of approaches, and provides opportunities to perform exciting experiments using cutting-edge engineering facilities and technologies to understand fundamental questions in evolutionary biology. The project therefore offers a great opportunity to learn new skills for the PhD student.

We are looking for a highly motivated student with a background either in physics or in biology and with the willingness to venture to new fields to combine existing knowledge with new approaches. The candidate should have a good command of English (written and verbal). A condition of the application is a Masters degree (or equivalent) in biology, zoology, physics, biophysics or similar subject.

The student will be based at the University of Debrecen (https://unideb.hu/en), the largest university in Hungary, which has a strong international community.

Students from eligible countries can apply for a scholarship at the ºStipendium Hungaricum± (www.stipendiumhungaricum.hu). Interested candidates should contact the lead supervisor, Dr Adam Z. Lendvai (az.lendvai@gmail.com). Applications that include a CV and a max 2 page cover letter with personal motivation and the name and contact details of two references should be sent to Dr Lendvai. Deadline of application: 31 December 2018, but students interested in applying for the Stipendium Hungaricum scholarship are encouraged to contact the supervisor earlier.

– Adam Z. Lendvai associate professor Dept. of Evolutionary Zoology University of Debrecen Egyetem tr 1. 4032 Debrecen Hungary http://web.unideb.hu/lendvai Tel: +36 52 512900/62525

az.lendvai@gmail.com

UDebrecen HormonalRegulationAvianLifeHistories

The role of IGF-1 signaling in regulating avian life-histories

PhD Studentship at the University of Debrecen, 2019-2021 Supervisor: Dr. Adam Z. Lendvai, University of Debrecen

The evolution of lifespan is a topic of paramount importance in our life and in evolutionary theory as well. Recent advances in molecular biology have revealed that an evolutionarily conserved hormonal signaling pathway, the insulin/insulin-like growth factor pathway may play an important role in the regulation of lifespan and the trade-off between reproduction and survival. However, much less is known about the role of these mechanisms in free-living organisms, and very little is known about their role in life-history regulation in birds.

We are seeking a highly motivated PhD student who would be interested to study this question as part of an international team. The PhD student is expected to investigate how IGF-1 signaling and related physiological mechanisms regulate reproduction and mortality using a combination of observational, experimental and phylogenetic comparative approaches: including (1) cross-sectional and longitudinal sampling within species (2) investigating interspecific variation using phylogenetic comparative analyses. This project is expected to produce new, significant scientific results that may affect our understanding the evolution of proximate mechanisms driving the diversity of life histories.

This project combines an ecological, evolutionary and physiological perspective, therefore the PhD position provides a great opportunity to learn new skills. A comprehensive training will be provided comprising specialist scientific training and generic transferable lab and professional skills. The ideal candidate has an affinity for both lab- and fieldwork. The candidate should have a Masters degree (or equivalent) in biology, zoology or similar subject. A good command of English (written and verbal) and the ability to work in team are required. Interest in data analysis using R, experience in ornithology, bird handling and ringing, a valid drivers license will be an advantage.

The student will be based at the University of Debrecen (https://unideb.hu/en), the largest university in Hungary, which has a strong international community. Students from eligible countries can apply for a scholarship at the ºStipendium Hungaricum± (www.stipendiumhungaricum.hu). For more information, interested candidates should contact Dr Adam Z. Lendvai (az.lendvai@gmail.com). Applications must include a CV and a max 2 page cover letter with personal motivation and the name and contact details of two references. Deadline of application: 31 December 2018, but students interested in applying for the Stipendium Hungaricum scholarship are encouraged to contact the supervisor earlier.

– Adam Z. Lendvai associate professor Dept. of Evolutionary Zoology University of Debrecen Egyetem tr 1. 4032 Debrecen Hungary http://web.unideb.hu/lendvai Tel: +36 52 512900/62525

az.lendvai@gmail.com

UEdinburgh SelfishGenes

Dear all,

I would like to advertise a PhD project on the evolutionary and reproductive genetics of insects in my lab at the University of Edinburgh starting October 2019 https://scholar.google.co.uk/citations?user=-hTtM8jkAAAAJ&hl=en. There are funding options for both UK and international students. If you are interested please contact me directly (laura.ross@ed.ac.uk) to discuss. Deadlines vary depending on funding source (13th of December for non-UK, 10th of January for UK), but please contact me at least a week before the official

deadline if interested!

https://www.ed.ac.uk/e4-dtp/how-to-apply/our-projects/project/67 The evolution of a 'selfish' chromosome

Dr Laura Ross (laura.ross@ed.ac.uk) and Dr Konrad Lohse (School of Biological Sciences, IEB, University of Edinburgh)

A project summary

Selfish chromosomes increase their transmission to future generations at the expense of other genes in the genome. This project studies how they affect the reproduction and evolution of an insect.

Project background

Selfish genetic elements are stretches of DNA that increase their own transmission to future generations at the expense of other genes in the genome. Such elements are widespread, yet how they increase their transmission and affect the evolution of the species in which they are found remains poorly understood [1]. The aim of this project is to understand these questions by studying the behaviour of a 'selfish' B chromosome in mealybugs [2] – small plant-feeding insects (figure 1a). This chromosome is not essential to the survival of these insects and is actually harmful as it reduces their fertility. Instead the chromosome spreads through populations by manipulating male reproduction to increase the rate at which it is included in sperm (figure 1b). However, not all individualds seem equally affected and some show resistance against the B chromosome, possibly limiting its spread [3] (figure 1c).

Key research questions

The aim of this project is to understand how a 'selfish' chromosome spreads through populations. How it manipulates the insect's reproduction to its own benefit and how it affects the evolution of resistance alleles in populations where it occurs. The tractability of the study system and the genetic tools provide a unique opportunity to understand how selfish genetic elements can shape the way animals reproduce.

Methodology and timeline

This project will combine laboratory experiments, microscopy, gene expression and genome analyses. There is also scope for tracking the evolution of the B chromosome in natural populations.The first year of the PhD will focus on training in the required techniques and generating sequence data, the second and third years will involve conducting large- scale laboratory experiments and possibly collecting and analyzing wild specimens.The final year will focus on finishing the analyses and preparing manuscripts to disseminate the results

Training

A comprehensive training programme will be provided comprising both specialist scientific training and generic transferable and professional skills. Specifically the student will undertake training in the use of molecular wet lab techniques, the analysis of sequencing data and the use of microscopy and cytogenetic approaches.

Requirements

Candidates must be highly motivated with a keen interest in evolutionary biology and genetics and a strong motivation to pursue a scientific career. Previous experience with genetic techniques and genomic and/or theoretical analyses would be an advantage.

Further reading

[1] Hurst, G. D., & Werren, J. H. (2001). The role of selfish genetic elements in eukaryotic evolution. Nature Reviews Genetics, 2(8), 597.

[2] Ross, L., & Shuker, D. M. (2009). Scale insects. Current Biology, 19(5), R184- R186.

[3] Nur, U., & Brett, B. L. H. (1988). Genotypes affecting the condensation and transmission of heterochromtic B chromosomes in the mealybug Pseudococcus affinis. Chromosoma, 96(3), 205-212.

Dr Laura Ross NERC Independent research fellow Institute of Evolutionary Biology Ashworth Laboratories Charlotte Auerbach Road City Edinburgh Post Code EH9 3FL

ROSS Laura <Laura.Ross@ed.ac.uk>

UExeter 3 EvolutionaryBiology

Dear Colleagues,

I would like to draw your attention to three PhD studentships currently advertised at the University of Exeter (UK), all at the interface of evolutionary biology and the physical sciences, all to a large extent supervised by myself (Wolfram Moebius). All projects can and should be shaped by and with the student. Deadline for applications is 7th January, 2019. Follow links for details.

1: The physical properties of a marine microbe, its virus, and their environment V and their effects on the

co-evolutionary dynamics

http://www.exeter.ac.uk/studying/funding/award/-?id327 This project at the interface of evolutionary biology and physics will be lab-based, but interested students are encouraged to take on related theoretical and/or computational questions.

2: Evolutionary dynamics of expanding populations as random walks in inhomogeneous media

http://www.exeter.ac.uk/studying/funding/award/-index.php?id388 http://www.exeter.ac.uk/codebox/-phdprojects/Bertolotti-EPSRC-DTP-Project.pdf This theoretical project provides a unique opportunity to work at the interface of evolutionary biology and the physics of wave propagation. The student will be embedded in both a life science and a physics of metamaterials community, providing the prospect for gaining a very broad research experience.

3: Hindering evolution of resistance to pesticides through optimizing landscape structure and application practise:

http://www.exeter.ac.uk/studying/funding/award/-index.php?id388 http://www.exeter.ac.uk/codebox/-phdprojects/Moebius-EPSRC-DTP-Project.pdf This project combines the basic question on how landscape structure affects evolutionary paths with an application in the agricultural industry, the management of evolution of resistance to pesticides. The PhD will include co-supervision by as well as a placement at Syngenta.

Any questions, please do not hesitate to email: w.moebius@exeter.ac.uk

Wolfram Moebius

"Moebius, Wolfram" <W.Moebius@exeter.ac.uk>

UExeter 5 AnimalBehaviour

Dear all

We are currently advertising five fully funded NERC PhD studentships in the Centre for Research in Animal Behaviour (CRAB) at the University of Exeter, to start in September 2019: https://psychology.exeter.ac.uk/-research/centres/crab/studentships/ .These are for the following projects:

1. Social isolation in macaques, supervised by Dr Lauren Brent (http://www.exeter.ac.uk/studying/funding/-award/?id317)

2. Family dynamics in killer whales, supervised by Prof. Darren Croft (http://www.exeter.ac.uk/-studying/funding/award/?id344)

3. Effects of light pollution on bees, supervised by Natalie Hempel de Ibarra (http://www.exeter.ac.uk/-studying/funding/award/?id348)

4. Courtship in fiddler crabs, supervised by Dr Tim Fawcett & Dr Safi Darden (http://www.exeter.ac.uk/-studying/funding/award/?id318)

5. Pheasant diet and its ecological impacts, supervised by Dr Joah Madden (http://www.exeter.ac.uk/-studying/funding/award/?id310)

The deadline for applications is 7 January 2019. Please contact the relevant supervisor for further information.

Dr Tim W. Fawcett Room 124b Centre for Research in Animal Behaviour Washington Singer Laboratories University of Exeter Exeter EX4 4QG United Kingdom

+44 7789 126382 (mobile) +44 1392 725273 (office)

t.w.fawcett@exeter.ac.uk

www.timwfawcett.com T.W.Fawcett@exeter.ac.uk

UExeter Cornwall DiseaseEcolEvolution

NERC GW4+ funded CASE PhD studentship (3.5 years)

'Is biodiversity good for your health? Birds as bioindicators of Lyme disease risk"

Location: University of Exeter, Penryn Campus, Cornwall, UK, with secondments at the partner institutions

Supervision: Dr Barbara Tschirren (University of Exeter), together with Dr Kate Plummer (British Trust for Ornithology), Dr Jolyon Medlock (Public Health England), and Dr Sarah Perkins (Cardiff University)

Brief project outline

Using a citizen science approach this project will establish the UK-wide distribution of ticks and Borrelia, and identify the ecological factors driving spatial variation in disease risk. A special focus of the project will be on the relationship between bird biodiversity and Lyme disease risk. The outcomes will improve our understanding of the value of biodiversity for human health. This is a collaborative project between the University of Exeter,

the British Trust for Ornithology (BTO), Public Health England (PHE) and Cardiff University. The student will obtain training and gain experience in project design, the coordination and management of large-scale citizen science projects, public outreach, molecular laboratory techniques (e.g. (q)PCR, sequencing), ecological modelling, statistical data analysis and scientific publishing.

Funding

This project is one of a number that are in competition for funding from the NERC Great Western Four+ Doctoral Training Partnership (GW4+ DTP). For further details about the programme please see http://nercgw4plus.ac.uk/ For eligible students, the studentship will provide funding of fees and a stipend which is currently GBP 14,777 per annum for 2018-19. Students from EU countries who do not meet the residency requirements may still be eligible for a fees-only award but no stipend. Applicants who are classed as International for tuition fee purposes are not eligible for funding.

More information and online application: http://-www.exeter.ac.uk/pg-research/money/award/?id338 Deadline: Mon Jan 7th 2019

Informal inquiries: b.tschirren@exeter.ac.uk

Barbara Tschirren Senior Lecturer in Evolutionary Ecology University of Exeter

www.biosciences.exeter.ac.uk Centre for Ecology and Conservation, College for Life and Environmental Sciences Penryn Campus, Treliever Road, Penryn, Cornwall, TR10 9FE, UK

B.Tschirren@exeter.ac.uk

UExeter Cornwall EvolutionGenetics

NERC GW4+ funded studentship available on "The lottery of life: How chance shapes the evolutionary dynamics of wild populations"

Location: University of Exeter, Penryn Campus, Cornwall, UK

Supervision: Dr Erik Postma (University of Exeter), together with Prof David Studholme (University of Exeter) and Prof Michael Bruford (Cardiff University)

Brief project outline:

Despite a large body of theory describing how genetic variation and selection shape evolutionary trajectories, theoretical predictions are often at odds with what we observe in the real world. Being able to understand the source(s) of this discrepancy would significantly advance our understanding of the evolutionary process and provide a much-needed understanding of the ability of population to persist in a world changing at unprecedented rates. However, as of yet we lack a comprehensive understanding of the importance of stochastic versus deterministic (but unknown) processes in shaping the evolutionary dynamics of populations.

In this project, you will quantify the importance of stochasticity in shaping the evolutionary dynamics of wild populations using a combination of long-term individual-based morphological, life-history, pedigree and genomic data to obtain a a unique insight into the genomics of adaptation in a wild vertebrate and the evolutionary process in general.

Funding:

This project is one of a number that are in competition for funding from the NERC Great Western Four+ Doctoral Training Partnership (GW4+ DTP). The GW4+ DTP consists of the Great Western Four alliance of the University of Bath, University of Bristol, Cardiff University and the University of Exeter plus five Research Organisation partners: British Antarctic Survey, British Geological Survey, Centre for Ecology and Hydrology, the Natural History Museum and Plymouth Marine Laboratory. For further details about the programme please see http://nercgw4plus.ac.uk/ For eligible students, the studentship will provide funding of fees and a stipend which is currently 14,777 per annum for 2018-19. Students from EU countries who do not meet the residency requirements may still be eligible for a fees-only award but no stipend. Applicants who are classed as International for tuition fee purposes are not eligible for funding.'

Application deadline: Midnight on 7 January 2019

More information and how to apply:

Email me at e.postma@exeter.ac.uk and have a look at:

http://www.exeter.ac.uk/studying/funding/award/-?id339 https://www.findaphd.com/phds/project/-the-lottery-of-life-how-chance-shapes-the-evolutionary-dynamics-of-wild-populations/?p102017 http://-erikpostma.net – Erik Postma Senior Lecturer in Evolutionary Biology University of Exeter

www.biosciences.exeter.ac.uk Centre for Ecology and Conservation, College for Life and Environmental Sciences Penryn Campus, Treliever Road, Penryn, Cornwall, TR10 9FE, UK

E.Postma@exeter.ac.uk

UExeter-Cornwall SocialEvolution

NERC GW4+ funded studentship available on "Developing to Help: Understanding Social Specialization in Cooperative Societies'

Location: University of Exeter, Penryn Campus, Cornwall, UK

Supervision: Dr Bram Kuijper (University of Exeter), together with Dr Sinead English (University of Bristol), Prof Jeremy Field (University of Exeter) and Prof Stuart Townley (University of Exeter).

Brief project outline:

When and how should cooperatively breeding animals decide whether to become helpers or reproductives? Cooperative breeders exhibit a broad variety of developmental trajectories, ranging from eusocial insects with irreversible specialization as queens versus workers, to vertebrates where individuals flexibly revert from helping to reproduction. Between those extremes lies a continuum of variation in social flexibility. Making sense of this variation is essential to understand the developmental basis of cooperation, yet testable predictions are currently lacking.

In this project, you will use a combination of evolutionary theory and field experiments to understand the development of social behaviours, with the balance between theory and experiment to be determined by the student's interests. Field experiments will take place in the UK (sweat bees) and/or Ecuaduor (silk wasps).

Funding: This project is one of a number that are in competition for funding from the NERC Great Western Four+ Doctoral Training Partnership (GW4+ DTP). The GW4+ DTP consists of the Great Western Four alliance of the University of Bath, University of Bristol, Cardiff University and the University of Exeter plus five Research Organisation partners: British Antarctic Survey, British Geological Survey, Centre for Ecology and Hydrology, the Natural History Museum and Plymouth Marine Laboratory. For further details about the programme please see http://nercgw4plus.ac.uk/ For eligible students, the studentship will provide funding of fees and a stipend which is currently 14,777 per annum for 2018-19. Students from EU countries who do not meet the residency requirements may still be eligible for a fees-only award but no stipend. Applicants who are classed as International for tuition fee purposes are not eligible for funding.'

Application deadline: Midnight on 7 January 2019

More information and how to apply:

Email me at a.l.w.kuijper@exeter.ac.uk and have a look at:

http://www.exeter.ac.uk/studying/funding/award/?id345 https://www.findaphd.com/search/ProjectDetails.aspx?PJID2018 http://ecoevo.net – Bram Kuijper Leverhulme Early Career Fellow University of Exeter

www.biosciences.exeter.ac.uk Centre for Ecology and Conservation, College for Life and Environmental Sciences Penryn Campus, Treliever Road, Penryn, Cornwall, TR10 9FE, UK

A.L.W.Kuijper@exeter.ac.uk

UHouston EcologyEvolution

GRADUATE OPPORTUNITIES IN ECOLOGY AND EVOLUTIONARY BIOLOGY

The Department of Biology and Biochemistry at the University of Houston (UH) welcomes applications for its graduate program in Ecology & Evolutionary Biology for Fall 2018. The following faculty in the areas of Ecology and Evolutionary Biology have opportunities available for their labs:

Alex Stewart (astewar6@central.uh.edu): Mathematical biology Blaine Cole (bcole@uh.edu): Evolution and social behavior Dan Graur (dgraur@uh.edu): Molecular evolutionary bioinformatics Diane Wiernasz (dwiernasz@uh.edu): Sexual selection Erin Kelleher (eskelleher@uh.edu): Evolutionary genetics and genomics George Fox (fox@uh.edu): Experimental evolution and origin of life Kerri Crawford (kmcrawford3@uh.edu): Community ecology Rebecca Zufall (rzufall@uh.edu): Evolutionary genetics Ricardo Azevedo (razevedo@uh.edu): Evolutionary genetics Rich Meisel (rpmeisel@uh.edu): Evolutionary genetics and genomics Mary Ann Ottinger (maotting@central.uh.edu): Avian biology and environmental chemicals Steve Pennings (spennings@uh.edu): Community ecology Tony Frankino (frankino@uh.edu): Evolution of complex traits

If you are interested, you should look at the relevant faculty members' web sites and then contact them directly

for more information:

http://www.uh.edu/nsm/biology-biochemistry/people/-faculty/faculty-alpha/ For more information regarding the Evolutionary Biology and Ecology graduate program at UH see:

http://www.bchs.uh.edu/graduate/prospective-students/ http://www.uh.edu/graduate-school/-prospective-students/how-to-apply/ If you have any questions regarding the application process, please contact:

Ms. Rosezelia Jackson (biograd@central.uh.edu)

The early deadline for application of prospective students is February 1st, 2018. Evaluation will continue after that date, but students are encouraged to apply as early as possible.

Ricardo B. R. Azevedo, PhD Associate Professor Associate Chair for Graduate Affairs Dept. Biology & Biochemistry University of Houston 369 Science & Research 2 Houston, TX 77204-5001 Tel: 713-743 4149 Fax: 713-743 2636 Email: razevedo@uh.edu

"Azevedo, Ricardo" <razevedo@Central.UH.EDU>

UKent CanterburyUK RuminantGenomics

Fully funded PhD studentship in School of Biosciences, University of Kent, Canterbury, UK

Title: Investigating the co-evolution of chromosome organisation and gene expression Closing date: 18th January 2019 Informal enquiries to: Dr Marta Farré ' M.Farre-Belmonte@kent.ac.uk

Project Description Our lab aims to study genome evolution and the genetic changes associated with individual and species differences, applying the newest comparative and functional genomic techniques and the great wealth of genomic data available. In particular, we focus on the dynamics of chromosomal evolution in mammals and other vertebrates. Although genome and chromosome evolution have long been studied, we still know very little about the functional consequences of these changes and the role they might have played during evolution. To address these questions, we use rodents and ruminants as model species and take a multidisciplinary approach that combines experimental and bioinformatic analysis.

This project will focus particularly on how genomic changes between closely related ruminant species might affect gene expression. To do so, the student will first detect genomic changes in ruminants using an algorithm designed in our lab. Then, they will generate and analyse RNA-Seq data for two tissues of cattle, sheep and red deer, to finally integrate their results with the gross genomic changes.

The candidate: We are seeking a highly motivated individual, excited by the prospect of conducting cutting-edge research, with a minimum of 2:1 degree in a relevant subject. She/he will have a strong willingness to work at the interface of wet-lab and bioinformatics, and demonstrate enthusiasm to learn new skills. Funding: This is funded by the Graduate Teaching Assistantship (GTA), which provides financial support in return for 96 hours of teaching per year. The stipend paid equals the full UK Research Council rate of pounds 14,777 (rate for 2018/19) plus tuition fees at the Home/EU rate. International applicants should make provision to meet the difference between Home/EU and International fees. For further information on the Graduate Teaching Assistantship scheme go to: https://www.kent.ac.uk/-scholarships/search/FNADGTA00001 How to apply: Applications can be made using the online University application page where the project title should be entered as the proposed area of research and Dr Marta Farré Belmonte as supervisor. Please include a CV and a cover letter. Applications must be received by 18 January 2019. The start date is September 2019.

Please apply here: https://www.kent.ac.uk/courses/-postgraduate/how-to-apply/#research Marta Farré Belmonte, PhD Lecturer in Molecular Biosciences Stacey Building G17 School of Biosciences University of Kent

ORCID: https://orcid.org/0000-0001-9170-5767 Lab web: http://www.farre-evogenomicslab.com/ M.Farre-Belmonte@kent.ac.uk

ULaval CaribouGenomics

GradStudent Position : Caribou SNP-Chip validation for wildlife forensics

This project aims to validate a new genomic tool for population assignment of caribou in a wildlife forensics context. The validation of the tool implies the population genomic characterization of regional and fine scale groupings as well as assessing the power of assignment and the strength of evidence provided to court. In order

to complete a proper wildlife forensics validation, the candidate will test the tool for sensibility, reproducibility and specificity.

The candidate will be base in Dr. Claude Robert's Lab at University Laval in the health science department and co-supervised by Dr. Vincent Bourret and Dr. Steeve D. Côté. University Laval is a French speaking institution so candidates should be ready to learn French in order to complete the master program. The University offers a great opportunity to learn or perfect a second language in a magnificent environment. University Laval is located in beautiful Québec city, the only fortified city north of Mexico and a UNESCO World Heritage treasure. Spectacular landscapes are just minutes from town.

We are looking for a highly motivated student interested in mastering skills in population genetics, bioinformatics, molecular ecology and wildlife forensics. Interested candidates are invited to send a motivation letter and curriculum vitae to:

Claude.Robert@fsaa.ulaval.ca or Vincent.Bourret@mffp.gouv.qc.ca

The project could start as early as January 2019.

Cheers,

Vincent Bourret Biologiste, Ph.D. Laboratoire d'expertise biolégale Direction du soutien aux opérations Direction générale de la protection de la faune Ministère des Forêts, de la Faune et des Parcs vincent.bourret@mffp.gouv.qc.ca mffp.gouv.qc.ca

Vincent.Bourret@mffp.gouv.qc.ca

ULeeds UK Marine eDNA

Understanding marine predator habitat use in the Mediterranean Sea through eDNA

A competitive PhD studentship is available in the School of Biology, University of Leeds, UK through the NERC Panorama Doctorial Training partnership (DTP) (https://www.nercdtp.leeds.ac.uk/), with closing date 7th January, 2019.

The studentship is open to European Union and UK students, with a minimum of a 2.1 undergraduate degree (or equivalent) in Biology, Zoology, Ecology, Genetics, Marine Sciences, Biodiversity, Evolution, Bioinformatics, Maths & Biology or related area.

Supervisors: Dr Simon Goodman (s.j.goodman@leeds.ac.uk), https://-biologicalsciences.leeds.ac.uk/school-of-biology/staff/-73/dr-simon-goodman; http://www.goodmanlab.org) Dr Elena Valsecchi, University of Milano-Bicocca, Italy (elena.valsecchi@unimib.it)

Project summary Understanding how animals use their habitats in relation to environmental and ecological factors is fundamental to basic ecological studies, evaluating potential exposure to impacts from human activities, and assessing species vulnerability to climate and ecosystem change. Such knowledge is also vital for spatial conservation planning, including determining where to site protected areas and evaluating how species might interact with existing protected areas. Marine vertebrates are particularly challenging to study because they are highly mobile, are often in remote areas, and are difficult to observe directly. However, tagging and telemetry studies, combined with the growing availability of remote sensing data and novel spatial statistical tools, is allowing the development of large scale habitat usage for many marine predator species. Such models are becoming increasingly important for marine spatial planning. However, such studies are potentially limited by expense, logistical challenges, and data collection may be focused on relatively small numbers of focal species.

In recent years rapid development of high throughput DNA sequencing technology has facilitated sensitive new approaches to quantifying biodiversity in environmental samples, such as soil and water, collectively known as environmental-DNA (eDNA). These techniques give

new ways to detect single species of interest, or to profile species communities from trace amounts of DNA shed into the environment. In the context of marine ecosystems, eDNA may offer complementary and sometimes alternatives to other established approaches such as telemetry and population surveys to evaluating the spatial distribution of biodiversity. Potential benefits include the ability to survey for multiple species simultaneously, and across time series and large spatial areas at relatively low cost.

In this project we will develop and validate new eDNA tools targeted to monitoring marine vertebrates (with a focus on cetaceans, and large predatory fish), and apply them to evaluate spatial and temporal variation in habitat use by the focal species in the Mediterranean Sea, and assess to what extent eDNA based surveys correlate with conventional methods for monitoring marine biodiversity. The work is a collaboration between Dr Simon Goodman (University of Leeds, UK) and Dr Elena Valsecchi (University of Milano-Bicocca, Italy) within the framework of the MeD for Med project, an initiative to develop and apply eDNA to biodiversity monitoring in the Mediterranean Sea.

With support from Italian shipping companies, and marine mammal observer programmes (run by ISPRA, Italian Higher Institute for Environmental Conservation and Research), we will use passenger ferries traversing Mediterranean routes as mobile sampling platforms. These routes are ideal since they traverse many known marine biodiversity hotspots, and collaboration with marine mammal observer programmes allow cross checking of eDNA results against visual detections of cetaceans. In addition we will also undertake systematic sampling of other locations based on existing published data and models of Mediterranean marine biodiversity, to evaluate the predictive capacity of eDNA tools. Ultimately such eDNA tools have potential to become an essential part of biodiversity monitoring tool kits, with direct implication for conservation management, and evaluating environmental impacts from human activities.

Research context and partners This project is part of a collaboration involving researchers from the University of Leeds and University of Milano-Bicocca, Italy. The student will join the Ecology and Evolution group in the School of Biology, Leeds, and will be integrated with the LIDA and Leeds Omics, virtual institutes which encompass a large group of researchers working on genomics and bioinformatics related projects. The student will also spend significant

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To read the entire message look it up at http://life.biology.-mcmaster.ca/~brian/evoldir.html

UMaryland EcologicalEvolutionaryGenomics

The *Gugger Lab < http://research.al.umces.edu/-pgugger >* at the University of Maryland Center for Environmental Science (UMCES) is seeking a motivated Ph.D. or M.S. student to develop a thesis project on ecological, evolutionary, or conservation genomics of trees. The lab uses next-generation sequencing approaches to understand how populations of long-lived trees respond evolutionarily to environmental change at various time scales, the molecular basis of local adaptation, the factors influencing population genetic variation, the role of hybridization in adaptation, and implications for conservation under global change.

The graduate student will matriculate through the Marine, Estuarine, and Environmental Sciences (MEES) Graduate Program *(http://mees.umd.edu/)* and will reside at the Appalachian Laboratory in scenic Frostburg, MD (*http://www.umces.edu/al*) for the duration of the degree. Expected starting date is Fall 2019 or sooner.

To apply, please first email Paul Gugger (*pgugger@umces.edu*) a single PDF containing (1) a statement of interest, (2) a CV, and (3) contact information for three references. Please indicate 'Genomics graduate position' in your subject line.

UMCES is an affirmative action, EOE. Individuals with disabilities, veterans, women and minorities are encouraged to apply.

Assistant Professor University of Maryland Center for Environmental Science Appalachian Laboratory (301) 689-7161 <callto:301-689-7161> research.al.umces.edu/pgugger/

pgugger@umces.edu

UmeaU EvolutionOfMulticellularity

Overview: A Ph.D. studentship in mathematics as related to modeling the evolution of multicellularity is available in the research group of Eric Libby at Umeå University in Sweden (http://ericlibby.github.io/). Candidates should have some quantitative background with an interest in building mathematical models of biological systems.

Background for the project: The evolution of multicellularity is considered a major transition for the evolution of life on earth that made possible significant increases in organismal complexity. Somehow single-celled organisms, who were successful in their own right, evolved to form new kinds of individuals composed of many cells, multicellular organisms. While multicellularity has evolved on dozens of independent occasions, these events occurred millions of years ago and are absent from the fossil record. Recent experiments, however, have made it possible to study this pivotal event in the lab by using microorganisms to evolve primitive multicellularity de novo. Such experimental systems provide excellent opportunities to test hypotheses about the conditions that govern major transitions and facilitate the evolution of additional forms of complexity.

Goal of the PhD project: The goal of this project is to develop mathematical models that marry theory with empirical results to uncover general principles of how life evolves to be complex. Useful modeling techniques include differential equations, network approaches, agent-based simulations, evolutionary analyses, and probabilistic models.

Qualifications: Candidates need to be skilled in both oral and written communication in English, and should be able to work independently as well as in collaboration with others. Certain coursework is needed in mathematics (contact Eric or see job posting for detailed information). Candidates need to have proficiency, but not necessarily documented, in working with computers and programming, e.g. in Matlab, Python, Julia, C++, etc. A good background in mathematics, optimization, differential equations, computer science, and/or programming is qualifying. Interest and knowledge of evolutionary biology, microbiology, and/or molecular biology is desirable but not necessary.

Apply: To apply visit the website: https://umu.mynetworkglobal.com/en/what:job/jobID:240085/ Questions: If there are any questions please contact Eric Libby at: Eric Libby Umeå University elibbyscience@gmail.com

Eric Libby <elibbyscience@gmail.com>

UNeuchatel ModellingMicrobialInteractions

I am looking to recruit a PhD student to work on mathematical modelling of microbial interactions, including bacteria growth in biofilms, bacteria dispersal through fungal hyphae networks, and bacteria-fungi interactions under different nutritional conditions, in the University of Neuchâtel, Switzerland. The student will be co-supervised by Prof. Redouan Bshary and/or Prof. Pilar Junier.

Bacteria are powerful in breaking down chemicals and thus have great potentials in treating polluted soils, but they cannot disperse in the soil without water, and this limits the applications of bioremediation of polluted soils. Recently, it is found that bacteria can disperse in the liquid layer on the surface of fungal hyphae. The fungal hyphae networks are like a 3D highway system that connects vast areas in the soil, providing potentially a very efficient way for bacteria to disperse. But unlike the highways we're familiar with, the fungal highways are living organisms and they interact with bacteria in complex ways. In the PhD project we will find out how bacteria spread through fungal hyphae networks, and whether the interactions between fungi and bacteria promote or impede the dispersal. In addition, we will study how nutrients influence the interactions between fungi and bacteria. Our pilot experiments have already shown that the nature of interactions between fungi and bacteria can change with the concentrations of nutrients. As fungi and bacteria involve in many different types of interactions, they can cooperate and compete at the same time, it is interesting to find out how a mixture of different types of nutrients affect the interactions between fungi and bacteria. Understanding the effects of nutrients can help us find ways to manipulate fungi-bacteria interactions in the way that we want.

The PhD project involves both experiments (20%) and modelling (80%). The successful applicant should have a Master's degree in mathematics, physics, biology, or another related field. A prerequisite is a keen interest in both mathematical modelling and understanding real biological systems. Good quantitative skills are essential.

Experience in mathematical modelling and knowledge of a programming language is an advantage. Experience in microbiology experiments is preferred but not required, since the lab skills required by the experiments are basic and can be learned quickly. The candidate needs to be fluent in English.

To apply, please send an email to < li@evobio.mpg.de > by December 31, 2018 (later inquiries might also be considered). Please include in your email a statement including 1) your research interests and career plan, 2) a brief overview of your previous academic and research experiences, and explain how your background fits with the project, 3) a CV or resume, and 4) a list of 2 to 3 academic references with their names and email addresses.

The position is funded by the Swiss National Science Foundation with a competitive salary for 4 years. The starting date is negotiable but must be before July 1st, 2019.

For more information about the project, please send me an email.

Email: li@evolbio.mpg.de Website: http://web.evolbio.mpg.de/ ~ li/ Xiangyi Li <li@evolbio.mpg.de>

UNewcastle ComputationalBiology

Three exciting fully funded PhD positions on Rubisco improvement funded by Doctoral Training Partnerships of BBSRC, NERC and EPSRC are available at Newcastle University (UK) https://www.ncl.ac.uk/, which will suit computer scientists and molecular biologists alike. Rubisco is one of the bottlenecks of photosynthesis, which curbs crop productivity, and a long time standing challenge to scientists. You have an exciting opportunity to pick the right ratio of molecular biology to computer science depending on the project. All three projects will start in October 2019 and will be synergistic to each other and to research in collaborators labs.

BBSRC DTP: Designing better Rubisco for crops: Predicting effects of amino acid substitutions on Rubisco kinetics using machine learning Application deadline: 11 January 2019. Full details: https://www.findaphd.com/search/projectDetails.aspx?PJID=103561&LIDE77 NERC DTP: Modelling effects of climate change on photosynthetic enzymes to find solutions for future food and environmental security Application deadline: 21 January 2019. Full details: https://www.findaphd.com/phds/project/modelling-effects-of-climate-change-on-photosynthetic-enzymes-to-find-solutions-for-future-food-and-environmental-security/?p105212 EPSRC DTP: Using cold adapted photobionts to improve photosynthesis in economically important organisms Application deadline: 31 January 2019. Full details: https://www.ncl.ac.uk/sage/research/phd-opportunities/engineering-physical-sciences/#epsrc Please contact Maxim for more information. Email: maxim.kapralov@ncl.ac.uk

Maxim.Kapralov@newcastle.ac.uk

UOttawa 3 ComparativePhysiology

COMPARATIVE BIOMECHANICS AND MUSCLE PHYSIOLOGY Using muscle activation patterns to understand motor control across amphibious systems. MSc/PhD Position University of Ottawa Ottawa, Canada Starting SUMMER/FALL 2019 The Standen Lab and the University of Ottawa is looking for an MSc/PhD student interested in Comparative Biomechanics of animal locomotion. This project is part of a larger Human Frontiers of Science Program Grant in collaboration with two international bio-robotics labs. This student will be part of a team working to provide biological data on muscle activation patterns across different environmental settings. A successful candidate will have skills in high-speed videography, electromyography and/or kinematic analysis in animals. This student will work as part of a team of researchers using high speed video, electromyography and other in vivo muscle physiology techniques on amphibious animals to gain information about how motor control patterns change in novel environments. Please contact Prof. Emily Standen estanden@uottawa.ca with your CV, unofficial transcript and a brief (1 paragraph) statement of interest. I am happy to meet with interested students at the 2019 SICB Meeting in Tampa. Please contact me in advance to schedule a meeting at SICB or to arrange a Skype or in person visit to uOttawa.

COMPARATIVE BIOMECHANICS AND HYDRODYNAMICS Wake structures under different neuro-control patterns across animal taxa. PhD Position University of Ottawa Ottawa, Canada Starting SUMMER/FALL 2019 The Standen Lab and the University of Ottawa

has a PhD position available for a student interested in the hydrodynamics of natural systems. This project involves using PIV to visualize flow fields and wake structures in live swimming animals. This student will be part of a team working in collaboration with robotics engineers to provide biological data on force production in biological systems under normal and altered neurocontrol patterns. This project is part of a larger Human Frontiers of Science Program Grant in collaboration with two international bio-robotics labs with a goal to understand how force feedback influences motor control across amphibious locomotory systems. The project may grow to involve flow visualization of robots during swimming. A successful candidate will have experience with flow visualization (PIV), hydrodynamics and/or animal biomechanics. Please contact Prof. Emily Standen estanden@uottawa.ca with your CV, unofficial transcript and a brief (1 paragraph) statement of interest. I am happy to meet with interested students at the 2019 SICB Meeting in Tampa. Please contact me in advance to schedule a meeting at SICB or to arrange a Skype or in person visit to uOttawa.

COMPARATIVE BIOMECHANICS AND MUSCLE PHYSIOLOGY The impact of novel environments on the plasticity of muscle function. MSc/PhD Position University of Ottawa Ottawa, Canada Starting SUMMER/FALL 2019 The Standen Lab and the University of Ottawa has an MSc/PhD position available for a student interested in the plasticity of muscle function. This project involves using in vitro muscle tissue performance measures to quantify the effect of novel environments at the tissue level. This project uses amphibious animal models across diverse taxa (centipedes to salamanders) to understand how changing environmental force feedback changes muscle fiber type and function. This project is part of a larger Human Frontiers of Science Program Grant in collaboration with two international bio-robotics labs with a goal to understand how force feedback influences motor control across amphibious locomotor systems. A successful candidate will bring knowledge in muscle physiology (force length curves, work loops etc.), experience quantifying mechanical properties of isolated muscle and an interest in mechanical testing and general animal biomechanics. Please contact Prof. Emily Standen estanden@uottawa.ca with your CV, unofficial transcript and a brief (1 paragraph) statement of interest. I am happy to meet with interested students at the 2019 SICB Meeting in Tampa. Please contact me in advance to schedule a meeting at SICB or to arrange a Skype or in person visit to uOttawa.

Emily Standen estanden@uottawa.ca Office: D'Iorio 205 Lab: D'Iorio 225 613-562-5800 ext. 6044

University of Ottawa *Department of Biology* Gendron Hall Room 160 30 Marie Curie Ottawa ON Canada K1N 6N5

Emily Standen <estanden@uottawa.ca>

UQueensland EvolutionAntibioticResistance

The Engelstaedter Lab at The University of Queensland, Brisbane, Australia, invites applications for a PhD position in microbial evolution. The successful candidate will work on a fully funded project investigating the evolutionary genetics of multidrug resistance in bacteria. The aim of the project is to gain a better understanding of distributions of fitness effects of resistance mutations and their epistatic interactions as well as the repeatability and predictability of resistance evolution. Methods to be employed include high-throughput fitness assays, whole genome sequencing, experimental evolution and mathematical modelling. This is a joint project with and will be co-supervised by Dr Isabel Gordo (Gulbenkian Institute, Portugal). For more information about our research, please visit www.engelstaedterlab.org and www.igc.gulbenkian.pt/-igordo . We are looking for a highly motivated student with a strong background in evolutionary biology, population genetics and/or microbiology. Applicants should possess a Bachelor's degree with Honours, Master of Science, MPhil or equivalent. Good communication skills, quantitative skills, scientific curiosity and enthusiasm for research in evolutionary biology are essential. The successful applicant will receive a living stipend ($27,596 per annum), plus a tuition fee waiver and overseas student health cover.

The School of Biological Sciences is a large and research-intensive unit at the University of Queensland, one of Australia's most prestigious universities. Brisbane is the third-largest city in Australia and offers mild subtropical climate, vibrant cultural life, plenty of outdoor activities and native wildlife.

Interested applicants should send a cover letter, CV, academic transcript, names and contact details of two referees and a brief outline of their research interests to j.engelstaedter@uq.edu.au. Screening of applicants will begin 21/1/2019. Informal enquiries are welcome.

Dr Jan Engelstädter ARC Future Fellow & Senior Lec-

turer School of Biological Sciences The University of Queensland Brisbane QLD 4072 Australia

phone: +61 7 336 57959 fax: +61 7 336 51655 www.engelstaedterlab.org

j.engelstaedter@uq.edu.au

UQueensland EvolutionaryGenomics

PhD POSITIONS IN EVOLUTIONARY GENOMICS OF SPECIATION

We are looking for two PhD students to join the Daniel Ortiz-Barrientos and Jan Engelstädter labs during 2019. Application deadline: January 31, 2019.

Daniel and Jan, together with Takeshi Kawakami were recently awarded an Australian Research Council (ARC) grant to study the "Evolution of the recombination landscape during speciation." We would like to invite applications from students with quantitative skills (in development) who are interested in that mystery of mysteries: the origin of new species. We are particularly interested in students who are keen to explore how recombination might evolve when populations diverge in the face of gene flow, and how this may affect patterns of genomic diversity and divergence.

With his group, Daniel has developed a great system of study for adaptation and speciation. The daisy Senecio lautus is a complex of taxonomic species that occurs in Australia and occupies multiple environments. Of note, there are two coastal ecotypes that have evolved repeatedly and independently multiple times, and with varying degrees of limited gene flow. Using these replicates, a recently sequenced genome, and multiple linkage maps, students will explore both theoretically and empirically the evolution of recombination rates in this system.

We expect the candidate to work closely with Daniel, who is an expert on genetics and ecology of adaptation and speciation, Jan, who is an expert on the evolution of recombination, and Taki, who is an expert on population genomics of speciation. Students are expected to think deep, to be up to date with the literature, to go to conferences and mingle, to learn coding and mathematics (to the required degree to accomplish the research to a high standard), to be or fall in love with language, and to position themselves as great speakers. We expect students to share their efforts with the scientific community freely via public data depositories, GitHub, R-packages etc., and to pursue writing for the general audience while being insightful for their immediate peers.

Students in our laboratories are free to independently explore ideas around the major scope of the ARC grant, and are encouraged to collaborate with other students. We value creative minds, people who are great team players, and have strong work ethics and integrity. We like people that want to become better scientists and better people at the same time, and that will strive for balance in their day-to-day lives without losing perspective of the big picture. We provide a warm and supportive environment and take seriously the needs and wishes of everyone in the lab, while at the same time striving to inspire everyone to do their best they can. So far, students who have graduated from our labs have always secured postdoctoral positions, and everyone has found a path inside or outside academia. We would work with each one of you to find your path as well, and to let you leave our labs being an evolutionary geneticist whose skills, discipline and imagination can help change the h orizon of any job you pursue.

LINKS TO RESEARCH WEBSITES

Daniel: www.ortizbarrientoslab.org Jan: https://engelstaedterlab.org Taki: http://-kawakamit.wixsite.com/kawakami SCHOOL OF BIOLOGICAL SCIENCES AT UQ

Students will be joining the School of Biological Sciences (BIOL) at The University of Queensland, in Brisbane, Australia. The school is recognised as one of the most successful biology schools (departments) in Australia, with 43 full-time academic staff, $>$ 40 post-doctoral researchers, and over 200 enrolled PhD students. The School has broad expertise across ecology and evolution, molecular and quantitative genetics, paleobiology, developmental biology, plant and animal physiology, and conservation biology. Research programs in the school involve a diverse array of taxa, ranging across microorganisms, animals and plants, take advantage of model and non-model organisms and many include a strong quantitative and modelling focus. The School of Biological Sciences strives for an equitable, inclusive and family-friendly working environment. The School is committed to provide an academic environment understanding of a reasonable work-life balance. Further information and details of the research interests of academic staff may be accessed on the schools web site at https://biological-sciences.uq.edu.au . LIFE AT UQ

While at UQ, students will have access to great research facilities including greenhouses, molecular biology labs, high performing computer clusters, and many wonderful places to writing and chatting science. Their offices are not inside laboratories, and are often shared by more than one laboratory. UQ life is pleasant, the campus is

beautiful and you want to

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USwansea SocialEvolution

There are several funded PhD opportunities available at the moment to work with me (Dr Hazel Nichols) at the Universties of Swansea and/or Bielefeld.

First, I am looking for students with excellent CVs (first class degree and/or distinction at Masters level, plus relevent experience) to apply for a doctoral scholarship at Swansea University https://www.swansea.ac.uk/-postgraduate/scholarships/research/swansea-university-research-excellence-scholarships-phd-2019.php .The topic of the PhD is flexible so this is a great opportunity to design your own project! I can provide opportunities investigating topics such as scent communication, inbreeding, mating/social systems, cooperation and conservation genetics in a variety of species (e.g. banded mongooses, meerkats, mole-rats, hedgehogs, pilot whales, social spiders and scorpions). Take a look at my website https://hazelnichols.weebly.com/ for further details. Deadline 4th January but contact me well in advance of this.

If you're interested, send me an email (h.j.nichols@swansea.ac.uk), sending me your CV, and we can discuss ideas.

Second, along with Dr Jamie Winternitz, we are advertising for a PhD studentship in scent communication in wild banded mongooses (see http://evol.mcmaster.ca/ ~ brian/evoldir/-GradStudentPositions/BielefeldU.BehavEvolEcol). The student will investigate genetic mechanisms behind scent communication, including the involvement of the MHC and microbiome. There will be the opportunity for both field work in Uganda and lab work in Germany. Deadline 15th December.

Best wishes,

Hazel

"Nichols H.J." <h.j.nichols@swansea.ac.uk>

UVienna Austria AncientDNA

PhD position at the Department of Evolutionary Anthropology, University of Vienna, Austria

PhD candidate will join a newly established group by Dr. Elmira Mohandesan at the Department of Evolutionary Anthropology at the University of Vienna. The project will be conducted in close collaboration with Prof. Joris Peters (LMU Munich), and Prof. Ludovic Orlando (University of Toulouse and University of Copenhagen). Data generation and analyses will require traveling to both collaborators labs.

Project Description: Humans have been crossbreeding wild and domestic members of the family Equidae for millennia, as illustrated by archaeological, iconographic and written sources. First-generation equine hybrids are, however, generally sterile. Maintaining such stocks thus required considerable wealth, and detecting when and how such practices developed during history can provide important information about the organization of past societies. This project aim at elucidating local breeding practices and the contribution of hybrid equine populations exploited in Germany and Austria in pre-Roman and Roman times. It will apply a multidisciplinary approach combining standard morphology with Geometric Morphometrics (GMM) and state-of-the-art methods in ancient DNA research aimed at the detection of hybrids, and possibly, at the characterization of both parental stocks. For more information please see https://-/www.anthropology.at/news-press-releases/ . Candidate Background: We are seeking a highly motivated candidate with background in molecular biology, population genetics, bioinformatics or equivalent. Proficiency in written and spoken English is required. Bioinformatics skills (Unix, R, and Python languages) are highly desired. Direct experience with ancient DNA is highly desired. Ability to work in a highly-international and multi-disciplinary team. Prospective student should demonstrate a desire to learn, work independently, and multi-task.

Terms of employment: Science Fund: Austrian Science Fund (FWF) Duration: three years, provided that the first year is successful (trial period) Start: anticipated as June 2019

How to apply: To apply for this position, please send your CV, letter of interests and at least one letter of recommendation to elmira.mohandesan@univie.ac.at and

elmira.mohandesan@gmail.com. The applications will be reviewed immediately, and after initial selection the successful candidates will go through either the MFPL PhD selection (www.mfpl.ac.at) or the internal selection at the Department of Evolutionary Anthropology at University of Vienna.

Elmira Mohandesan, PhD Department of Evolutionary Anthropology Faculty of Life Sciences University of Vienna Althanstrasse 14 1090 Vienna Austria

Elmira Mohandesan <elmira.mohandesan@gmail.com>

UZurich ComputationalEvolBiol

PhD thesis in computational ecology and evolutionary biology

A Ph.D. studentship in computational biology is available in the laboratory of Andreas Wagner at the University of Zurich. We are looking for a researcher to study the assembly and the evolution of microbial communities using computational modeling. The project will use genome-scale metabolic models to predict the resource consumption and ecological interactions of individual microbes from first principles. Lab members have diverse backgrounds and research projects, but are unified by their interests in life's fundamental organizational principles. Ongoing projects cover a broad range of topics, including the evolution of community diversity through cross-feeding, the structure of adaptive landscapes, and the origins of genome organization (e.g., San Roman and Wagner, PLoS Comp. Bio. 2018, Hosseini and Wagner, PNAS 2018, Aguilar-Rodríguez et al., Nature Ecology and Evolution 2017).

The successful candidate will have strong mathematical or computational skills, and a background in biology, bioinformatics, computational biology, biochemistry, biophysics, or related subjects. Fluency in a major programming language, such as python is essential. Familiarity with computational models to analyze complex metabolic systems, such as Flux Balance Analysis. Applications without a demonstrated interest or research history in computational or theoretical biology will not be considered further. We are looking for an individual with a Master's Degree or equivalent, who is highly self-motivated and can work independently.

The working language in the laboratory is English. German skills, although helpful, are not essential. Zurich is a highly attractive city in beautiful surroundings, with a multinational population, and many educational and recreational opportunities.

To be considered, please send a single (!) PDF file merged from the following parts to jobs.wagner@ieu.uzh.ch: CV including publication list, academic transcripts, a statement of research interests not exceeding three pages, and contact information for three academic references. Please include the word "COMPPHD19" in the subject line. The application deadline is January 3, 2019. The position is available starting immediately.

Annette Schmid Administrative Assistant of Prof. A. Wagner / HR University of Zurich Institute of Evolutionary Biology and Environmental Studies Wagner lab, Y27-J52 Winterthurerstrasse 190 CH-8057 Zürich Switzerland Mail to: annette.schmid@ieu.uzh.ch Phone +41 (0)44 635 61 42 Fax +41 (0)44 635 61 44 at the office on Monday and Thursday

annette.schmid@ieu.uzh.ch

Vienna PopulationGenetics

The Vienna Graduate School of Population Genetics is looking for PhD students:

Over the past years, Vienna has developed into one of the leading centres of population genetics. The Vienna Graduate School of Population Genetics has been founded to provide a training opportunity for PhD students to build on this excellent on-site expertise.

We invite applications from highly motivated and outstanding students with a background in one of the following disciplines: bioinformatics, statistics, evolutionary genetics, functional genetics, theoretical and experimental population genetics. Students from related disciplines, such as physics or mathematics are also welcome to apply.

Topics include: - Contribution of transposable elements to adaption during experimental evolution. - Detection of adaptive gene introgression. - Efficient detection of variants of polygenic adaptation in Drosophila experimental evolution. - Evolution of gene expression. - Footprints of polygenic adaptation. - Functional characterization of adaptive QTLs. - Historical demography in horses. - Incipient speciation during adaptation to a new environment. - Inference of selection parameters using whole genome data. - Microbiome evolution in Drosophila. - Multi-measurement experimental evolu-

tion: How to combine evidence from different sources? - Polygenic adaptation: The roles of pleiotropy and epistasis. - Population genomic footprints and drivers of repeated trait shifts during adaptive radiation. - Sequence diversity in mammalian Y chromosomes. - The genetics of local adaptation in Arabidopsis thaliana. - The molecular basis of recurring, multi-trait adaptation to substrate. - The role of a nascent sex chromosome on interspecific patterns of allele sharing. - The sources of variation fueling adaptive radiation after long-distance dispersal. - Transposon polymorphism in Arabidopsis thaliana. - Within-species consequences of genomic interactions in ecologically important species.

Only complete applications (application form, CV, motivation letter, university certificates, indication of the two preferred topics in a single pdf) received by February 14, 2019 will be considered. Two letters of recommendation need to be sent directly by the referees. Accepted PhD students will receive a monthly salary based on currently EUR 2.112 before tax according to the regulations of the Austrian Science Fund (FWF).

All information about the about available topics, the training program and the application procedure can be found at www.popgen-vienna.at – Dr. Julia Hosp Vienna Graduate School of Population Genetics Coordinator

CALL FOR PHD STUDENTS OPEN! www.popgen-vienna.at https://twitter.com/PopGenViennaPhD c/o Institut fur Populationsgenetik Veterinärmedizinische Universität Wien (Vetmeduni Vienna) Veterinärplatz 1, 1210 Wien

T +43 1 25077 4338 F +43 1 25077 4390

http://www.vetmeduni.ac.at/en/population-genetics/ https://twitter.com/PopGenVienna julia.hosp@gmail.com

Vienna Wolbachia-fruitFlyGenomics

A PhD position is available to study the endosymbiont Wolbachia in invasive cherry fruit flies. The project is funded by the Austrian Science Fund (FWF) for three years.

The eastern cherry fruit fly Rhagoletis cingulata is an important economic pest species infesting cherry species in its native range in North America. It was recently introduced to Europe where it co-infests cherries with the native European cherry fruit fly Rhagoletis cerasi. The shared habitat of the two insect species resulted in the horizontal transmission of a Wolbachia strain from R. cerasi to R. cingulata. The project aims to study the early stages of Wolbachia transmission and the spread of the endosymbiont in nature. Moreover the project focuses on the invasion history of the fly and the potential consequences of the new Wolbachia infection for invasion success of its host. Our research objective will be accomplished by whole genome sequencing of different Wolbachia strains and by studying the spatial and temporal distribution of the newly acquired endosymbiont in natural populations. We will determine the introduction routes of R. cingulata performing extensive genomic characterization of native and invasive fly populations and perform crossing studies to study the phenotypic effects of the endosymbiont.

The project will be in collaboration with Lisa Klasson (Uppsala University, Sweden) and Jeff Feder (University of Notre Dame, USA) and will be performed in the lab of Christian Stauffer (Boku, Vienna).

The ideal candidate will have a strong interest in entomology and molecular ecology. Experience in the application of molecular methods and in generating and analyzing next-generation sequencing data are helpful. General requirements for the position are a MSc degree in Biology, Evolution or in a related field. The candidate should have excellent communication skills and should be fluent in English. The working language in the laboratory is English. German skills, although helpful, are not essential. PhD candidates have to enrol at Boku www.boku.ac.at/en/ . The position is based at the University of Natural Resources and Life Sciences, Boku https://www.boku.ac.at/ in Vienna. Salary is according to the standard personnel costs of the FWF https://-www.fwf.ac.at/en/research-funding/personnel-costs/ . To apply, please send an application letter detailing research background and research interests, your CV, and the contact information of at least two references to hannes.schuler@unibz.it. The position is available immediately, but the starting date is negotiable. Review of applications will begin immediately and continue until the position is filled.

For informal inquiries, please contact Hannes Schuler hannes.schuler@unibz.it.

References:

Schuler H, Bertheau C, Egan SP et al. (2013) Evidence for a recent horizontal transmission and spatial spread of Wolbachia from endemic Rhagoletis cerasi (Diptera: Tephritidae) to invasive Rhagoletis cingulata in Europe. Molecular Ecology, 22, 4101'4111.

Schuler H, Köppler K, Daxböck-Horvath S et al. (2016)

The hitchhiker's guide to Europe: the infection dynamics of an ongoing Wolbachia invasion and mitochondrial selective sweep in Rhagoletis cerasi. Molecular Ecology, 25, 1595'1609.

Dr. Hannes Schuler Faculty of Science and Technology Free University of Bozen-Bolzano Universitätsplatz 5 I-39100 Bozen Tel: +39 0471 017648 https://-sites.google.com/view/hschuler

Schuler Hannes <Hannes.Schuler@unibz.it>

Jobs

ArizonaStateU EvolutionMedicine-Inflammation

Initial closing date December 7th

The Center for Evolution & Medicine (CEM) and the School of Life Sciences (SOLS) at Arizona State University (ASU) invite applications for a full time open-rank, tenured or tenure-track faculty position. Rank and tenure status will be commensurate with experience. The anticipated start date is August 2019. JOB# 12629

Preferred research topics include immunology, inflammation or autoimmune disease. Other possible topics include research on physiological systems, infectious disease, or aging. All approaches are welcome including field, clinical, and/or lab-based research. Clinical relevance and potential collaborations in clinical settings are encouraged. Preference will be given to candidates

whose research plans hold promise of major advances that demonstrate why evolutionary biology is essential for medicine or public health. Experience or an interest in teaching evolutionary medicine and otherwise contributing to developing the field is desired. This position is part of an institutional initiative to advance the field of evolutionary medicine. Under the direction of Randolph Nesse, the Center for Evolution & Medicine (CEM) seeks to improve human health by establishing evolutionary biology as a basic science for medicine, worldwide. In an institution that rewards transdisciplinary research and innovation, the CEM currently includes faculty members from the School of Life Sciences, School of Human Evolution and Social Change, the Department of Psychology, and the School of Mathematical and Statistical Sciences, as well as researchers from ASUs Complex Adaptive Systems Initiative and clinical partnerships with the Mayo Clinic and Banner Hospitals. For more information on the CEM, please visit http://evmed.asu.edu/. Newly remodeled space for CEM offices and laboratories encourages collaborations between members of its highly interdisciplinary group. The CEM provides support for visiting speakers, workshops, research collaborations, and extensive web resources for the worlds evolution and medicine community. The successful candidate will be expected to develop or maintain an innovative, independent, extramurally funded research program, provide excellent classroom instruction, contribute to curriculum development, mentor students and postdoctoral fellows, interact with a transdisciplinary group of colleagues, and provide service to the department, college and university. A competitive start-up package will be provided. Minimum Qualifications: a doctoral degree or an MD by the time of appointment, and a track record of research that uses evolutionary biology to address questions about health and disease. Candidates for rank of Associate or Full Professor must have a demonstrated record of significant extramural funding. Desired Qualifications: postdoctoral experience, publications in refereed journals, demonstrated excellence in teaching and/or mentoring, experience working in a transdisciplinary environment; demonstrated success meeting the needs of diverse student populations and/or reaching out to diverse communities. To apply, please submit the following materials within a single PDF document to solsfacultysearch5@asu.edu: (1) a cover letter that specifies the rank for which you seek consideration and why this position is a good fit for you, (2) curriculum vitae, (3) three representative publications, (4) a statement of research vision and plans, (5) a statement of teaching philosophy/experience and (6) contact information (name, email and telephone number) for three references. Only electronic applications will be considered. The initial closing date for receipt of complete applications is December 7, 2018; if not filled, review will continue every week thereafter until the search is closed. A background check is required for employment. For additional information, please feel free to contact Randolph Nesse (nesse@asu.edu) or James Collins (jcollins@asu.edu). Arizona State University is a VEVRAA Federal Contractor and an Equal Opportunity/Affirmative Action Employer. All qualified applicants will be considered without regard to race, color, sex, religion, national origin, disability, protected veteran status, or any other basis protected by law. ASUs full non-discrimination statement (ACD 401) is located on the ASU website at https://www.asu.edu/aad/manuals/acd/acd401.html and https://www.asu.edu/titleIX Randolph Nesse <nesse@asu.edu>

CentreCollege 2 TeachingEvolution

Visiting Assistant Professors of Biology

Centre College invites applications for two visiting assistant professor positions in Biology (one-year and two-year) to begin in August 2019. We seek teacher-scholars who will enhance the learning and teaching environment at Centre College with their lived experience, ideas, perspectives, and scholarship. Candidates must have a Ph.D. in the biological sciences or related field by the time of appointment, demonstrate a commitment to excellence in teaching at a nationally-ranked liberal arts college, and have qualifications that match the following criteria: For the one-year position: an evolutionary biologist who can teach evolution, introductory biology and its associated lab, and an additional class in the candidate's area(s) of interest. For the two-year position, a candidate with expertise in genetics who can teach an introductory genetics course and its associated lab, introductory biology and its associated lab, and additional classes in the candidate's area(s) of interest. Collaborative research with undergraduates is encouraged and supported. The program strongly encourages applications from candidates who have experience teaching and mentoring a diverse student body

Centre College is committed to an environment that welcomes and supports diversity. Centre strives to create an environment where differences are celebrated rather than discouraged, where the individuals have the opportunity to exchange ideas and share in the richness of mutual experiences. For more information on diversity at Centre, please view our Statement of Com-

munity < http://www.centre.edu/about/centre-facts/-statement-of-community/ >. Centre College is a highly selective liberal arts college of about 1,450 students, has one of the nation's premier study abroad programs and is ranked among the top fifty National Liberal Arts Colleges by U.S. News & World Report. Classes are small and academic standards are high. Centre graduates enjoy extraordinary success, with entrance to top graduate and professional schools, prestigious fellowships for further study abroad, and rewarding jobs. The College is located in Danville, Kentucky, a town of 18,000 recognized for its high quality of life. It is within easy driving distance of Lexington, Louisville, and Cincinnati. For information concerning the college, visit our web site at www.centre.edu . To apply, please go to http://apply.interfolio.com/58854 to submit a letter of application that includes your cover letter, CV, transcripts, three letters of recommendation, teaching philosophy, research interests and a statement that explains the importance of diversity and inclusion and how you would contribute to and/or address issues of diversity and inclusion at Centre. Review of applications will begin February 1, 2019. Centre College is an Equal Opportunity Employer.

mark.galatowitsch@centre.edu

DukeU AssociateinResearch Biology

Job: DukeU.AssociateinResearch.Biology

*An Associate in Research position is available, starting in January 2019, in the Tung lab at Duke University. *

The Tung lab studies the relationship between behavior, the social environment, and genetics and genomics. We combine detailed phenotypic and demographic information with modern genomic data sets on gene regulation and epigenetics. Current projects focus on the epigenetic signature of early life ecological and social adversity; gene regulatory mechanisms linking social adversity and health in rhesus macaques; trade-offs associated with helper-breeder transitions in meerkats and mole rats; and the genomic and phenotypic consequences of hybridization in wild baboons.

The ideal candidate will have previous experience with cell culture and aseptic technique, and will be familiar with basic molecular techniques such as DNA/RNA extraction and library preparation for high-throughput sequencing. We are also interested in the ability to work independently and the ability to multi-task. Attention to detail and careful record keeping are essential.

In addition to performing wet lab work as described above, duties will also include responsibility for day-to-day logistics, such as ordering and receiving, working with trainees in the lab, and exporting/importing irreplaceable samples to/from our field sites.

Requirements: bachelor's degree, 1-2 years of experience in a research laboratory (not just a lab class), and familiarity with the fundamentals of molecular biology.

Position is for 40 hrs/week, and will last 12 months, with the possibility of renewal contingent on performance and availability of funding.

For more information about the lab and our work, see: *http://www.tung-lab.org/ If interested, please apply via academicjobsonline.org (job #12885). You will need a copy of your CV and contact information for 3 references.

Duke University is an Affirmative Action/Equal Opportunity Employer committed to providing employment opportunity without regard to an individual's age, color, disability, gender, gender expression, gender identity, genetic information, national origin, race, religion, sex, sexual orientation, or veteran status. Duke also makes good faith efforts to recruit, hire, and promote qualified women, minorities, individuals with disabilities, and veterans.

tawni.voyles@duke.edu

FieldMuseum Chicago CollectionsManagerOfInsects

Collections Manager, Insects Field Museum of Natural History Chicago, IL USA

The Field Museum houses one of the world's largest collections of biological specimens. The Insect Collection's holdings of worldwide Arthropoda (excluding Crustacea) rank fifth in overall size among North American collections with over 12.5 million specimens and are of worldwide importance for many groups. The collection presently includes roughly 4.2 million pinned insects plus 8.4 million specimens or lots in alcohol or on microscope slides. In addition, there are over 17,000 partly sorted 'bulk samples' from traps or leaf-litter extractions. The collection receives heavy use by Field Museum scientists and US and international research visitors and borrowers as well as extensive educational

use.

Applications should be submitted by February 1, 2019.

Applicants should include a CV, which includes names and contact information for three references, as well as a cover letter that further explains their qualifications and experience that make them uniquely qualified for this position, as well as their vision for the position.

Duties and Responsibilities: The Collection Manager reports to the Head of Zoological collections and will supervise a staff managing day-to day activities in the insect collection. The Collection Manager will work jointly with curators to set long and short-term priorities for management of the Insect collections. The Collection Manager will also interact with other collections areas, research scientists, exhibits, and education staff. The Collection Manager will have opportunities to seek funding for collections improvements and specimen-based research projects. The successful candidate will be evaluated on their ability to promote, study, build, care for, and ensure accessibility to the great wealth of specimens in the collection.

- Managing digitization efforts; including transcription of label data, imaging specimens, georeferencing, species inventory, and development and evaluation of workflows and standards to ensure best practices - Oversight of incorporating new material into the collection, preparing, sorting, and identifying specimens - Tracking and reporting metrics of collection use and growth - Managing the insects collection budget - Coordinating an active loan program and on-site use of the collection by researchers - Support for the museum's public programming and promoting the mission of the museum and its fundraising goals - Training, mentorship, and supervision of staff, interns, and volunteers in the collection

Qualifications: PhD (with an emphasis in Entomology) with collections experience is preferred, or equivalent combination of education and experience, e.g., Masters in Biology (with an emphasis in Entomology) with at least 3 year's collections experience, A well-versed background in Entomology is required, including familiarity with other Entomology collections and research, Knowledge of taxonomic principles and Entomology collection management, Strong organizational skills necessary to keep collection accessibleAmple experience with collection databases, imaging systems, and data aggregators is required, as well as a strong history of managing digitization projects, Working knowledge of international and domestic regulations for shipment of specimens and requirements for packing loans, Strong history of building and managing a diverse team of staff, interns, and volunteers; Training, mentorship, and supervision of staff, interns, and volunteers in their collection-related duties, Developing grant proposals for collections projects in collaboration with curators Incorporating new material into a collection, including preparing, sorting and identifying newly collected material, labeling and integration of specimens

Caleb D. McMahan, Ph.D. Collections Manager, Fishes Field Museum of Natural History 1400 S. Lake Shore Drive Chicago, IL 60605 Ph: 312-665-7994 Fax: 312-665-7391 https://www.calebdmcmahan.com/ Caleb McMahan <cmcmahan@fieldmuseum.org>

Frankfurt Genomics

Job offer ref. # 12-18018

The Senckenberg Gesellschaft fÃ‚Â¼r Naturforschung (SGN) is a member of the Leibniz Association and is based in Frankfurt am Main, Germany. LOEWE Centre for Translational Biodiversity Genomics (LOEWE-TBG) is a joint venture of the Senckenberg Gesellschaft fÃ‚Â¼r Naturforschung (SGN), Goethe-University Frankfurt, Justus-Liebig-University Giessen and Fraunhofer Institute for Molecular Biology and Applied Ecology IME aiming to intensify biodiversity genomics in basic and applied research. We will establish a new and taxonomically broad genome collection to study genomic and functional diversity across the tree of life and make genomic resources accessible for societal-demand driven applied research.

The Senckenberg Gesellschaft fÃ‚Â¼r Naturforschung and the LOEWE-TBG invite applications for a

Lead Bioinformatician (m/f/d) for high-throughput genome assembly and annotation (100%)

Your tasks:

* Lead a team of bioinformaticians to develop, maintain and run high- throughput pipelines for the assembly and annotation of de novo genomes from diverse eukaryotes * Implementing and documenting the work-flow from receiving data, issue assembled genomes to users and archiving data in public databases * Communication with user groups, service providers and external database managers

Your profile:

* PhD in Bioinformatics or related subjects * Experience with de novo genome assembly of non-model organisms and developing large scale, high-throughput procedures for de novo genome assembly and annotation * Proven

understanding of comparative genomics or evolutionary biology research preferably in non-model organisms * Familiarity in leading a service orientated unit and excellent communication skills

What is awaiting you?

* A central role in an innovative large-scale genomics project * A motivated and dynamic team of international researchers at an internationally recognized biodiversity research institution * An opportunity to build a central research and service unit within LOEWE- TBG and Senckenberg * Excellent opportunities to expand your scientific network across disciplines * Flexible working hours ' annual special payment ' company pension scheme " 30 days holidays

Salary and benefits are according to a full time public service position in Germany (TV-H E14/15) according to qualification and experience). The contract should start as soon as possible and will initially be limited for two years. The Senckenberg Gesellschaft fÃÂ¼r Naturforschung support equal opportunity of men and women and therefore strongly invites women to apply. Equally qualified handicapped applicants will be given preference. The place of employment is in Frankfurt am Main, Germany. The employer is the Senckenberg Gesellschaft fÃÂ¼r Naturforschung.

Please send your application, mentioning the reference of this job offer (ref. #12-18018) before January 15th, 2019 by e-mail (attachment in a single pdf document) and including a cover letter detailing research interests and experience, a detailed CV and a copy of your certification to:

Senckenberg Gesellschaft fÃÂ¼r Naturforschung

Senckenberganlage 25

60325 Frankfurt am Main

E-Mail: recruiting@senckenberg.de

Mit freundlichen GrÃÂ¼ÃÂen / Best Regards

Jessica Helm Personalsachbearbeiterin

SENCKENBERG Gesellschaft fÃÂ¼r Naturforschung (RechtsfÃÂhiger Verein gemÃÂÃÂ Â§22 BGB) Senckenberganlage 25

60325 Frankfurt am Main

Besucheradresse: MertonstraÃÂe 17-21, 60325 Frankfurt am Main (1. OG)

Telefon/Phone: 0049 (0)69 / 7542 -

Leiterin Personal & Soziales - 1458 Loke, Uta

Stellv. Leiterin Personal & Soziales - 1319 Elsen, Carina

Team Personalbeschaffung (Recruiting) - 1564 di-Biase, Maria - 1313 Helm, Jessica - 1478 Gajcevic, Isabel

Fax: 0049 (0)69 / 7542-1445

Mail: recruiting@senckenberg.de

Direktorium: Prof. Dr. Dr. h.c. Volker Mosbrugger, Prof. Dr. Andreas Mulch, Stephanie Schwedhelm, Prof. Dr. Katrin BÃÂ-Gaese, Prof. Dr. Karsten Wesche

PrÃÂsidentin: Dr. h. c. Beate Heraeus AufsichtsbehÃÂ: Magistrat der Stadt Frankfurt am Main (Ordnungsamt)

Mitglied der Leibniz-Gemeinschaft

Vernetzen Sie sich mit uns:http://www.senckenberg.de/-socialmedia Jessica Helm <recruiting@senckenberg.de>

Frome UK GeneticAnthropologist PopGeneticist

Hi,

We are recruiting a genetic anthropologist / population geneticist to join the science team at Living DNA in Frome, UK to work on improving our direct-to-consumer genomic testing offerings. This is a full-time, permanent position. We are open to applicants of all experience levels. If you are interested in applying, please see https://www.indeed.co.uk/jobs?q=-living%20dna&l&vjk=cf92d0dce01a6905 or contact me at heatho@dna-worldwide.co.uk

All good things, Heath

Heath OBrien Ph.D Bioinformatician Living DNA

email: heatho@dna-worldwide.co.uk visit: www.livingdna.com Everyones DNA has a story. Living DNA delivers fascinating insights to individuals across the world by taking the complex world of DNA and distilling it into a personal, individualised narrative surrounding ancestry, health and nutrition

Were looking for a graduate in biological sciences or biological anthropology ideally with knowledge of human population genetics and genetic anthropology to join our science team. The role will involve interpretation of genetic structure analyses, effective communication the with customer support team and indirectly with individual clients. Understanding of the historical/anthropological context of results is important . Other responsibilities will include curating the contents of the user portal and the description of ancestry-related

products. There is also potential for leading projects that seek to increase our database of reference populations for ancestry inference.

This role will suit someone who has experience in using genetic data to explore the demographic history of human populations and interpreting results from standard population genetics methods. The role will also involve researching and curating anthropological and population genetics research literature to support and guide the findings of analyses carried out by the science team. The right candidate would be happy working in a dynamic start-up environment with a practical, self-motivated approach to their work.

Our expectations are for you to:

- Work side-by-side with our bioinformaticians in the science team in order to interpret population genetics analyses (i.e. genetic structure and admixture) and contextualise them in the light of the demographic history of human populations throughout the world. - Write, edit and curate contents on our website and in user portal connecting the findings from the genetic analyses with history. - Support the Customer Service and Marketing teams when specific/detailed explanations regarding the genetics and/or the history of the populations are needed. - Manage the ongoing projects regarding the collection of new samples and the acquisition of additional genetic data to improve our reference population panels. - Establish and manage relationships with academic and industry partners, as well as genealogical societies.

Requirements

If you answer yes to any of the following wed like to hear from you:

- Do you have experience using genetic data to study the history of human populations? - Are you, or could you be comfortable with basic population genetics concepts and standard statistical tools for the analysis of population structure and admixture? - Can you solidly interpret genetic data in the context of historical human migrations and other events? - Are you an enthusiast for science communication and explaining science-related concepts to different audiences? - Are you interested in developing project management skills in the context of establishing and managing relationships with partner organisations to collect and curate genetic data?

Essential Skills

- BSc in biological sciences or biological anthropology. - Experience and/or interest in project management focused on sample collection. - Experience managing and curating data (Excel and related software). - Ideally experience with interpreting results of statistical analyses for the characterisation of genetic structure and admixture (e.g. STRUCTURE/ADMIXTURE, PCA).

Advantageous attributes

- MSc or equivalent experience in human population genetics, genetic anthropology, or related fields. - Experience with advanced statistical analyses and tools for the characterization of genetic structure and admixture. - Basic knowledge of Python and/or R for statistical analyses and data visualization. Benefits

- Competitive salary based on experience - Investment in your career with multiple growth opportunities

— / —

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

HoldenArboretum Cleveland PlantCollection

We're hiring a research scientist to work with the collections at the Holden Arboretum. Would you be willing to post the following?

Holden Forests and Gardens - Research Scientist

Holden Forests and Gardens invites applications for a full-time scientist to perform research relating to Holdens living plant collections. We are particularly interested in hiring a scientist to work with and develop our woody plant collections, which include native forests as well as diverse plantings of native and non-native taxa.

The scientist will establish an internationally recognized research program related to his/her area of specialization using Holden collections. He/she should demonstrate the ability to lead a strong, independent, extramurally funded research program, and to be a spokesperson to diverse public and professional audiences.

Holden Forests and Gardens, the 13th largest public garden in the US, is comprised of two campuses: the Holden Arboretum (www.holdenfg.org) and the Cleveland Botanical Garden. The Arboretum, based in Kirtland, OH, is an American Alliance of Museums accredited institution that promotes the beauty and importance of trees and plants and encompasses over 3600 acres of gardens, documented plant collections, and natural areas The Botanical Gardens urban campus

houses both glasshouse and outdoor plant collections on its 10 acre campus. This position will be based at the Long Science Center on the Holden Arboretum campus, a modern facility comprised of 15,000 square feet of greenhouse and laboratory space. Scientists have the opportunity for academic appointments and interdisciplinary interactions with students and faculty from neighboring universities including Case Western Reserve University (www.cwru.edu), Kent State University (www.kent.edu), and The Ohio State University (www.osu.edu).

Interested applicants should have a Ph.D. in plant biology, ecology, horticulture, forestry, or related discipline; postdoctoral experience is preferred. We will begin reviewing applications on January 15, 2019. The successful candidate may begin as early as October of 2019, but the start date is flexible. Interested applicants should send a cover letter, a statement of research interests, curriculum vitae, and names and addresses of three referees combined in a single document to our online application site at

https://workforcenow.adp.com/mascsr/default/-mdf/recruitment/recruitment.html?cidÛ704977-d8c5-4be2-a36a-23f4002eddc0&jobIdH253&lang=-en_US&sourceÌ3&ccId000101_000001 Questions concerning the position should be forwarded to Dr. David Burke, Scientist and Chief Programming Officer (dburke@holdenfg.org). Holden Forests and Gardens is an Equal Opportunity Employer.

Katie Stuble <klstuble@gmail.com>

IndianaStateU Bioinformatics ComputationalBiology

Tenure-track Assistant Professor position in Bioinformatics/Computational Biology. Great collaborative potential across disciplines (Development, Evolution, Ecology, Computer Sciences). Ability to teach core courses in Biology. Programming for biologists highly desirable. Deadline for full-consideration: December 15.

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The Department of Biology at Indiana State University (ISU) invites applications for a tenure-track, Assistant Professor of Biology with a specialty in Bioinformatics. The Department of Biology is comprised of faculty with active research programs in a wide variety of specialties.

It includes popular undergraduate majors in biology and pre-med, as well as Master's and Doctoral programs; it maintains a long-standing relationship with the Indiana University School of Medicine-Terre Haute. In addition, the successful candidate will be affiliated with, and an active member of, The Center for Genomic Advocacy (TCGA), an interdisciplinary research center that supports the Master's degree in Genetic Counseling and Certificate in Genomic Advocacy. The mission of TCGA is to develop a community of genomic advocates through new academic programs, cutting-edge interdisciplinary research, public engagement, and social advocacy, provides a next-generation sequencing facility, and a cell and tissue culture facility.

We are seeking an innovative, energetic, and collaborative colleague who is committed to excellence in both scholarship and teaching. The successful candidate will be expected to develop a vibrant bioinformatics research program to address questions in regulatory genomics, comparative genomics, transcriptomics, systems biology, statistical genetics, or evolutionary biology. The ideal candidate will have a PhD (professional or postdoctoral experience is a plus) in biology, bioinformatics, or related fields, demonstrated potential for a strong research agenda either through publication record or demonstrated independent research, with either existing research funding, or strong potential to initiate and obtain funding for their research program. It is anticipated that the successful candidate will develop an externally funded research program at ISU, conduct both independent and collaborative research, provide bioinformatics advice to other faculty members in the Department of Biology and TCGA, and direct undergraduate and graduate research in her/his laboratory.

The ideal candidate will also demonstrate preparedness to teach undergraduate core courses in the Biology major as well as undergraduate and graduate courses in Bioinformatics, including relevant programming languages. Applicants enthusiastic about successful teaching and mentoring of students from all backgrounds are encouraged to apply. We are especially interested in applicants passionate about contributing to Biology programs, curricular offerings, and the departmental research portfolio in ways that enhance diversity, equity, and inclusion. The typical and expected teaching load in the Department of Biology and College of Arts and Sciences is 9 credit hours per semester for all faculty who maintain an active and productive scholarly agenda.

The successful candidate will be provided with an initial startup package to support his/her research program, including computational and/or laboratory resources commensurate with individual research needs. This will include the support of, and close collaboration with, the Department of Mathematics and Computer Science and

the Office of Information Technology, including access to ISU's high performance computing resources.

All applicants must submit their applications online at https://jobs.indstate.edu. Along with their application, candidates are required to submit a letter of interest, curriculum vita, a statement of research accomplishments/interests, a statement of teaching philosophy/excellence, unofficial doctoral transcript, and three letters of reference. Inquiries and questions may be addressed to Dr. Kyu Hong Cho and Dr. Shaad M. Ahmad, Search Committee Co-Chairs, Department of Biology, Indiana State University, IN 47809, Email: Shaad.Ahmad@indstate.edu and/or KyuHong.Cho@indstate.edu. For full-consideration, applications must be submitted by December 15.

ISU welcomes diversity and encourages applications from women and minorities. ISU seeks to recruit and retain a diverse workforce as a strategic priority and as a reflection of our diverse student body and our commitment to inclusive excellence.

Hugo F. Gante, PhD Assistant Professor Department of Biology TCGA - The Center for Genomic Advocacy Indiana State University Terre Haute, IN 47809, USA http://hugofgante.com Hugo.Gante@indstate.edu

KunmingInstBotany EvolutionaryGenomics

Research assistant and postdoc positions in Evolutionary genomics and Computational genomics

1-2 Research assistant/Postdoc positions are available in the Plant Genomics and Computational Biology Group in Kunming Institute of Botany (KIB), Chinese Academy of Sciences (CAS), Yunnan, CHINA. The successful candidates will be involved in one or several ongoing projects:

1) Analyze the genome and transcriptome sequencing data to address the evolutionary question of mitochondrial genome complexity in seed plants;

2) Integrate analyses of multi-omics datasets to investigate the evolution of gene expression and chromosome-level interactions in polyploidy plants

3) Study gene function with crisper/cas9.

Requirements:

A background in plant genomics, genetics or bioinformatics is required; Experiences with analyzing NGS sequence data and programming or genetic transformation is preferred. For research assistant position, a Master Degree in related majors is required; for Postdoc position, the Doctor Degree (or will obtain in 2018) is required.

Others:

Salary will be based on the KIB pay scale (12,000-15,000 RMB per month) and will be commensurate with experience; we will also provide a supportive environment for you to pursue your research career and enhance your competitiveness.

To apply: Please send your CV to Dr. Fan (fanweishu@mail.kib.ac.cn) or Dr. Zhu (zhuandan@mail.kib.ac.cn).

LingnanU HongKong TeachingEvolution

Assistant Professor

Science Unit, Core Curriculum and General Education Office

(Post Ref.: 18/176/W)

In August 2015, the University created a Science Unit (http://www.ln.edu.hk/ccgeo/science.php) to strengthen teaching, research, and service efforts in the area. We are looking for a productive, high-calibre scholar to broaden the scope and expertise of the Science Unit at the Assistant Professor level. An ideal candidate has experience demonstrating excellence in research and teaching in a liberal arts setting. The candidate should have interdisciplinary research interests that foster collaborations within the Science Unit and across campus, and be able to perform high-quality research in the absence of major laboratory equipment and resources. We are open to applicants from any science discipline that can foster links between the Science Unit and other departments on campus. We are looking for a colleague who relishes the challenge of joining a growing unit in a unique academic environment, so we will consider candidates from all fields of natural sciences.

The appointee should share our enthusiasm in promoting science education, and be expected to: (a) teach in the Core Curriculum; (b) develop courses in his/her areas of expertise for the 'Science, Technology, Mathematics

and Society' cluster; (c) pursue scholarship in his/her areas of expertise; (d) pursue collaborative research with members of the Science Unit and other staff members of the University; (e) enhance links and collaborations with other universities, NGOs, and industries in Hong Kong and abroad; (f) contribute to the public outreach and knowledge transfer efforts of the Science Unit; (g) contribute to the university's efforts to ensure whole-person development of students of Lingnan University; and (h) undertake other duties as assigned by the University.

General Requirements

Candidates should have (i) a PhD in a relevant natural science discipline; (ii) the ability to conduct research and publish in leading journals; (iii) evidence of well-developed, fundable, independent research projects; (iv) relevant experience in teaching, especially at the non-majors general education level; and (v) excellent interpersonal and communication skills for developing meaningful collaborations with students and colleagues in a liberal arts setting.

Lingnan University is fully committed to the pursuit of excellence in both research and teaching so appointee should demonstrate commitment to both research and teaching excellence. Candidates are required to provide information on their research records and evidence of quality teaching.

Appointment

The conditions of appointment will be competitive. Remuneration will be commensurate with qualifications and experience. Fringe benefits include annual leave, medical and dental benefits, mandatory provident fund, gratuity, housing benefits and incoming passage and baggage allowance for the eligible appointee.

Appointment will normally be made on an initial contract of three years, which, subject to review and mutual agreement, may normally lead to longer-term appointment with possibility of consideration for substantiation.

Appointment Procedure

Applicants are invited to forward their dossier which includes (1) a letter of application discussing how their areas of expertise and relevant teaching and scholarly experience make them a good fit for the Science Unit at Lingnan University, (2) a research statement, (3) a teaching statement, and together with a completed personal data sheet (Form R1 which is obtainable at http://www.LN.edu.hk/hr/employment-opportunities/application-forms) to the Human Resources Office, Lingnan University, Tuen Mun, Hong Kong by post or by email: recruit@LN.edu.hk (as attachment in MS Word format) by 28 December 2018. Applicants should provide names and contact information of at least three referees to whom applicants' consent has been given for their providing references. Please specify the post you are applying for and quote the reference number of the post in all correspondence. Shortlisted candidates may be invited for a campus visit to meet with the selection panel and to demonstrate their concerns about student learning, their abilities in teaching and curriculum development, and their plans for the development of their research programme. Personal data collected will be used for recruitment purposes only. Further information on the University and its programmes and activities can be found on the University's web site: http://www.LN.edu.hk. Enquiries can be directed to recruit@LN.edu.hk. (Note: If you have applied in our previous recruitment, you are not required to submit your application again. Your application has been kept on file and will be considered again.)

jonfong@ln.edu.hk

NorthCarolinaMuseum MammalPopGenetics

Senior Research Scientist, Mammal Population/Conservation Genetics NC Museum of Natural Sciences

Salary Range: $48,195-$125,000 Type of Appointment: Permanent Full-Time Location: Raleigh, NC USA Application Deadline/Closing Date: 1/31/2019

The NC Museum of Natural Sciences and the NC State University's College of Natural Resources jointly announce a search to recruit a scientist with a research program in mammalian conservation genetics, mammalian population biology/ecology, and/or mammalian population genetics. Potential areas of research expertise include (but are not limited to) predator-prey interactions, integrated population modeling, life-cycle modeling, conservation genomics. Researchers with collections based research programs and/or international conservation experience are encouraged to apply.

This joint position is located in Raleigh, North Carolina at the NC Museum of Natural Sciences (55%) and NC State University (45%). At the Museum, this position works in the Biodiversity Research Lab, a unit within the Museum's Research & Collections section. At NC State University, this position works in the Fisheries, Wildlife and Conservation Biology program within the

Department of Forestry and Environmental Resources in the College of Natural Resources. The employee will have non-tenure track faculty status and associated teaching and service requirements as a Research Assistant Professor with the College of Natural Resources.

The successful candidate will have an outstanding record of scholarly publications, research support and public science engagement. This position has several areas of responsibility, requiring a candidate with strong interpersonal skills, the ability to independently plan and implement research/teaching activities, and the ability and interest to collaborate with other researchers. The areas of responsibility of this position include:

1. Development of an original scientific research program in mammalian conservation genetics, mammalian population biology/ecology, and/or mammalian population genetics; research programs may have local, regional, and/or international focus and will include pursuit of external research funding, data generation and analyses, and publication/dissemination of results. Some aspects of this research should be suitable for display in the NC Museum of Natural Sciences' Biodiversity Research Lab, a glass-walled laboratory 'on-exhibit' in the Nature Research Center wing of the Museum; 2. Shared management and administration of the Museum's Biodiversity Research Lab, including supervision of laboratory with oversight of equipment, budgets, personnel, students, and volunteers; 3. Shared management and administration of the Museum's Mammalogy Unit, a collection-based unit within the Research & Collections section; 4. Teaching one class per year in NCSU's Department of Forestry and Environmental Resources; 5. Training/mentoring undergraduate and graduate students and/or postdoctoral researchers, with a particular focus on training that bridges museum/university goals; 6. Engaging the public through science communication and/or participatory science; public engagement may be accomplished through active participation in Museum education/outreach programs, interacting with NC State University's Public Science Cluster, and/or providing opportunities for citizen scientists to contribute to authentic research initiatives.

Knowledge, Skills, and Abilities: A successful candidate will have the following:

(1) Considerable knowledge of many aspects of conservation biology (2) Experience applying principles and practices of research, with special expertise in some aspect of conservation biology (3) A demonstrated mastery of materials, equipment, and techniques used in laboratory practices and in fieldwork (4) Experience in teaching undergraduate and/or graduate courses in evolution or related subjects (5) A demonstrated track record of effective and creative science communication to diverse public audiences (6) Experience writing and/or administering grants to fund biological research (7) Experience successfully publishing technical science papers in peer- reviewed journals

Training and Experience Requirements: Required: Doctorate degree in biology, zoology, conservation biology, or other natural science curriculum or related field and four years of progressively responsible experience; or an equivalent combination of education and experience.

How to Apply:

To view the posting please go to: https://-www.governmentjobs.com/careers/northcarolina/-jobs/2272344/senior-research-scientist-biodiversity-research-lab?keywords=science&pagetype=-jobOpportunitiesJobs

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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

NTNU Trondheim EvolutionaryBiology

Professor / Associate Professor in Evolution, Behaviour & Ecology at NTNU, Trondheim, Norway

Full Description: https://www.jobbnorge.no/en/-available-jobs/job/161323/professor-associate-professor-in-evolution-behaviour-ecology The Department of Biology at NTNU is seeking candidates for this position to further integrate and strengthen collaborations across research groups, including CBD. We encourage candidates to apply that have a strong quantitative research profile in the intersection between evolution, behaviour and ecology. We are looking for candidates working within a clear theoretical framework who can document the empirical application of their research. The successful candidate will be expected to develop her/his own independent research program within the Department. The position may be offered as a full professorship to an established researcher or at the associate professor level to a candidate earlier in their career that shows future promise.

The successful candidate will be jointly responsible for the development of the discipline together with other

scientific staff in the department. She/he will also participate in teaching activities in accordance with the relevant curriculum, and assist in developing the teaching program, including advanced and postgraduate courses. The new faculty member will have responsibility for part of the teaching in evolution, behaviour and ecology, as well as possible elements of conservation biology and quantitative methods, depending upon her/his interests/expertise. The successful applicant will also have the opportunity to participate in departmental management and the strategic development of the department, the faculty and NTNU.

For further information, please contact Prof. J. Wright (jonathan.wright@ntnu.no), or the Head of Department Dr. Else Berit Skagen (else.berit.skagen@ntnu.no), at the Department of Biology. More information about the department can be found on http://www.ntnu.edu/-biology. The application with the attachments must be sent electronically through www.jobbnorge.no.The application should be clearly marked with the reference number 2018/44030.

The closing date for applications is January 15th 2019.

Prof. Jonathan Wright Department of Biology, NTNU, Trondheim, N-7491 Norway.

E-mail:jonathan.wright@ntnu.no http://www.ntnu.no/-employees/jonathan.wright Tel: +47 91897210 Fax: +47 73596100

Jon <jonathan.wright@ntnu.no>

OhioU EvolutionaryGenomics

The Department of Biological Sciences at Ohio University in Athens, Ohio invites applications for a full-time, tenure-track position in evolutionary, comparative or functional genomics. We are interested in candidates that combine experimental and computational methods, and applicants who investigate model or non-model organisms, and have expertise in biostatistics, including Bayesian methods, and in analyzing large genomic datasets. The ideal candidate will have postdoctoral experience in Genomics or Bioinformatics and teaching experience at undergraduate or graduate levels.

The Assistant Professor will be expected to establish a strong, extramurally funded research program, and collaborate with faculty from a broad-based biology department. Faculty members in the department are responsible for: teaching and mentoring both undergraduate and graduate students; student advising; conducting scholarly research; and providing service to the university and/or department. Depending on the Assistant Professors area of interest, teaching for this position will include the appropriate portion of a second semester introductory class (Ecology, Evolution, Animal Body Systems) and two upper-division courses based on their research expertise that fill teaching needs in the department.

Ohio University is committed to creating a respectful and inclusive educational and workplace environment. Ohio University is an equal access/equal opportunity and affirmative action employer with a strong commitment to building and maintaining a diverse workforce. Women, persons of color, persons with disabilities, and veterans are encouraged to apply.

For more information: https://-www.ohiouniversityjobs.com/postings/29480 "Kuchta, Shawn" <kuchta@ohio.edu>

RZSS Edinburgh Zoo ConservationGenetics

Research Assistant - (2 years Fixed Term) Location: Edinburgh Zoo

About Us The charity that owns both RZSS Edinburgh Zoo and RZSS Highland Wildlife Park are looking for committed, compassionate and conservation-minded individuals to join our expert staff team. RZSS aims to connect people with nature and safeguard species from extinction, a mission that sees us work both here in Scotland and in over 20 countries around the world. From inspiring the next generation about wildlife in our parks to protecting chimpanzees in the Ugandan rainforest; looking after some of the world's most endangered species to saving the Scottish wildcat, RZSS is making a huge difference and we need your help to continue to grow.

The role An opportunity has arisen for a committed research assistant to join the Royal Zoological Society of Scotland WildGenes lab. Reporting to the Conservation Programme Manager (Wildgenes), the Research Assistant will assist with the analysis of applied conservation genetic research data delivered by the RZSS WildGenes laboratory.

Who we are looking for The successful candidate will have previous academic background in Conservation

Genetics or Population Genetics/Genomics and a desire to work as part of our team to support conservation projects around the globe.

Interested? For full information on how to apply, please visit the RZSS vacancy page and follow the instructions: http://www.rzss.org.uk/job-vacancies/ Closing date: Sunday 6th January 2019.

Invitation to interview will be by email/phone and interviews will take place on Friday 18th January 2019.

For any questions and queries, please email Dr Alex Ball at aball@rzss.org.uk quoting "Research Assistant" as the subject or call 0131 314 0388.

Our mission is Connecting people with nature. Safeguarding species from extinction.

The RZSS strives to be an equal opportunities employer. Registered Charity SC00406

Alexander Ball <aball@rzss.org.uk>

SanDiegoZoo SeniorResearchCoordinator

The Conservation Genetics group at the San Diego Zoo Institute for Conservation Research is seeking a Senior Research Coordinator to contribute to the application of molecular genomic methods to address critical questions in evolution and conservation. This person will contribute to existing and ongoing research projects in conservation genetics.

Essential functions of this position include participating in collaborative research projects in the field of genomics and bioinformatics; documenting research results and data analysis; contributing to papers in peer-reviewed scientific journals and popular literature; and making presentations to professional groups and the public.

The minimum qualification for the position is a Masters degree in biology, genetics, bioinformatics or related fields. This position is appropriate for someone with a Masters degree and several years of research experience, or a recent PhD with minimal or no postdoctoral experience. Solid data analysis skills and bioinformatics background are required, as well as knowledge of population genetics and recent molecular genomic methods. Excellent communication and writing skills and the ability to work effectively with others is desirable. For inquiries, please email awilder@sandiegozoo.org. To apply: www.sandiegozoo.org/jobs. Deadline: 1/10/2013. AA/EOE.

– Aryn P. Wilder, PhD Researcher, Conservation Genetics San Diego Zoo Institute for Conservation Research 15600 San Pasqual Valley Rd Escondido CA 92027 760-291-5453

Aryn Wilder <awilder@sandiegozoo.org>

SavannahRiverEcologyLab ResTech GenomicsSexDetermination

Research Technician in Ecological and Evolutionary Genomics of Sex Determination A Research Technician position is available in Ben Parrott's research group at the Savannah River Ecology Laboratory, located on the Department of Energy's Savannah River Site near Aiken, SC. This is a temporary position (not to exceed 8 months), to begin in January or February of 2019.

The technician will contribute to our research investigating the impact of temperature and heavy metal exposures on stress responses in the japanese rice fish (Medaka fish). Tasks will include assisting in fish care, collecting fish embryos, and assisting in experimental assays.

Applicants must have a BS, BA, or MA degree in biology or a closely related filed. Prior research experience is preferred, and applicants should demonstrate a good work ethic, organizational abiliy, and ability to work in a team setting.

Applicants should electronically submit a single PDF file containing the following: 1) Cover Letter, including a summary of research experience and career goals 2) CV 3) List of three references, with contact information (email, telephone, and mailing address). References will be contacted after identifying potential candidates.

The application file should be emailed to Dr. Ben Parrott (benparrott@srel.uga.edu). Review of applications will begin January 15th.

"Benjamin B. Parrott" <benparrott@srel.uga.edu>

SmithsonianInst 2 InvertebrateEvolution

Just a reminder that the deadline for applying to these positions is quickly approaching (Jan. 7th). Please help us spread the word to all qualified and interested potential applicants. With a fair amount of internal funding available, these are fantastic positions for any research focused invertebrate biologist.

Cheers - Karen

Hello All,

We are searching for 2 outstanding invertebrate zoologists. Applicants are expected to have a question-driven research program focused on evolutionary, biodiversity, ecological, or conservation approaches as well as expertise in at least one invertebrate group (sorry insects and chelicerates are excluded). Any taxonomic group specialty will be considered. Positions are primarily research positions, making them comparable to typical academic positions with collections administration duties instead of teaching. Applicants must be able to demonstrate potential for modern and historical collections-based research. The collections are an amazing resource.

You must be a US citizen to apply.

Applications will be accepted until Jan. 7th. Late or incomplete applications will not be considered.

For more information and to apply, see the job ad (19A-JW-304220-DEU-NMNH) here https://-www.usajobs.gov/GetJob/ViewDetails/516234600. For further information or questions, contact the search committee chair, Chris Meyer (meyerc@si.edu) . Application process is a bit different than for non-federal academic jobs so check it out well ahead of the deadline and follow instructions to the letter. For questions regarding the application process, contact the HR Specialist on the announcement.

Please feel free to share this announcement with everyone.

Cheers - Karen

Ad in Science:

Research Zoologist, Department of Invertebrate Zoology, National Museum of Natural History, Smithsonian Institution

The Smithsonians National Museum of Natural History seeks a zoologist to conduct an integrative, specimen- or collection-based research program in invertebrate evolution and biodiversity (exclusive of hexapods, myriapods, and arachnids). The successful candidate is expected to develop an internationally recognized research program that makes important contributions to understanding invertebrate evolution and biodiversity through synthetic research involving phylogenetics, genetics, anatomy, development, genomics, biogeography, conservation, informatics, or related fields. Frequent publication of highly regarded papers in competitive, peer-reviewed journals, curation of collections in specialty area, service to the scientific community in leadership capacities, acquisition of external funding, engagement in outreach activities, and mentorship of students are expected.

Full-time, permanent appointment with full Government benefits to be filled at the GS-12 level; US citizenship and a one-year probationary period are required. The museums authorized salary range for this position at this time is $81,548 - $86,984 per year. College transcripts and proof of U.S. accreditation for foreign study must be submitted online by the closing date of announcement. For complete requirements and application procedures go to www.sihr.si.edu or www.usajobs.gov and refer to Announcement 19A-JW-304220-DEU-NMNH. The announcement opens November 7, 2018. Applications and all supporting documentation must be received on-line by January 7, 2019 and must reference the announcement number. All applicants will be notified by email when their application is received. The Smithsonian Institution is an Equal Opportunity Employer.

X Karen Osborn Research Zoologist/Curator of Polychaetes, Peracarids and Plankton Department of Invertebrate Zoology w 202.633.3668 osbornk@si.edu http://invertebrates.si.edu/osborn/ http://orcid.org/-0000-0002-4226-9257 SMITHSONIAN INSTITUTION NATIONAL MUSEUM OF NATURAL HISTORY Facebook < https://www.facebook.com/nmnh.fanpage/ > | Twitter < https://twitter.com/NMNH > | Instagram < https://www.instagram.com/smithsoniannmnh/ >

Mail: Department of Invertebrate Zoology, Smithsonian National Museum of Natural History, MRC-163 P.O. Box 37012, Washington, D.C. 20013-7012 USA

“Osborn, Karen” <OsbornK@si.edu>

SpelmanC Atlanta TeachingEvolutionBehav

See full posting at: https://spelman.peopleadmin.com/-postings/1964 Spelman College seeks teacher/scholar dedicated to excellence in teaching and to the continued enhancement of the academic environment for students and colleagues. Founded in 1881, Spelman College is a private four-year liberal arts college located in Atlanta, GA. The oldest historically Black college for women in the United States, Spelman is a member of the Atlanta University Center Consortium and Atlanta Regional Consortium for Higher Education.

Essential Duties and Responsibilities

The Department of Biology invites applications for a One Semester, Part-Time Instructor for an upper-level Animal Behavior (Bio 365) Course for Spring 2019. The instructor will be responsible for teaching a single section of Animal Behavior for junior and senior undergraduate biology majors. This lecture course will meet three times per week (MWF 1-1:50 pm). The successful candidate will prepare and deliver learning activities, design and grade exams and homework assignments, assess the learning outcomes of students, and meet with students during scheduled office hours.

Required Qualifications

Masters degree in Biology or 18 graduate credit hours.

Preferred Qualifications

PhD in Biology preferred. Previous teaching experience is a plus.

Rank Instructor

Employment Status Non-Tenure Track

Full Time/Part Time Part Time

Posting Detail Information

Posting Number

Close Date

Open Until Filled Yes

Special Instructions to Applicants

EEO Statement

Spelman College is an EEO /Minority/Female/Disabled/Veteran/Title IX Employer and we participate in E-Verify. We are a smoke-free campus

Jennifer Kovacs, Ph.D. Assistant Professor of Biology Spelman College Atlanta, GA 30030 jkovacs@spelman.edu

alfred.r.wallace@gmail.com

StockholmU EnvironmentalGenomics

Stockholm university has opened a position broadly in Environmental Genomics. The successful candidate may work in any area ranging from Metagenomics of lake systems to Metabarcoding of gut contents, on evolutionary or ecological problems. The position is connected to SciLifeLab in Stockholm.

*S**ubject**description* **Genomic studies of all kinds of non-human biota and their relationships to the environment, focusing on structure and function of ancient or recent systems.

Further information https://www.su.se/-english/about/working-at-su/jobs?rmpage=-job&rmjobc78&rmlang=UK Peter Hambäck <peter.hamback@su.se>

TrinityU TX VisitingAssistantProfessor

The Department of Biology at Trinity University invites applications for a full-time, Visiting Assistant Professor during the spring 2019 term (January-May). Responsibilities of this position are to teach four sections of our introductory biology lab. Candidates must possess a Ph.D. in the biological sciences at the time of hiring.

Trinity University is a small, private, independent liberal arts and sciences university recognized for excellence in teaching and high impact undergraduate research. The Department of Biology (https://new.trinity.edu/-academics/departments/biology), located in Trinity's state- of-the-art Center for Sciences and Innovation, consists of 13 highly collaborative faculty. Trinity is located in San Antonio, a large, vibrant, cosmopolitan

city in south central Texas. The city's cost of living is relatively low for a major metropolitan area. More information on San Antonio can be found at http://visitsanantonio.com/ . Applicants should submit a cover letter, curriculum vitae, statement of teaching philosophy, and the names and contact information of three references to biology@trinity.edu. Please direct any inquiries about the position to the committee chair, Kevin Livingstone (klivings@trinity.edu). Evaluation of applications will begin January 1, 2019. All offers of employment are contingent upon completion of a background check. Women and minority candidates are strongly encouraged to apply. Trinity University is an equal opportunity employer, and as such provides equal opportunity for employment and advancement of all employees without regard to race, color, religion, sex, age, national origin, disability, military/veteran status, sexual orientation, gender identity, gender expression, or any status protected by Federal, State, or Local Laws.

klivings@trinity.edu

UBern EvolBehaviour

ASSISTANT PROFESSORSHIP TENURE-TRACK IN BEHAVIOURAL BIOLOGY The Institute of Ecology and Evolution of the University of Bern announces a vacancy for a tenure-track Assistant Professorship in Behavioural Biology. The Institute currently has six full professors (chairs), several tenured group leaders, and it hosts a large international community of post-doctoral researchers and graduate students. With the retirement of two of these full professors, the institute intends to hire three new tenure-track Assistant Professors, one being in the area of behavioural biology.

Applications are sought from individuals with an outstanding research record in the integrative study of behaviour, including studies both at the proximate and ultimate levels of behavioural causation. Candidates that take empirical approaches, or that combine empirical and theoretical approaches to the study of behaviour from an ecological and/or evolutionary perspective are particularly encouraged to apply.

The candidate should have a doctorate in a relevant field, several years of postdoctoral and teaching experience, an interest in establishing an active, proliferative research group, in teaching, and in collaborating with other researchers of our institute. The new faculty member will have responsibility for teaching in the field of behavioural biology at undergraduate and graduate levels. All graduate teaching and advanced undergraduate teaching is in English.

The IEE is one of three institutes of the Department of Biology at the University of Bern and is involved in two Masters Programs (Ecology and Evolution, Bioinformatics and Computational Biology). The research and teaching strategy of the Department of Biology is to contribute to the understanding of mechanisms, processes and patterns at all levels of biological integration, from genes to ecosystems, and to provide evidence-based guidance for the conservation of biodiversity. The successful candidate should take advantage of this collaborative environment and is expected to strengthen the links between behavioural biology and other areas of biology in the Department.

The University of Bern is an equal opportunity employer and strives to increase the number of women in the faculty. Qualified female researchers are especially encouraged to apply.

The earliest starting date for the position will be August 1, 2020.

Interested candidates must submit an application by February 4, 2019 in two ways: 1) email a single PDF file addressed to the Faculty of Science, University of Bern, Prof. Dr. Zoltan Balogh, Dean, Sidlerstrasse 5, 3012 Bern, Switzerland (info@natdek.unibe.ch); and 2) complete an online questionnaire (http://www.iee.unibe.ch/-jobs/job01/). The PDF should include: a letter of motivation; a CV including funding history, list of courses taught, list of supervised BSc, MSc and PhD students, and postdocs (including current status), list of publications; and a short research plan for the next five years.

More information about the institute can be found at www.iee.unibe.ch. Informal inquiries can be addressed to Prof. Catherine Peichel (catherine.peichel@iee.unibe.ch).

Susanne Holenstein Institut fur Ökologie und Evolution Baltzerstrasse 6 CH-3012 Bern susanne.holenstein@iee.unibe.ch Tel. +41 31 631 45 11

University of Berne Web www.iee.unibe.ch susanne.holenstein@iee.unibe.ch

UBern EvolutionaryEcol

ASSISTANT PROFESSORSHIP TENURE-TRACK IN ECOLOGY The Institute of Ecology and Evolution of the University of Bern announces a vacancy for a tenure-track Assistant Professorship in Ecology. The Institute currently has six full professors (chairs), several tenured group leaders, and it hosts a large international community of post-doctoral researchers and graduate students. With the retirement of two of these full professors, the institute intends to hire three new tenure-track Assistant Professors, one being in the area of ecology.

Applications are sought from individuals with an outstanding research record in ecology. We are looking for empiricists who have their research well anchored in theory and take an integrative approach. To maintain complementarity with the Institute of Plant Sciences of the University of Bern and with other research groups within our institute, candidates whose research focuses on animals in terrestrial or marine systems are particularly encouraged to apply.

The candidate should have a doctorate in a relevant field, several years of postdoctoral and teaching experience, an interest in establishing an active, proliferative research group, in teaching, and in collaborating with other researchers of our institute. The new faculty member will have responsibility for teaching in the field of ecology at undergraduate and graduate levels. All graduate teaching and advanced undergraduate teaching is in English.

The IEE is one of three institutes of the Department of Biology at the University of Bern and is involved in two Masters Programs (Ecology and Evolution, Bioinformatics and Computational Biology). The research and teaching strategy of the Department of Biology is to contribute to the understanding of mechanisms, processes and patterns at all levels of biological integration, from genes to ecosystems, and to provide evidence-based guidance for the conservation of biodiversity. The successful candidate should take advantage of this collaborative environment and is expected to strengthen the links between ecology and other areas of biology in the Department.

The University of Bern is an equal opportunity employer and strives to increase the number of women in the faculty. Qualified female researchers are especially encouraged to apply.

The earliest starting date for the position will be August 1, 2020.

Interested candidates must submit an application by February 4, 2019 in two ways: 1) email a single PDF file addressed to the Faculty of Science, University of Bern, Prof. Dr. Zoltan Balogh, Dean, Sidlerstrasse 5, 3012 Bern, Switzerland (info@natdek.unibe.ch); and 2) complete an online questionnaire (http://www.iee.unibe.ch/-jobs/job02/). The PDF should include: a letter of motivation; a CV including funding history, list of courses taught, list of supervised BSc, MSc and PhD students, and postdocs (including current status), list of publications; and a short research plan for the next five years.

More information about the institute can be found at www.iee.unibe.ch. Informal inquiries can be addressed to Prof. Catherine Peichel (catherine.peichel@iee.unibe.ch).

Susanne Holenstein Institut fur Ökologie und Evolution Baltzerstrasse 6 CH-3012 Bern susanne.holenstein@iee.unibe.ch Tel. +41 31 631 45 11

University of Berne Web www.iee.unibe.ch susanne.holenstein@iee.unibe.ch

UBern EvolutionaryTheory

ASSISTANT PROFESSORSHIP TENURE-TRACK IN THEORETICAL ECOLOGY AND/OR THEORETICAL EVOLUTIONARY BIOLOGY The Institute of Ecology and Evolution of the University of Bern announces a vacancy for a tenure-track Assistant Professorship in Theoretical Ecology and/or Theoretical Evolutionary Biology. The Institute currently has six full professors (chairs), several tenured group leaders, and it hosts a large international community of post-doctoral researchers and graduate students. With the retirement of two of these full professors, the institute intends to hire three new tenure-track Assistant Professors, one being in the area of theoretical ecology and/or theoretical evolutionary biology.

Applications are sought from individuals with an outstanding research record in theoretical ecology and/or theoretical evolutionary biology. We are searching for candidates that develop new theory to model ecological and/or evolutionary systems. Candidates that develop theory and/or models to match empirical systems are

particularly encouraged to apply.

The candidate should have a doctorate in a relevant field, several years of postdoctoral and teaching experience, an interest in establishing an active, proliferative research group, in teaching, and in collaborating with other researchers of our institute. The new faculty member will have responsibility for teaching in the field of theoretical ecology and/or theoretical evolutionary biology at undergraduate and graduate levels. All graduate teaching and advanced undergraduate teaching is in English.

The IEE is one of three institutes of the Department of Biology at the University of Bern and is involved in two Masters Programs (Ecology and Evolution, Bioinformatics and Computational Biology). The research and teaching strategy of the Department of Biology is to contribute to the understanding of mechanisms, processes and patterns at all levels of biological integration, from genes to ecosystems, and to provide evidence-based guidance for the conservation of biodiversity. The successful candidate should take advantage of this collaborative environment and is expected to strengthen the links between theoretical ecology and/or theoretical evolutionary biology and other areas of biology in the Department.

The University of Bern is an equal opportunity employer and strives to increase the number of women in the faculty. Qualified female researchers are especially encouraged to apply.

The earliest starting date for the position will be August 1, 2020.

Interested candidates must submit an application by February 4, 2019 in two ways: 1) email a single PDF file addressed to the Faculty of Science, University of Bern, Prof. Dr. Zoltan Balogh, Dean, Sidlerstrasse 5, 3012 Bern, Switzerland (info@natdek.unibe.ch); and 2) complete an online questionnaire (http://www.iee.unibe.ch/-jobs/job03/). The PDF should include: a letter of motivation; a CV including funding history, list of courses taught, list of supervised BSc, MSc and PhD students, and postdocs (including current status), list of publications; and a short research plan for the next five years.

More information about the institute can be found at www.iee.unibe.ch. Informal inquiries can be addressed to Prof. Catherine Peichel (catherine.peichel@iee.unibe.ch).

Susanne Holenstein Institut fur Ökologie und Evolution Baltzerstrasse 6 CH-3012 Bern susanne.holenstein@iee.unibe.ch Tel. +41 31 631 45 11

University of Berne Web www.iee.unibe.ch susanne.holenstein@iee.unibe.ch

UCalifornia LosAngeles QuantEvolutionaryBiol

Quantitative Ecologist or Evolutionary Biologist: Open rank faculty position

The Department of Ecology & Evolutionary Biology (EEB) at UCLA is searching for a quantitative biologist (open rank), in any area of ecology, evolution or behavior. This position will enhance EEBs strengths in theoretical biology and quantitative approaches in experimental and field research. We expect candidates to have or develop a robust research program to attract external funds, and to teach at the graduate and undergraduate levels with innovative pedagogical approaches. The teaching expectation includes a new undergraduate introductory course (Statistics of Biological Systems), emphasizing simulation-based approaches to problem solving. Necessary qualifications include a PhD degree in a relevant discipline and a strong background in quantitative methods.

Please direct inquires to quantsearch@eeb.ucla.edu. Submit application packages online through https:/-/recruit.apo.ucla.edu/apply/JPF04204 and include the following: 1) cover letter 2) curriculum vita; 3) statement of research interests; 4) statement of teaching expertise; 5) statement of formal and informal activities to promote equity, diversity and inclusion; and 6) names of three referees. All items should be distinct documents. Individuals with a history of mentoring students under-represented in the sciences are encouraged to apply and to describe their experience in a cover letter. The University of California seeks to recruit and retain a diverse workforce as a reflection of our commitment to serve the people of California, to maintain the excellence of the University, and to offer our students richly varied disciplines, perspectives and ways of knowing and learning. Complete applications must be submitted by January 3, 2019.

The EEB Department has 29 faculty with strengths in population ecology, evolutionary and conservation genomics, behavioral biology, plant biology, and phylogenetics and paleobiology. EEB also features a large graduate program, three undergraduate majors (Biology; Ecology, Behavior, and Evolution; Marine Biology), and two minors (Conservation Biology and Evolutionary

Medicine). EEB faculty have affiliations or close ties with the Institute for Quantitative and Computational Biosciences and the Institute of Environment and Sustainability, the David Geffen School of Medicine, and the Fielding School of Public Health. EEB is also closely associated with UCLAs La Kretz Center for California Conservation Sciences, Stunt Ranch UC Reserve, the Mildred E. Mathias Botanical Garden, the Donald R. Dickey Collection of Birds and Mammals, and the Center for Education and Innovation and Learning in the Sciences.

UCLA has programs to assist in partner employment, childcare, schooling and other family concerns. For additional information, visit the UCLA Academic Personnel Office website (https://www.apo.ucla.edu/) or the UC Office of the Presidents website (http://www.ucop.edu/-).

The University of California is an Equal Opportunity/Affirmative Action Employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, age or protected veteran status. For the complete University of California nondiscrimination and affirmative action policy, see: UC Nondiscrimination & Affirmative Action Policy. (http://policy.ucop.edu/doc/4000376/-NondiscrimAffirmAct)

"Sanchez, Sheena" <ssanchez@lifesci.ucla.edu>

UCambridge 3 EvolutionaryBiology

Three lectureship positions (equivalent to tenure-track assistant professorships) have just been advertised in the department of Earth Sciences at Cambridge.

We seek three candidates carrying out creative and innovative research in the Earth Sciences to join our collegial and supportive department. We encourage applications from individuals using observational, numerical and/or experimental techniques in Earth Sciences who will complement and enhance our current research and teaching portfolio, including new and emerging areas of Earth Sciences and its applications. We welcome collaborative and inclusive new colleagues to join us in formulating our future research agenda and making the next important discoveries and breakthroughs in Earth Science. These appointments are part of a broad strategy to increase the scope and diversity of our research and we will also be advertising two further senior appointments (full professorships) in the coming year.

This search is broad across the Earth Sciences, including evolutionary palaeobiology.

We welcome applications from those with a Ph.D. or equivalent degree in Earth Sciences or allied disciplines. You should have an outstanding record of research, and its communication, in a relevant subject. The Department will partner with you in establishing a vigorous research programme at an international level and will mentor you in developing your existing capabilities to raise external funds in support of your research. We offer many opportunities to contribute to synergistic research activities in the Department (and the University) leading to interaction with colleagues across many areas. You will be encouraged to recruit and supervise our talented and diverse group of postgraduate research students and postdoctoral research fellows.

The Department also supports a rigorous and vibrant programme of teaching at undergraduate and postgraduate levels. You should have the desire and potential to help inspire the next generations of scientists through the delivery of the highest quality education at undergraduate and postgraduate level. You will be given the opportunity to participate in teaching at all levels. At elementary level, you may be asked to help with teaching outside your immediate field of specialisation. All of our academic staff take part in undergraduate field teaching which is an integral and rewarding part of our curriculum.

The appointments will be made at an appropriate salary for University Lecturers with review after five years and appointment to the retiring age thereafter.

As well as submitting a CV and contact details for three referees, your letter of application should include (a) a list of publications, (b) a 1000 word statement covering your current research, future research directions, and teaching experience.

Interviews will be held in the first half of March 2019.

If you have any questions please about the position, in the first instance please contact the Administrator (ab78@esc.cam.ac.uk)

Please quote reference LB17377 on your application and in any correspondence about this vacancy.

The Department is committed to equality and diversity, and we would particularly welcome applications from women and minority candidates. We are sensitive to the needs of families and dual career couples. Details of some of the family-friendly policies operated by the University are at: http://www.hr.admin.cam.ac.uk/pay-benefits/-

cambens-employee-benefits/family-friendly .We are committed to fostering a collaborative and inclusive working environment and the University holds an institutional Athena-SWAN silver award and the Department holds an Athena-SWAN bronze award.

The University has a responsibility to ensure that all employees are eligible to live and work in the UK.

Further particulars: http://www.jobs.cam.ac.uk/-job/19524/file/ULs+in+Earth+Sciences+-+Further+Particulars.pdf – Daniel Field, PhD University Lecturer Department of Earth Sciences, University of Cambridge Downing Street | Cambridge | CB2 3EQ | United Kingdom djf70@cam.ac.uk | Tel: +44 (0)7413 231913 danieljfield.com | https://-www.esc.cam.ac.uk/directory/daniel-field Daniel Field <djf70@cam.ac.uk>

UCambridge EvolutionaryBiol

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| CB2 3EQ | United Kingdom djf70@cam.ac.uk | Tel: +44 (0)7413 231913 danieljfield.com | https://-www.esc.cam.ac.uk/directory/daniel-field Daniel Field <djf70@cam.ac.uk>

UChicago StatisticalMolecularEvolution

The University of Chicago's Department of Ecology & Evolution in the Biological Sciences Division is searching for a tenured or tenure-track faculty member at any rank, and invites applications from those pursuing research on statistical molecular evolution and phylogenetics, and in related areas.

At The University of Chicago, we are committed to academic excellence and diversity within the faculty, staff, and student body. The University is a vibrant center of scientific discovery and innovation, and opportunities for multidisciplinary collaboration are abundant, both within and outside the Biological Sciences Division. The Division, other academic units of the University, and the University of Chicago Medical Center, are all contained within one compact campus in Chicago's Hyde Park. Appointees will have access to state-of-the-art core facilities and to outstanding colleagues and graduate students affiliated with numerous degree-granting programs within and outside the biological sciences. Competitive research space and start-up funding will be available, as will the potential for interactions with our affiliates, Argonne National Laboratory and the Marine Biological Laboratory.

Applicants must have a doctoral degree or equivalent. To be considered, those interested must apply online at the University of Chicago's Academic Career Opportunities website academiccareers.uchicago.edu/applicants/Central?quickFindU919. Applicants must upload a cover letter, curriculum vitae with bibliography, and statements on past and prospective research and teaching. Three publications or preprints must also be uploaded. Applicants for assistant professorships must arrange for three letters of reference to be sent directly by the referee to choman@uchicago.edu. All letters must be received before an application can be considered complete. Applications for associate and full professorships must include the names and contact information for three references. Review of complete applications will begin on January 14, 2019 and continue until the position is filled.

The University of Chicago is an Affirmative Action/Equal Opportunity/Disabled/Veterans Employer and does not discriminate on the basis of race, color, religion, sex, sexual orientation, gender identity, national or ethnic origin, age, status as an individual with a disability, protected veteran status, genetic information, or other protected classes under the law. For additional information please see the University's Notice of Nondiscrimination at http://www.uchicago.edu/about/-non_discrimination_statement/. Job seekers in need of a reasonable accommodation to complete the application process should call 773-702-0287 or email ACOppAdministrator@uchicago.edu with their request.

Sarah Cobey, PhD Associate Professor Department of Ecology & Evolution cobey@uchicago.edu

cobey@uchicago.edu

UFlorida BiodiversityConservation DeadlineExtended

Although we have a few outstanding applicants already, weve decided to extend the deadline for this position to Thursday 20 December in order to further enrich the applicant pool.*

Lecturer in Global Change, Biodiversity, and Conservation (39939) apply.interfolio.com/56910

Position Description The Department of Biology at the University of Florida College of Liberal Arts and Sciences invites applications for a full-time, nine-month, renewable, non-tenure accruing faculty position at the level of Lecturer in Global Change, Biodiversity, and Conservation beginning August 16, 2019. This is a renewable appointment with the possibility of promotion based on experience and merit. We seek a colleague who will develop and teach courses at the undergraduate level in global change ecology, sustainability, and biodiversity. The applicant will be assigned other courses as needed, and may develop courses in their area of specialty that can serve as electives for the Biology major. The teaching expectation is three courses per semester. We especially encourage applications from candidates who would substantially contribute to the University of Floridas commitment to broadening participation in the biological sciences.

The University of Florida is among the top ten public universities in the United States. Research in the

biological sciences at the University of Florida is conducted by faculty in many departments across several Colleges and Institutes, providing a rich intellectual environment and extensive opportunities for collaboration. The University of Florida hosts many institutes and centers, including the UF Biodiversity Institute, the Land Use and Environmental Change Institute, the Florida Climate Institute, the UF Water Institute, the Emerging Pathogens Institute, the One Health Center of Excellence for Research and Training, the Center for Landscape Conservation and Ecology, and the Center for Environmental Policy.

The University of Florida counts among its greatest strengths V and a major component of its excellence V that it values broad diversity in its faculty, students and staff and creates a robust, inclusive and welcoming climate for learning, research and other work. UF is committed to equal educational and employment opportunity and access, and seeks individuals of all races, ethnicities, genders and other attributes who, among their many exceptional qualifications, have a record of including a broad diversity of individuals in work and learning activities.

Qualifications The successful candidate should possess a doctoral degree in the biological sciences or other relevant discipline at time of the appointment. Strong preference will be given to applicants with at least one year of teaching experience. The salary is competitive and commensurate with qualifications and experience, and includes a full benefits package.

Application Instructions For full consideration, applications must be submitted online at http://-apply.interfolio.com/56910 and must include: (1) a cover letter summarizing the applicants qualifications and interests in the Department; (2) a complete curriculum vitae; and (3) a teaching statement that includes teaching philosophy, interest and/or experience with pedagogical research and scholarship, and a list of courses the applicant is prepared to teach. The teaching statement should include a discussion of inclusive practices in teaching (engaging a broad range of students) and include evidence of effective teaching practices. A teaching portfolio may also be included. (4) In addition, names and email addresses for three references must be provided in the application. After initial review, applicants who are chosen to receive further consideration will be asked to request confidential letters of recommendation from the references. Applications will be reviewed beginning December 7, 2018 as received and the position will remain open until filled. Applications received after this date may be considered at the discretion of the committee and/or hiring authority. Please send email inquiries to Dr. David Oppenheimer, Chair of the Global Change, Biodiversity, and Conservation Lecturer Search Committee (oppenhe@ufl.edu). Please include Global Change, Biodiversity, and Conservation Lecturer Search in the subject line.

All candidates for employment are subject to a pre-employment screening which includes a review of criminal records, reference checks, and verification of education.

The selected candidate will be required to provide an official transcript to the hiring department upon hire. A transcript will not be considered if a designation of to Student is visible. Degrees earned from an educational institution outside of the United States require evaluation by a professional credentialing service provider approved by the National Association of Credential Evaluation

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UNorthCarolina Charlotte 2 MicrobeHostEnvironment

Assistant Professor Positions in Biological Sciences at the University of North Carolina at Charlotte (Environmental and Molecular)

The Department of Biological Sciences (DBS) at the University of North Carolina at Charlotte seeks applicants for two tenure-track Assistant Professor positions in the biology of microbes or viruses. One position is focused on the ecology and evolution of microbes. The second position is focused on the molecular biology of microbes. The department supports BS, BA, MS (thesis & non-thesis) and PhD programs with a diverse body of faculty and students, and prides itself with hands-on training of its students.

Required Qualifications: Applicants should possess a Ph.D. in the biological sciences or related fields with expertise in the use of microbial and viral systems to investigate either ecological or evolutionary responses to environmental change OR cell and molecular biology or immunology. Candidates must demonstrate proficiency in their specialty by a record of postdoctoral training and peer-reviewed publications, as well as an

ability to teach at the undergraduate and graduate levels. *Desired Qualifications: * Special consideration will be given to applicants with expertise in state-of-the-art proteomic, genomic and/or metabolomic approaches. Previous teaching and mentoring experience will be considered highly desirable.

The successful candidate would be expected to develop and sustain an independent, externally funded, internationally recognized research program. Candidates will be expected to successfully contribute to the teaching of our undergraduate and graduate curricula, with a focus on core courses including ecology, physiology, or cell biology.

Finalists will be asked to discuss how their qualifications, experience, and professional background prepares them to incorporate diversity and inclusion into their teaching, research, and service activities during their screening.

Candidates must apply online at http://jobs.uncc.edu, position numbers #003728 or #006264. Please provide a complete curriculum vita, philosophy statements for research and teaching in an ethnically diverse environment, contact information for three references, and three representative publications. Screening of applications will begin January 1st, 2019, and continue until the positions are filled. The expected start date is August 12, 2019.

This position will be part of a larger effort to build research programs within a central theme of "Integrated Health and Environmental Research" and complement "Big Data" research groups that are being developed in collaboration with other academic units within the university.

As an EOE/AA employer and an ADVANCE Institution that strives to create an academic climate in which the dignity of all individuals is respected and maintained, the University of North Carolina at Charlotte encourages applications from all underrepresented groups.

The candidate chosen for this position will be required to provide an official transcript of their highest earned degree and submit to a criminal background check.

If you have questions, please email: Adam Reitzel (co-chair for search committee), areitze2@uncc.edu.

areitze2@uncc.edu

UToronto 2 EvolutionaryGenomics

Posting #1

The Department of Biological Sciences, University of Toronto Scarborough invites applications for a tenure-stream appointment in the area of Computational Genomics, Evolutionary Genomics. The appointment is at the rank of Assistant Professor and will commence on July 1, 2019 or shortly thereafter. ÂÂ

Candidates must have a PhD in biological or computational sciences, and at least one year of postdoctoral experience relevant to the position. The successful candidate will be expected to conduct innovative and independent research at the highest international level and to establish an outstanding, externally funded research program. Applicants must have a record of excellence in research, as demonstrated by publications in top ranked and field relevant academic journals, the submitted research statement, presentations at significant conferences, awards and accolades for work in the field, and strong endorsements by referees of high international standing. Candidates must also demonstrate a commitment to excellence in undergraduate and graduate student training and supervision. A commitment to excellence in teaching will be demonstrated through the statement of teaching philosophy, teaching accomplishments, and evidence of superior performance in teaching-related activities documented in the teaching materials submitted as part of the application (including performance as a teaching assistant or course instructor, experience leading successful workshops or seminars, student mentorship, or excellent conference posters or presentations), as well as strong letters of reference.

ÂWe seek candidates whose research and teaching interests complement and strengthen our existing departmental strengths. The successful candidate will apply computational approaches to genome-wide datasets to address fundamental questions in ecology and evolution, including topics such as phylogenomics, population genomics, conservation genomics, or behaviour genomics. They will make use of the University of Toronto's Scinet supercomputing cluster (https://www.scinethpc.ca) and other computation resources to sort through the Big Data associated with whole genome sequences. Computational, bioinformatics and programming proficiency is expected and must be demonstrated in the application materials. ÂÂ

Salary will be commensurate with qualifications and experience. ÂÂ

The University of Toronto is an international leader in biological research and education and the Department of Biological Sciences enjoys strong ties to other units within the University. The successful candidate will join an expanding and dynamic group of faculty working in the areas of Ecology, Evolution, Conservation, and Genomics and will contribute to both the undergraduate curriculum and graduate teaching. The successful candidate will be a member of a Tri-campus Graduate Department (Cell and Systems Biology, https://-csb.utoronto.ca/, or Ecology & Evolutionary Biology, http://www.eeb.utoronto.ca/ depending on their field of research). ÂÂ

Further information on the research and teaching activities of the department can be found at http://-www.utsc.utoronto.ca/~biosci/. ÂÂ

All qualified candidates are invited to apply by clicking https://utoronto.taleo.net/careersection/10050/-jobdetail.ftl?job04962&tz=GMT .Applications must include a cover letter, a CV, a statement of research, three representative publications, a statement of teaching philosophy, and other teaching materials showing evidence of excellent performance in teaching related activities as listed above. Submission guidelines can be found at: http://uoft.me/how-to-apply We recommend combining attached documents into one or two files in PDF/MS Word format. ÂÂ

Applicants should also arrange that letters of reference (on letterhead, signed and scanned) from at least three referees familiar with the candidate's research and teaching be emailed directly by the referees to: biologygeneral@utsc.utoronto.ca by the closing date. ÂÂ

Applications lacking reference letters will not be considered. If you have questions about this position, please email biologygeneral@utsc.utoronto.ca ÂÂ

All materials, including reference letters, must be received by January 14, 2019. ÂÂ

The University of Toronto is strongly committed to diversity within its community and especially welcomes applications from racialized persons / persons of colour, women, Indigenous / Aboriginal People of North America, persons with disabilities, LGBTQ persons, and others who may contribute to the further diversification of ideas. ÂÂ

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Other

AGA EECG ResearchAwards

The American Genetic Association grants Evolutionary, Ecological, or Conservation Genomics (EECG) Research Awards to graduate and post-doctoral researchers who are at a critical point in their research, where additional funds would allow them to conclude their research project and prepare it for publication.

These awards are open to any PhD student or postdoctoral fellow who is a member of the AGA at the time of application - visit the AGA homepage for membership details.

The program is not intended to fund an entire research project, to initiate new research projects, or to provide salary support. Proposals addressing genome-scale questions, or ecological, evolutionary and conservation genetics questions best addressed with genome-scale data, will be given priority for funding. Awards will generally range from $5,000 to $10,000, awarded to the PI or institution (no overhead is provided).

To apply, visit https://www.theaga.org/ Anjanette Baker, AGA Manager

theaga@theaga.org

AGA SpecialEventsAwards

The American Genetic Association grants awards each year to its members for support of special events that advance the mission of AGA, particularly to support students to attend the event.

Eligible events include specialized workshops and short courses in topical areas of organismal genetics and genomics, but any event relevant to AGA's purpose will be considered, especially those that could lead to Journal of Heredity articles.

Awards are between $1,000-$15,000, with a total of $70,000 available for 2019. Funding is competitive, and applications must follow the guidelines.

To apply, visit https://www.theaga.org/ Anjanette Baker, AGA Manager

theaga@theaga.org

BiodiversityNext ExtDeadline

Dear colleagues,

For your information, the Program Committee of* Biodiversity_next *just extended the deadline for breakout session proposals.

The new deadline is *9 December, 2018.*[image: Resultado de imagen de logo biodiversity_next]

Here's the link to *submission instructions < https://-biodiversitynext.org/call-for-symposia/proposal-letter/ >*.

We take this opportunity to encourage you to submit ideas and proposals for workshops, symposium and/or meetings to facilitate discussion on the topics of interest to our community.

Best regards,

*Gila Kahila Bar-Gal *

The Hebrew University of Jerusalem, Israel

Gila Kahila <gila.kahila@mail.huji.ac.il>

ESEB SpecialTopicNetworks CallForProposals

ESEB Special Topic Networks - Call for proposals

Small symposia, workshops and courses in various formats can perform functions complementary to those of the ESEB Congresses, allowing more focused interactions within specialist areas, forging new links between previously separate areas or fostering interdisciplinary

and innovative ideas that merge specialized fields. One-off events can be valuable but the returns for connected series of events can be even greater. Therefore, ESEB invites proposals for Special Topic Networks (STNs) that will support dynamic and flexible series of small meetings and/or other networking opportunities in focused and currently active research areas.

Each STN will be funded for up to 6 years (subject to review after 2 and 4 years of operation) with an annual budget of up to 10 000 Euros. Four STNs have been initiated since the start of the initiative (see https://-eseb.org/prizes-funding/special-topic-networks/), and further STNs will be initiated every other year. The format of these STNs is up to their organisers and innovative ideas are encouraged. All fields of evolutionary biology are eligible. Applicants should provide a proposal with the following components:

1) a description of the research area to be targeted, showing why it is timely to address it in this way and outlining the expected benefits to the field from the STN (max. 1000 words), 2) a plan for the first two years of operation of the STN and an outline of activities over the remaining years (max. 500 words), 3) the names and affiliations of the proposed organisers, with brief (max. one page) CVs, and 4) a budget, with brief justification, for the STN activities proposed for the first two years.

Applicants should also identify an institution that is prepared to open an account in which the funds can be deposited and managed by the applicants. 'Overheads' will not be paid to this institution but reasonable direct administrative costs will be eligible. Funding for each 2-year block will be subject to approval by the STN Committee, established by Council, following receipt of a report of activities in the preceding 2 years. The institution managing funds will be asked to provide a certified statement of expenditure to accompany the report. The principal criterion for renewal will be evidence that the funding provided had been used to further interaction in the topic area.

Applications should be sent to the ESEB office email (office@eseb.org) as PDF files by ***31 March 2019***. Updated versions of previously-submitted proposals are welcome. Proposals will be assessed by an independent STN Review Panel, appointed by the STN Committee following the closing date and ensuring no conflict of interest by panel members. The STN Review Panel will make funding recommendations to Council. The result will be announced after the next Council meeting, at latest on 31 August 2019.

The principal criterion for selection of an STN will be its focus on an active area of research within the scope of evolutionary biology. Preference might be given to STNs that propose new connections between sub-disciplines or that focus on the resolution of current controversies. New STNs will address topic distinct from those covered by currently-funded STNs. A score for this criterion based on part (1) of the application will account for 50% of the overall panel score. It is primarily for the proposers to demonstrate the need for an STN, the potential for it to stimulate progress and the activities that will enable the network to be effective. A typical STN might organise one small discussion meeting per year but it might also organise training events and its members might work together to generate resources or publications. Interaction among members might be fostered, between meetings, using social media, online discussion forums or similar. A score for the effective and innovative nature of the plans laid out in part (2) of the proposal will account for 25% of the overall panel score. The final 25% of the score will be based on the budget and adherence to the following guidelines:

1. A proposal should be supported by at least three ESEB members (membership in date on the closing date for applications), from at least two and typically three countries and taking gender issues into account, who commit to organising the STN for its duration (or to finding appropriate replacements if forced to step down). A member should support no more than one proposal in a given application round and organisers of current STNs should not be proposers of new STNs. 2. STNs should organise at least one meeting in the non-Congress year following its inception and one in its final non-Congress year. Complementing these meetings with an innovative range of other activities is strongly encouraged.

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EvolutionMedicineSociety MembershipDiscountThisWeekOnly

The International Society for Evolution, Medicine and Public Health is offering a 20% discount on membership fees only until December 15th. Use codeISEMPH2019 at checkout Full information at https://isemph.org/-membership $1000 discount for Sponsors $200 discount for Lifetime $50 discount for Regular 3 year

The Fifth Annual Meeting will be in Zurich in August. Registration and Abstract Submission are open. https://isemph.org/2019-Meeting Full Members get many benefits:

- Reduced fees for the Annual Meeting August 13-16 in Zurich. - Early notice about events, funding opportunities and the ISEMPH Newsletter - A $1000 discount on publication fees for articles in the Societys journal, Evolution, Medicine & Public Health - A 25% discount on all Oxford University Press academic books (use your email or ISEMPH member number) - Notification of new publications in Evolution, Medicine, & Public Health (1 click unsubscribe) - Advanced search and download functions for all 1500+ resources on EvMedEd - Nomination and voting rights in Society elections - Your information listed online to facilitate connections with other members (you can specify what is displayed) - Access to more information about other members of ISEMPH - Opportunities to collaborate with other members to help develop the field of evolutionary medicine

Gratis membership is also available. It includes only a newsletter subscription and an opportunity to list selected information on the EvMed Network to facilitate connections with others who share your interests

Randolph Nesse <nesse@asu.edu>

HuronMountain WildlifeCons ResProposals

The Huron Mountain Wildlife Foundation invites proposals for field-based research, in all areas of natural science, focused on the landscape and ecosystems of the Lake Superior basin, particularly the Huron Mountains of northern MI.

The Foundation offers small GRANTS and provides housing and facilities free of charge at the Ives Lake Field Station near Big Bay, MI.

HMWF provides exclusive research access to a large (ca 10,000 ha), ecologically diverse, private natural area in the Huron Mountains of northern Marquette Co, MI. The area includes extensive old-growth forests, diverse aquatic systems, and a variety of other habitats.

Particular priority for grants goes to: 'seed' projects that might lead to successful proposals to major funding agencies; long-term studies; projects that make use of the reference ecosystem values of the study area.

HMWF also supports biodiversity/taxonomic documentation and is particularly interested in projects addressing poorly studied groups in its extremely diverse research area (see website, below, for current biodiversity inventory).

The Foundations website, at www.hmwf.org, provides information about past and present research projects. Go to the for researchers tab for guidelines for research proposals.

Proposals for the 2019 field season should be submitted by 1 Feb, 2019; this deadline is strict if funding is requested.

For further information, contact Kerry Woods, Director of Research at kwoods@bennington.edu

– Kerry D. Woods Bennington College, Natural Sciences Dir. of Research, Huron Mt. Wildlife Found. www.hmwf.org faculty.bennington.edu/~kwoods kwoods@bennington.edu

kerry.d.woods@gmail.com

LMU Munich FieldAssist SongbirdBehav

*Student field assistant in **behaviour-related settlement of songbirds*

The Behavioural Ecology group at the Ludwig-Maximilians University (LMU) of Munich, Germany is seeking 2-3 field assistants to help with data collection between February and July 2019. Preferred starting dates are between 1st of February V 1st of April 2019, and field assistants should be available for at least 4-6 month. Employment as a student assistant (Minijob) can be provided.

The study will use the great tit (*Parus major*) V a key species in animal personality research V as a model system. The aim of the project is to investigate how social structures within wild populations drive the assortment of behavioural phenotypes (and *vice versa*), and what fitness consequences result from such interactions.

Candidates should have a BSc in Biology or a related field. Also, applicants should be well-organized and able to work independently, as well as together with other researchers and students. Fieldwork is physically demanding and working hours can be long, including work in all types of weather and during the weekend. Main working tasks will include:

P Catching and ringing

P Territorial mapping

P Conducting behavioural tests (aggressiveness and exploration)

P Nest monitoring

P Data entry and management

Applicants should be aware that Lyme disease (carried by ticks) is prevalent in the area and should inform themselves about this disease beforehand. In addition, successful candidates should be vaccinated against Tick Borne Encephalitis (TBE or FSME) before commencing the fieldwork.

The Behavioural Ecology group is based at the Biocentre of the LMU in Martinsried. Fieldwork will take place at the Forstenrieder Park, which is located 10 min from the Bio-centre. The working language of the Behavioural Ecology group is English, so good knowledge of the language is required.

To apply please send a letter of motivation (max. 1 page) and a detailed CV as one single pdf file to holtmann@bio.lmu.de. Review of applications will start immediately and continue until positions are filled. For further information or questions on the project and the Behavioural Ecology group, please refer to http://-www.behavioural-ecology.bio.lmu.de/index.html or contact Dr Benedikt Holtmann per e-mail.

Benedikt Holtmann <holtmann@biologie.uni-muenchen.de>

MaxPlanckInst Seewiesen FieldAssist AvianEvolution

The Department of Behavioural Ecology and Evolutionary Genetics at the Max Planck Institute for Ornithology in Seewiesen, Bayern, Germany (see http://-/www.orn.mpg.de/2622/Department_Kempenaers), is seeking two

field assistants

to work from 1st June 2019 to 21th July 2019.

The two assistants will work as part of a team of 11 people that study the reproductive biology of Red Phalaropes (Phalaropus fulicarius) and Long-billed dowitchers (Limnodromus scolopaceus) in Utqiagvik (former Barrow), Alaska.

Work will include:

catching birds using mist nets and/or nest traps

measuring and banding birds

attaching GPS tags with a full-body or leg harness

detailed behavioural observations

nest searching

data entry and management

Successful candidates must have experience in catching and handling birds, including experience in mist netting. Applicants should also be highly motivated and well organised, with capabilities of working both in a group and independently. Previous experience of work in remote field sites will be an advantage.

Fieldwork in the short Arctic breeding season is intense and working hours can be long. Applicants must be prepared to work in all types of weather conditions, at any time (including weekends and holidays). Smart time management, attention to detail and effective communication skills are important attributes for this type of fieldwork.

The working language in the team is English. A full, clean driver's licence is essential, with driving experience of at least one year.

The successful applicants will be based in double rooms in housing for scientists, kitchen and common room are shared with other international researchers. Travel costs, lodging and board will be covered.

Review of applications and calls for interviews will be at the end of January 2019. If you are interested in applying for one of the positions, please apply (including your CV) via email to jkrietsch@orn.mpg.de

Johannes Krietsch Department of Behavioural Ecology and Evolutionary Genetics Max-Planck-Institute for Ornithology Eberhard-Gwinner-Straße, House 7 82319 Seewiesen Germany

"Krietsch, Johannes" <jkrietsch@orn.mpg.de>

Namibia 5 BaboonFieldAssist

Dear Evoldir,

We are currently recruiting volunteer research assistants for the 2019 field season on the Tsaobis Baboon Project. If you could please circulate these details to anyone you think might be interested in fieldwork with desert baboons in Namibia, that would be great, thank you.

Tsaobis Baboon Project 2019 - Volunteer Field Assistants

The Tsaobis Baboon Project is a long-term study of desert baboons in Namibia. Based at the Institute of Zoology (the research arm of the Zoological Society of London), and affiliated with the Gobabeb Research and Training Centre (Namibia), our aim is to carry out fundamental research in behavioural ecology and population ecology, and to inform conservation policy and practice for social species.

We are seeking to appoint five volunteer field assistants, each for a period of 3.5 months, between mid-April and the end of July 2019. The f ieldwork will primarily involve daily follows of baboon troops on foot, collecting data on the behaviour and ecology of individually recognisable animals . Our research focus this year is on baboon social behaviour and female reproductive strategies.

Further information about the Tsaobis Baboon Project, the volunteer field assistant positions, and the application procedure can be found on the Project's webpages:

[http://www.zsl.org/science/research/baboon | www.zsl.org/science/research/baboon]

The deadline for applications is 10am Monday 7 January 2019

Have a lovely Christmas,

Jules Dezeure

Jules Dezeure <jules.dezeure@etu.umontpellier.fr>

NewEditors GBE

*Re: *Announcing the new Editor-in-Chiefs of GBE

Dear Colleague

After 10 years in the role Bill Martin has decided to step down as Editor-in-Chief of Genome Biology and Evolution. Bill founded the journal with Takashi Gojobori in 2009 and has been its sole EiC since then. Under his guidance the journal has grown to one which now receives over 500 submissions and publishes around 300 papers per year. His place is taken by not one, but by two EiCs: Laura A. Katz and Adam Eyre-Walker. Laura will serve for 5 years and Adam for 4, to allow overlap going forward into the future.

We dont anticipate making any changes in the near future but we would welcome your input as to how the journal can be improved. We would also ask that you bear with us as we take over and iron-out any problems running the journal with two EiCs.

We are very grateful to Bill for all that he has done for the journal and we look forward to receiving submissions from you.

Best wishes

Laura A. Katz and Adam Eyre-Walker

Editors in Chief, Genome Biology and Evolution

– Dr Lulu Stader Executive Administrator, Society for Molecular Biology and Evolution smbe.contact@gmail.com <smbe.meetings@gmail.com>

"Lulu Stader (SMBE admin)" <smbe.contact@gmail.com>

PhilosophyOfScienceEvolution answers

A few days ago, I posted a request for suggestions of articles on philosophy of science and logical inference that would be suitable for an upper-level undergraduate course in evolutionary biology. I was particularly interested in articles about how science works that are

aimed at biologists (or at least not aimed at professional philosophers), and ideally these would be in the context of one or more aspects of evolutionary biology.

I got a great set of responses with really diverse suggestions. Many thanks to those who made the suggestions.

Below, I've appended the list for anyone else who might find it useful. Cheers, Jeff Dudycha

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Philosophy of Science & Evolutionary Biology Articles and Book Chapters:

Crespi, B. & K. Summers. 2014. Inclusive fitness theory for the evolution of religion. Anim. Behav. 92: 313-323.

Currie, Adrian & Turner, Derek. 2016. Introduction: Scientific knowledge of the deep past. Studies in History and Philosophy of Science Part A 55:43-46.

Currie, Adrian. 2018. Mass Extinctions as Major Transitions. Biology & Philosophy [Preprint; available at http://philsci-archive.pitt.edu/14854/] Doolittle, W. F. and S. A. Inkpen. 2018. Processes and patterns of interaction as units of selection. An introduction to ITSNTS thinking. PNAS 115: 4006-4014.

Feldman, Richard. 2007. Reasonable religious disagreements. In Louise Antony (ed.), Philosophers Without Gods: Meditations on Atheism and the Secular Life. Oxford University Press. pp. 194-214.

Godfrey-Smith, P. 2015. Reproduction, symbiosis, and the eukaryotic cell. PNAS 112 (33) 10120-10125.

Gowaty, P.A. 2018. Biological Essentialism, Gender, True Belief, Confirmation Biases, and Skepticism. In: Travis CB, and White JW, eds. APA Handbook of the Psychology of Women: American Psychological Association, 145-164.

Graur, D., et al. 2013. On the immortality of television sets: "Function" in the human genome according to the evolution-free gospel of ENCODE. Genome Biol. Evol. 5: 578-590.

Healy, K. 2017. Fuck nuance. Sociological Theory 35: 118-127.

Hilborn, R. and M. Mangel. 1997. Chapter two: Alternative views of the scientific method and modeling. in The Ecological Detective: Confronting Models with Data (Authors: Hilborn & Mangel) Princeton University Press.

Lloyd, E. 2015. Adaptationism and the logic of research questions: How to think clearly about evolutionary causes. Biological Theory 10: 343-362.

Masel, J. and D.E. Promislow. 2016. Answering evolutionary questions: A guide for mechanistic biologists. BioEssays 38: 704-711.

O'Malley M. A. 2018. The experimental study of bacterial evolution and its implications for the modern synthesis of evolutionary biology. Journal of the History of Biology 51: 319-354.

O'Malley M.A., Wideman J.G., Ruiz-Trillo I. 2016. Losing complexity: The role of simplification in macroevolution. Trends in Ecology and Evolution, 31: 608-621.

Pennock, Robert T. 2007. Models, Simulations, Instantiations and Evidence: The Case of Digital Evolution. Journal of Experimental and Theoretical Artificial Intelligence (Vol. 19, No. 1).

Quinn, J. F. and A. E. Dunham. 1983. On hypothesis testing in ecology and evolution. American Naturalist 122(5): 602-617.

Salt, G. W. 1983. Roles: Their limits and responsibilities in ecological and evolutionary research. American Naturalist 122(5): 697-705.

Scott-Phillips, T.C., et al 2013. The Niche Construction Perspective: A Critical appraisal. Evolution 68: 1231-1243.

Servedio, M. R., et al. 2014. Not just a theory-The utility of mathematical models in evolutionary biology. PLoS Biol 12: e1002017.

Welch, J. J. 2017. What's wrong with evolutionary biology? Biol Philos 32: 263-279.

Zuk, M. and M. Travisano. 2018. Models on the runway: How do we make replicas of the world? American Naturalist 192: 1-9.

Other types of resources:

Stanford Encyclopedia of Philosophy (https://-plato.stanford.edu/) (Articles on scientific discovery, explanation, method, objectivity, and realism, among others.)

Gower, Barry. 1997. Scientific Method: A historical and philosophical introduction. Psychology Press.

Donald Forsdyke's series of 12 historical videos (each about 10 minutes) on Natural Selection: https://www.youtube.com/playlist?list=-PL59A9C65FB0DCED9E Steve Carr's course notes for History of Biology (https://www.mun.ca/biology/-scarr/Bio4270_2019.html) and Advanced Genetics (https://www.mun.ca/biology/scarr/BIO4241.html), with particular attention to Meselson & Stahl (1958), King & Wilson (1975), and Carlson (2018).

–

Jeffry L. Dudycha Professor Dept. of Biological Sciences University of South Carolina

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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

Philosophy of science in Evolution course

Colleagues,

I'm looking for suggestions of articles on philosophy of science and logical inference that would be suitable for an upper-level undergraduate course in evolutionary biology. I want to have my students read 2-3 articles about how science works that are aimed at biologists (or at least not aimed at professional philosophers), and ideally these would be in the context of one or more aspects of evolutionary biology. Thus far, my searches haven't turned up anything quite like what I'm hoping is out there, so I thought I'd try crowdsourcing it.

I'm not looking for books (there are lots of those) or discussions of evolution-vs-creationism (lots of those, too). As it stands, I'll probably use a couple of chapters from OUP's "very short introduction" to philosophy of science.

Email any suggestions to me at dudycha <at> biol.sc.edu. I'll compile and post the list later.

Thanks,

Jeff

Jeffry L. Dudycha Professor Dept. of Biological Sciences University of South Carolina Columbia, SC 29208 dudycha [at] biol.sc.edu http://ww2.biol.sc.edu/~dudycha

Phyloseminar SarahHilton Dec12

Next on http://phyloseminar.org/: Model Adequacy of Experimentally Informed Site-Specific Substitution Models Sarah Hilton (University of Washington, Seattle) Wednesday, December 12, 2018, 10:00 AM PST

Phylogenetic substitution models are hypotheses about evolutionary process and, like all models, they contain simplifying assumptions. One common assumption is that all sites in a gene evolve identically. However, even a cursory analysis of a multiple sequence alignment will show that this assumption is violated in natural protein evolution. Relaxing this assumption greatly increases the number of model parameters to account for the effect of every amino acid at every site in the protein. We have developed a family of models, called Experimentally Informed Codon Models (ExpCMs), which describe the site-specific constraints on a protein using empirical measurements from a high-throughput functional assay in the lab. Even though the vast majority of the parameters are determined empirically rather than fit to the data, we have found that ExpCMs are generally better descriptors of natural sequence evolution than site-uniform codon models, as evaluated by model comparison techniques such as AIC. Now, we are turning to model adequacy tests as a more quantitative and comprehensive way to evaluate ExpCMs on a site-by-site basis. We believe that sites which are inadequate descriptors of natural sequence evolution may indicate sites where the selective pressure differs between the lab and nature and point to interesting biological mechanisms. Model adequacy tests will also allow us to compare how well experiments performed under different conditions are able to capture natural constraint. Overall, the site-specific ExpCMs can be used as a tool to bridge the gap between what we know about selection in the lab and in nature.

Andy Magee UW Biology <afmagee@uw.edu>

Query Disposal AgaroseGels

Dear EvolDir

We are in the process of phasing out ethidium bromide from our labs and looking for cost-effective alternatives. I am writing mainly to know

1) how do labs worldwide dispose their agarose gels with or without Ethidium bromide?

2) how do labs treat biological waste before disposal?

3) Do you just throw plastic waste like tips etc after use or autclave it before disposal?

4) cost effective alternative for EtBr.

I would appreciate some advice so we can adopt an effec-

tive solution. Many thanks in advance for your response. Farah IshtiaqCentre for Ecological Sciences,Indian Institute of Science,Bangalore 560012INDIA

Farah Ishtiaq <fishtiaq2001@yahoo.com>

SMBE NominationsPrestigiousFacultyAwards

SMBE: Nominations Due for Prestigious Faculty Awards

Dear Colleague,

In 2015, SMBE instituted four new awards for: Early-Career, Mid-Career, and Lifetime Research Achievements, and Service to the SMBE Community. We are now calling for nominations for these awards and ask you to consider nominating your colleagues.

The nominations will be due on January 25, 2019.

Briefly, the Junior Award for Independent Research is intended for nominees in tenure-track positions at the Assistant Professor level or equivalent; the Mid-Career Award is for the research contributions of faculty nearing promotion to Full Professor or in the early stages as a Full Professor; the Lifetime Contribution Award is for exceptional contributions to the published literature in the field of molecular biology and evolution; and the Community Service Award recognizes outstanding efforts on behalf of the Society and the broader scientific community. Awardees will receive a cash prize and a trip to the upcoming SMBE Annual Meeting in Manchester, United Kingdom (July 21-25, 2019).

Here are links to the pages describing these awards:

*Allan Wilson Junior Award for Independent Research * http://www.smbe.org/-smbe/AWARDS/FacultyAwards/-AllanWilsonJuniorAwardforIndependentResearch.aspx *Margaret Dayhoff Mid-Career Award* http://www.smbe.org/smbe/AWARDS/-FacultyAwards/MargaretDayhoffMidCareerAward.aspx *Community Service Award* http://-www.smbe.org/smbe/AWARDS/FacultyAwards/-CommunityServiceAward.aspx *Motoo Kimura Lifetime Contribution Award* http://-www.smbe.org/smbe/AWARDS/FacultyAwards/-MotooKimuraLifetimeContributionAward.aspx
Nominations require a nomination letter, which should clearly indicate the award under consideration and also serve as a recommendation letter; a separate one-page summary of the nominees qualifications for the award; a CV of the nominee; and an additional letter of recommendation. Self-nomination is not allowed. The nominator need not be an SMBE member, but the nominee must be a member of SMBE to be considered for the award.

The materials should be compiled into a single PDF file, and should be emailed to smbe@allenpress.com <tleatherman@allenpress.com>.

Best Regards,

Laura Landweber

Past-President, SMBE 2019 SMBE Awards Committee Chair

"Lulu Stader (SMBE admin)" <smbe.contact@gmail.com>

SouthAfrica VolResAssist MoleRatBehaviour

We are looking for several volunteer research assistants to carry out exciting experiments with captive Damaraland mole-rats, Fukomys damarensis at the Kuruman River Reserve, in the South African Kalahari Desert. Broadly, our research investigates the influence of genes, hormones and social factors on individual developmental, growth and behaviours. Currently, we are particularly interested in characterizing the phenotypical differences between breeding and non-breeding individuals and to develop an integrated understanding of the causes and consequences of contrasts in reproductive output.

Applicants should be available for a period of 6 to 12 months starting as soon as possible. They should be hardworking, enthusiastic, physically fit, and prepared for long hours in the laboratory. Successful applicants will be responsible to run experiments and will be involved in data collection (behavioural observations, collection of blood and urine samples). Other general tasks related to animal handling and husbandry and data handling will also be expected. Working weeks will not exceed 45 hours.

This position is particularly suited, but not exclusively, for people aiming to carry on their academic education or a management position in a research project. Successful applicants can expect to gain invaluable experience in animal handling procedures and in conducting and managing experiments. They will also gain database

skills (MySQL) and will be provided with the opportunity to work on a personal analysis project using the data available in our existing database. Costs of food and accommodation while at the project will be covered. If you are interested in this position send your CV and cover letter stating your availability to Philippe Vullioud (philippe.vullioud@gmail.com). Shortlisted applicants will be invited for a Skype interview. Deadline: 15th December 2018 (the position will however remain open until filled)

Philippe Vullioud <philippe.vullioud@gmail.com>

SSE DobzhanskyPrize CallForNominations

Nominations/applications are now open for the Theodosius Dobzhansky Prize, awarded annually by the Society for the Study of Evolution (SSE) to recognize the accomplishments and future promise of an outstanding young evolutionary biologist. The recipient will receive $5000 USD and present their research at Evolution 2019 in Providence, RI. < http://www.evolutionmeetings.org/evolution-2019—providence.html > Nominations are due *January 31. *Learn more here < http://www.evolutionsociety.org/-index.php?module=content&type=user&func=-view&pid > .

– *Kati Moore* *Communications Specialist* *Society for the Study of Evolution* communications@evolutionsociety.org www.evolutionsociety.org SSE Communications <communications@evolutionsociety.org>

SSE FisherPrize CallNominations

The Society for the Study of Evolution (SSE) is pleased to announce the call for the R. A. Fisher Prize, which is awarded annually for an outstanding Ph.D. dissertation paper published in the journal *Evolution < https://onlinelibrary.wiley.com/toc/-15585646/0/ja >* during a given calendar year. The award comes with a $1000 USD honorarium. Nominations are due *January 31*. Learn more here < http://www.evolutionsociety.org/index.php?module=-content&type=user&func=view&pid > .

Kati Moore *Communications Specialist* *Society for the Study of Evolution* communications@evolutionsociety.org www.evolutionsociety.org communications@evolutionsociety.org

SSE GouldPrize CallForNominations

The Society for the Study of Evolution is pleased to announce the call for nominations for the annual Stephen Jay Gould Prize, which recognizes individuals who have increased public understanding of evolutionary biology and its place in modern science. The recipient will receive $5,000 USD and will present the Public Outreach Seminar at Evolution 2019 in Providence, RI < http://www.evolutionmeetings.org/-evolution-2019—providence.html >. The awardee should be a leader in evolutionary thought and in public outreach who can deliver an inspiring lecture for both professionals and the broader public. Nominations are due *January 15*. Learn more here < http://www.evolutionsociety.org/index.php?module=-content&type=user&func=view&pid > .

– *Kati Moore* *Communications Specialist* *Society for the Study of Evolution* communications@evolutionsociety.org www.evolutionsociety.org SSE Communications <communications@evolutionsociety.org>

SSE GraduateResearchExcellenceGrants

The Society for the Study of Evolution (SSE) is pleased to announce the 2019 Graduate Research Excellence Grants (GREG) V R.C. Lewontin Early Awards. These awards assist students in the early stages of their Ph.D. programs by enabling them to collect preliminary data (to pursue additional sources of support) or to enhance the scope of their research beyond current funding limits (e.g. by visiting additional field sites, or working at other labs). Awards will be made up to $2500. Proposals will be due

February 15. Learn more and apply here < http://-www.evolutionsociety.org/content/society-awards-and-prizes/graduate-research-excellence-grants.html#greg1 > .

– *Kati Moore* *Communications Specialist* *Society for the Study of Evolution* communications@evolutionsociety.org www.evolutionsociety.org SSE Communications <communications@evolutionsociety.org>

SSE SmallGrants Outreach

The Society for the Study of Evolution (SSE) Education and Outreach Committee is pleased to announce a call for proposals from SSE members for support for local and regional educational outreach activities to take place during 2019. It is our hope that these projects will lead to ongoing outreach collaboration in future years. Examples of past outreach activities have included public lectures, exhibits, student competitions, and professional development events for teachers. Proposals will be accepted until *January 18*. Learn more here < http://www.evolutionsociety.org/index.php?module=-content&type=user&func=view&pid > .

– *Kati Moore* *Communications Specialist* *Society for the Study of Evolution* communications@evolutionsociety.org www.evolutionsociety.org SSE Communications <communications@evolutionsociety.org>

Systematics ResearchFund

The Councils of the Linnean Society (https://-www.linnean.org/) and the Systematics Association (http://www.systass.org/) jointly administer the Systematics Research Fund (SRF) that provides grants annually for small-scale research projects in the field of systematics.

Typical activities supported include contributions to fieldwork expenditure, the purchase of scientific equipment or expertise (e.g. buying time on analytical equipment), specimen preparation (including the cost of temporary technical assistance), and contributions to publication costs. However, please note that it is unable to fund the cost of article publication charges. Projects of a more general or educational nature will also be considered, provided that they include a strong systematics component. Typical activities not supported include attendance at scientific meetings and contributions to student maintenance or tuition fees. The fund does not provide payments for Bench Fees. Projects already substantially funded by other bodies may be disadvantaged. Applications of all nationalities are welcome but applicants must be a current member of the Systematics Association or Linnean Society of London.

Successful projects are selected by a panel of systematists who represent a wide range of conceptual interests and taxonomic groups. Generally, applications in the range of £500-£1000 are preferred, the value of any single award will not exceed £1500.

Deadline: 20 February 2019

More information on SRF on the Systematics Association webpage: http://systass.org/grants-and-awards/-srf/ Questions about the application procedure can also be sent to the SRF Administrator (srf@systass.org)

Dr. Anne D. Jungblut Grants & Awards Secretary for SRF The Systematics Association

Anne Jungblut <a.jungblut@nhm.ac.uk>

Vignettes on EvolutionaryApplications

Dear EvolDir,

We are seeking your help in developing two-page vignettes on Applications of Evolution to topics that impact our world in a variety of ways. The concept is to identify primary research papers that have exciting applications of evolution to areas of impact on environment (climate change, conservation, biotic assembly, etc.), medicine (infectious disease, genomics, human phenotypic variation, etc.), and Society (agriculture, law, computation, language, etc.). Then develop a lay summary (2 page, 2 figure/table) of the research topic for use in teaching efforts at high school, college, and political levels. We envision graduate seminars and/or lab groups focused on developing such vignettes and submitting for peer review via EasyChair https://easychair.org/-cfp/EvolApps2019. We are developing a distinguished Program Committee to review vignettes and welcome additions to the Program Committee as well. The top

50 vignettes will be published in a volume by Oxford University Press with up to four articles winning a cash prize. We hope faculty and graduate students will organize around the world and produce exciting vignettes for submission by our May 31, 2019 deadline. You can find more information and some example vignettes here https://www.evolutionapps.org/. Please let me know if you have any questions or need any guidance as your are developing your Evolutionary Applications!

Sincerely,

Keith Crandall kcrandall@gwu.edu

"Prof. Keith A. Crandall" <kcrandall@gwu.edu>

PostDocs

ArizonaStateU CancerPhylogenetics

We have won a large grant from the NCI to develop a tumor atlas of breast pre-cancers (ductal carcinoma in situ). We would like to translate methods from ecology and evolution to study the cell level ecology and evolution of these tumors. We are hiring a postdoc with expertise in those fields - no cancer knowledge is necessary. Please see https://biodesign.asu.edu/contact/careers/-evolution-and-ecology-cancer- postdoctoral-research-scholar for more information and links to apply.

- Carlo Maley Associate ProfessorBiodesign InstituteSchool of Life SciencesArizona State University Director, Arizona Cancer Evolution Center Research ProfessorNorton Thoracic InstituteSt. Joseph's Hospital and Medical Center Assistant: Merielle Kalos(480) 965-2831Merielle.Kalos@asu.edu My Cell:480-326-0428 Sent with Mixmax

maley@asu.edu

ArizonaStateU EvolutionCancer

I am reposting this to fix the broken link:

We have won a large grant from the NCI to develop a tumor atlas of breast pre-cancers (ductal carcinoma in situ). We would like to translate methods from ecology and evolution to study the cell level ecology and evolution of these tumors. We are hiring a postdoc with expertise in those fields - no cancer knowledge is necessary. Please see

https://biodesign.asu.edu/contact/careers/evolution-and-ecology-cancer-postdoctoral-research-scholar for more information and links to apply.

- Carlo Maley

– Carlo C. Maley, Ph.D. Associate Professor Biodesign Institute School of Life Sciences Arizona State University

Cell: +1-480-326-0428

BangorU SpeciationSulwesi

32 month, full-time postdoctoral researcher in School of Natural Sciences, Bangor, UK

Forecasting biodiversity losses in Wallacea from ecological and evolutionary patterns and processes

We are seeking a highly motivated post-doctoral researcher in genomics and spatial analysis to join an exciting, NERC-funded project investigating the evolution and diversification of taxa on the Indonesian island of Sulawesi. The successful candidate will be one of two post-doctoral researchers working on this highly collaborative project with researchers at Bangor University, the University of Aberdeen and the University of Nottingham. The post-doctoral researcher will join the Molecular Ecology and Fisheries Genetics Laboratory (http://mefgl.bangor.ac.uk/) at Bangor University and spend a portion of their time at the University of Nottingham. The project will integrate state-of-the-art eco-evolutionary modelling with new and existing ecological and evolutionary data across eukaryotic taxa and soil microbes to deliver fresh understanding of the processes responsible for the generation, diversification, and persistence of Wallacea's endemic biodiversity. The project will generate a calibrated model (called ForeWall ' Forecasting for Wallacea) which will forecast biodiversity dynamics across a suite of taxa under alternative future scenarios of land use and climate change. The Bangor post-doctoral researcher will collate and analyse existing spatial and genetic data for the Sulawesi biota and produce new genomic data for two damselfly genera represented, which are in the process of diversification on Sulawesi. Additionally, they will also investigate three groups of soil microbes, which perform a key ecosystem function (nitrification)

Candidates should hold a PhD (or near completion) in evolution, ecology or genetics and have research experience in evolutionary biology, molecular ecology or a related discipline, preferably in relation to population genetics of wild organisms. The post-doctoral researcher will be responsible for the generation and analysis of genomic data for Sulawesi damselflies and metabarcoding data for prokaryotes. They will collate and analyse existing genetic and spatial data for other Sulawesi taxa in collaboration with the project's expert partners. Basic molecular genetic wet lab skills, genetic data handling/analysis skills and field working experience are

essential, as is the ability to work collaboratively on writing and analysis for publication. Experience in bioinformatics, population genetic/phylogenetic analysis of genomic data, tropical fieldworking, geographic information systems, and knowledge of genetic analysis for eukaryotes and prokaryotes is highly desirable.

This is a fixed term appointment for 32 months. Starting Salary: pounds 33,199 pa (Grade 7). Preferred start date is 01/02/19 or as soon as possible thereafter. Applications will only be accepted via the on-line recruitment website (jobs.bangor.ac.uk).

See https://tinyurl.com/yb4ofxne and https://tinyurl.com/ydge3y2a for further details.

Closing date for applications: 09/01/19.

For informal enquiries contact Alex Papadopulos (a.papadopulos@bangor.ac.uk)

About MEFGL Bangor The Molecular Ecology and Fisheries Genetics Laboratory (MEFGL) is a leading research division of the School of Biological Sciences (SBS), within the College of Natural Sciences at Bangor University. The MEFGL represents one of Europe's largest centres focusing on population, species and community diversity of aquatic animals, with additional activities on prokaryotic and eukaryotic groups, including plants, fungi and microbes throughout terrestrial and aerobiological biomes.

Mae croeso i chi gysylltu gyda'r Brifysgol yn Gymraeg neu Saesneg

You are welcome to contact the University in Welsh or English

Rhif Elusen Gofrestredig 1141565 - Registered Charity No. 1141565

Gall y neges e-bost hon, ac unrhyw atodiadau a anfonwyd gyda hi, gynnwys deunydd cyfrinachol ac wedi eu bwriadu i'w defnyddio'n unig gan y sawl y cawsant eu cyfeirio ato (atynt). Os ydych wedi derbyn y neges e-bost hon trwy gamgymeriad, rhowch wybod i'r anfonwr ar unwaith a dilewch y neges. Os na fwriadwyd anfon y neges atoch chi, rhaid i chi beidio a defnyddio, cadw neu ddatgelu unrhyw wybodaeth a gynhwysir ynddi. Mae unrhyw farn neu safbwynt yn eiddo i'r sawl a'i hanfonodd yn unig ac nid yw o anghenraid yn cynrychioli barn Prifysgol Bangor. Nid yw Prifysgol Bangor yn gwarantu bod y neges e-bost hon neu unrhyw atodiadau yn rhydd rhag firysau neu 100% yn ddiogel. Oni bai fod hyn wedi ei ddatgan yn uniongyrchol yn nhestun yr e-bost, nid bwriad y neges e-bost hon yw ffurfio contract rhwymol - mae rhestr o lofnodwyr awdurdodedig ar gael o Swyddfa Cyllid Prifysgol Bangor.

This email and any attachments may contain confidential material and is

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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

BristolU CichlidFishEvolution

Full time NERC funded Postdoctoral Researcher, School of Biological Sciences, University of Bristol, UK

Can phenotypic plasticity and DNA methylation promote adaptive radiation?

We are seeking a postdoctoral researcher to take a key role in a NERC funded project investigating the roles of phenotypic plasticity and DNA methylation during adaptive radiation, focussing on the cichlid fish model system. The objective of the project is to test core principles of this 'plasticity first' idea using the Eastern Happy (Astatotilapia calliptera), a phenotypically variable, genomically well characterised, and experimentally tractable cichlid fish species within the Lake Malawi radiation. The project is a partnership between the University of Bristol (Prof. Martin Genner; Dr Jon Bridle) and Bangor University (Prof. George Turner), with support from project partners in the Malawi Fisheries Research Unit (Dr Harold Sungani), the Tanzania Fisheries Research Institute (Dr Semvua Mzighani) and the University of Cambridge (Prof. Eric Miska; Prof. Richard Durbin). We will test: i) whether plasticity in traits present among wild populations can direct genetically driven trait divergence, ii) whether patterns of DNA methylation are repeated in parallel cases of ecomorphological trait divergence, iii) if differential gene expression is linked to methylation during divergence events, and iv) if DNA methylation shows transgenerational stability in fish within stable environments. This project will provide key insights into the role of plasticity and DNA methylation in vertebrate evolution. The project will focus on both wild caught and laboratory reared specimens and quantify morphology using micro-CT scans and geometric morphometrics. Epigenetic variation will be quantified using a combination of reduced-representation and whole genome bisulphite sequencing, while gene expression will be quantified using RNAseq. Candidates should have a doctoral degree. They should also have an aptitude for experimental

design, and enthusiasm for fieldwork and analyses of complex data. Candidates should have experience of molecular laboratory work, and knowledge of bioinformatics tools. The position is for 36 months, is based at the University of Bristol.

The closing date for application is 6th January 2019. For informal enquiries please contact Prof. Martin Genner (m.genner@bristol.ac.uk). For further details, including the full job description and details on how to apply, please follow the link below.

http://www.bristol.ac.uk/jobs/find/-details.html?nPostingID)254&nPostingTargetID3815&option(&sortSC&isp=1&ID=Q50FK026203F3VBQBV7V77V83&key

Prof. Martin Genner School of Biological Sciences University of Bristol Bristol Life Sciences Building 24 Tyndall Avenue Bristol, BS81TQ. UK Email: m.genner@bristol.ac.uk

Martin Genner <M.Genner@bristol.ac.uk>

BristolU GenomicsTransitions

Discovering the genomic basis of the evolution of animal parasitism

A post-doctoral position funded by the Wellcome Trust with two years fixed funding is available in the lab of Dr Jordi Paps (University of Bristol) to work on the genome biology and evolution of parasitic animals.

Roundworms (Nematoda) and flatworms (Platyhelminthes) are among the most species-rich animal groups, including free-living animals but also parasites. Helminthiases affect farm animals and plants, and infect more than half of the worldwide human population. Understanding the genomic basis of the evolution of parasitism is imperative to fight these parasites with huge socioeconomic impact.

The candidate will use genomics approaches, assembling and annotating genome data generated with Illumina and ONT PromethION platforms, and analysing single-cell data. Genomes of different animals will be compared using evolutionary genomics approaches. This will provide new insights into the genomic events, such as gene gains and losses, associated with the transition from free-living to parasitic organisms, revealing new therapeutic targets.

The candidate will have a PhD (or about to submit) in evolutionary biology and/or bioinformatics, along with a strong interest in animal evolution and genomics. Essential requirements include expertise in programming, de novo genome assembly and annotation, ability to work in a team in an interdisciplinary environment, and proficiency in English. Desirable requirements are experience in phylogenetics, comparative genomics, and analysis of RNAseq and single cell sequencing data.

Relevant papers from the lab:

-Paps & Holland, Peter WH (2018). Reconstruction of the ancestral metazoan genome reveals an increase in genomic novelty. Nature Communications 9, 1730. -Paps (2018). What makes an animal? The molecular ion(&sortSC&isp=1&ID=Q50FK026203F3VBQBV7V77V83&key and Comparative Biology 58 (4), 654-665. -Dunwell, Paps, and Holland (2017). Novel and divergent genes in the evolution of placental mammals. Proceedings of the Royal Society B: Biological Sciences 284, 1864. -Paps et al (2015). Reinforcing the egg-timer: Recruitment of novel Lophotrochozoa homeobox genes to early and late development. Genome Biology and Evolution 7(3), 677-688. -Tsai et al (2013). The genomes of four tapeworm species reveal adaptations to parasitism. Nature 496 (7443).

Link to apply: http://www.bristol.ac.uk/jobs/find/-details.html?nPostingID1594&nPostingTargetID0594&option(&sortSC
1&ID=Q50FK026203F3VBQBV7V77V83&JobNum103725&Resultsper
UK&mask=uobext Informal enquiries are encouraged and may be made to Dr Jordi Paps via e-mail: jordipaps@gmail.com.

Location: Bristol Salary: £33,199 to £37,345 per annum Hours: Full Time Contract Type: Fixed-Term/Contract Closes: 14th January 2019 Job Ref: ACAD103725 Work Hours: 35.0 Hours per Week Division/School: School of Biological Sciences

Jordi Paps School of Biological Sciences University of Bristol Life Sciences Building 24 Tyndall Avenue Bristol, BS8 1TQ. UK

Jordi Paps <jordipaps@gmail.com>

ColumbiaU EcoEvoEpiLymeDisease

A postdoctoral fellow position is available in Maria Diuk-Wassers EcoEpidemiology lab at Columbia Universitys Dept. of Ecology, Evolution, and Environmental Biology (E3B). The postdoc will join a collaborative project with Sergios-Orestis Kolokotronis (SUNY Downstate Medical Center, Brooklyn, NY), Yi-Pin Lin and Laura Kramer (Wadsworth Center, NY State Dept of Health,

Albany, NY), and Ben Adams (University of Bath, Bath, UK) to study strain dynamics and host specialization in Borrelia burgdorferi, the Lyme disease bacterium, recently funded by the NSF Div. of Integrative Organismal Systems (IOS). This project offers a unique opportunity to integrate long-term field data collection, lab transmission experiments, molecular evolutionary epidemiology, and mathematical modeling to examine the processes driving B. burgdorferi diversity and host specialization.

For more info on the research teams: - Maria Diuk-Wasser [eco-epidemiology] at https://-blogs.cuit.columbia.edu/mad2256 - Sergios-Orestis Kolokotronis [molecular evolution] at http://-kolokolab.org - Yi-Pin Lin [host-pathogen interactions] at https://www.wadsworth.org/senior-staff/yi-pin-lin - Laura Kramer [host-pathogen interactions] at https:/-/www.wadsworth.org/senior-staff/laura-kramer - Ben Adams [biomathematics] at https://people.bath.ac.uk/-ba224 Candidates should have a doctoral (or equivalent) degree in evolution, ecology, epidemiology, microbiology, or related fields. Background in molecular biology methods is required, in addition to skills in one or more of the following areas: molecular evolution, population or community ecology, dynamic modeling of microbes/vectors/vertebrate reservoir hosts, high-throughput sequencing methodology and relevant bioinformatics. Highly desirable skills: field and laboratory animal handling.

The successful candidate must be capable of working independently in an interdisciplinary environment and have strong quantitative and writing skills, evidenced by scholarly publications. The postdoc will be based at Columbia (Manhattan) and interact closely with SUNY Downstate (Brooklyn). In addition to the formal collaborations, opportunities exist for collaboration with the Columbia U Mailman School of Public Health, the Columbia Earth Institute, the American Museum of Natural History, the Wildlife Conservation Society, EcoHealth Alliance, and the NY Genome Center.

Women and minorities are encouraged to apply. Columbia University is an equal-opportunity, affirmative-action institution committed to cultural diversity and compliance with the ADA. Columbia University encourages all qualified individuals to apply, and does not discriminate on the basis of any protected status, including veteran and disability status.

Application deadline: January 1, 2019. The position will remain open until filled. Expected start date: May-June 2019.

Salary is commensurate with experience. Applications must include a CV, a statement of research interests, and the contact information of 3 referees in a single PDF file to be sent to mad2256@columbia.edu.

Maria Diuk-Wasser, PhD Columbia University Dept. of Ecology, Evolution & Environmental Biology New York, NY, USA

Sergios-Orestis Kolokotronis, PhD SUNY Downstate Medical Center School of Public Health Dept. of Epidemiology & Biostatistics Brooklyn, NY, USA

koloko@amnh.org

CzechAcademySci InteractionNetworks

A position as *Postdoctoral Researcher* is available to work on

Exploring changes in interaction network structure along environmental gradients using a meta-analytical approach

A highly motivated Postdoctoral Researcher is sought to explore the shifts that occur in network structure along natural and anthropogenic environmental gradients. The successful candidate will join the LifeWebs project (www.lifewebs.net), which seeks to understand broad-scale network ecology through collation and analyses of existing published and unpublished datasets. They will be responsible for collating additional network datasets through searches of published literature and requests to authors, management of the database and analyses of network patterns. We are particularly interested in changes in network structure in relation to latitude, elevation, anthropogenic habitat degradation, and habitat fragmentation. The work will span a range of terrestrial interaction network types, including insect-parasitoid, animal-parasite, plant-animal pollinator (including vertebrates), ant-plant mutualism, plant-herbivore, plant-seed disperser, insect-fungus, and vertebrate predation datasets. The position purely analytical, and there is not a field component to the work. There will be opportunities to develop the project in an analytical direction of the postdocs own choosing.

The successful applicant will join the Ant Research Group (http://antscience.com/) at the Institute of Entomology, Biology Centre Academy of Sciences, Ceske Budejovice, Czech Republic, employed on a grant held by Tom Fayle (http://www.tomfayle.com/index.htm). The Ant Research Group is a dynamic, multinational group studying ant ecology, evolution and biogeography,

and is embedded within the Department of Ecology and Conservation Biology, a world-class centre for interaction network research with regular publications in *Science*, *Nature* and other leading journals. The position allows the successful candidate to apply for standard research grants from the main Czech grant agency (GACR) to eventually expand the project. The deadline for applications is *January 10th 2019*, with a start date of April 1st 2019, and the appointment lasting until Dec 31st 2021 (33 months). Applicants from all countries are eligible. Salary for this full time position is CZK 40,000 per month (approx. EUR 1500 pre-tax). Note that living costs in Czech Republic are substantially lower than in many other European countries and the salary is competitive for such position (e.g. http://bit.ly/1NCkQKJ).

Required

A PhD degree in network ecology or a related field.

Experience of use of databases, or evidence of ability and interest to learn.

Good publication record for career stage.

Experience in the use of ecological statistical analyses, preferably with a focus on network analyses.

Desirable

Previous work using a data collation and meta-analytical approach.

A strong publication record in ecological modelling and/or analysis of biological interactions.

Experience of managing small teams or supervising students for research projects.

To apply please send a CV, contact details for three references, and cover letter stating qualifications, previous work and motivation to Tom Fayle (tmfayle@gmail.com).

Tom Fayle <tmfayle@gmail.com>

Dartmouth NH EvolutionaryBiology

Postdoctoral Fellowship in Ecology & Evolution at Dartmouth http://apply.interfolio.com/57898 Postdoctoral Fellow within Dartmouths Graduate Program in Ecology, Evolution, Ecosystems and Society Location: Hanover, NH, USA

We seek applicants for an independent postdoctoral fellowship in the Ecology, Evolution, Ecosystems, and Society (EEES) Graduate Program at Dartmouth College. The ideal candidate will possess a PhD in the natural sciences by the time of the appointment and will work specifically in the field of ecology and evolutionary biology but will engage with the broader EEES community. The successful candidate will be expected to pursue independent and collaborative research projects in ecology and evolutionary biology. In addition, the fellow will be responsible for enhancing undergraduate and graduate student education and will lead a graduate seminar course or working group dedicated to developing a research product. The ideal candidate will be a strong contributing member of the vibrant EEES community at Dartmouth and will foster productive discourse both within and beyond the program. EEES is a diverse community of scholars who conduct innovative research in the natural sciences and interdisciplinary environmental social sciences, including ecology, evolution, anthropology, environmental economics, geography and earth sciences. Applicants should identify in their cover letter one or more faculty with whom their research interests align as sponsors from the EEES program and describe how their research interests fit within current or future projects with their sponsors at Dartmouth. We encourage applicants to contact one or more faculty members in advance. Program website: http://sites.dartmouth.edu/EEES/ We welcome applications from candidates regardless of race, ethnic identity, national origin, religion, sexual orientation, gender identity, gender expression, physical abilities, or veteran status

Deadline: Review of applications will begin Jan 1 Starting date: Expected 1 September Salary: $50,000 and competitive benefits package. Additional resources for research and professional development: TBD Term: up to 2 yrs pending satisfactory annual performance

Qualifications PhD in the natural sciences by the time of the appointment. Application Instructions

Please submit the following application materials through Interfolio: - Cover letter & Research Statement (1-2 pp.) describing your research interests and future directions - Curriculum vitae (with list of publications) - PDF copies of up to five representative publications or manuscripts - Prospectus (1-2 pages) for an interdisciplinary graduate seminar or working group, including a hypothetical timeline of what will be accomplished when.

Questions about the fellowship can be directed to: biology@dartmouth.edu

"Ryan G. Calsbeek" <Ryan.G.Calsbeek@dartmouth.edu>

Eawag ETHZurich EvolutionaryEcology

Postdoc Position in Evolutionary Ecology

A postdoc position is available in Christoph Vorburger's lab at Eawag and ETH Zurich, Switzerland (https://-homepages.eawag.ch/˜vorburch/). Our research is concerned with the evolutionary ecology of host-parasite interactions in terrestrial and freshwater systems. We have a particular interest in the role of symbiont-conferred resistance in insect host-parasitoid coevolution. This position is available for at least two years and offers ample freedom to develop independent research within the scope of our group. The incoming candidate is expected to take over some responsibility in lab management and in the instruction of students, especially in molecular techniques.

The ideal candidate will have a keen interest in evolutionary ecology, strong quantitative and communication skills evidenced by scholarly publications, and excellent molecular laboratory skills with experience in generating and analyzing next-generation sequencing data. A PhD is required. The expected starting date is 1 March 2019, but can be negotiated.

Eawag offers a unique research and working environment and is committed to promoting equal opportunities for women and men and to support the compatibility of family and work. Applications from women are especially welcome. For more information about Eawag and our work conditions please consult www.eawag.ch and www.eawag.ch/en/aboutus/working/employment.

For enquiries about this position please contact Christoph Vorburger (+41 58 765 51 96; email christoph.vorburger@eawag.ch). Deadline for applications is 31 December 2018.

We look forward to receiving your application. Please submit your application (including cover letter explaining your motivation, research interests and relevant experience, a curriculum vitae, and the names and contact details of three academic references) via the Eawag Jobs & Career webpage, any other way of applying will not be considered. The link below will take you directly to the application form.

https://apply.refline.ch/673277/0673/pub/1/-index.html *** Christoph Vorburger Eawag, Swiss Federal Institute of Aquatic Science and Technology & Institute of Integrative Biology, ETH Zurich Überlandstrasse 133 8600 Dubendorf Switzerland

Phone: +41 58 765 5196 e-mail: christoph.vorburger@eawag.ch or vorburgc@ethz.ch group homepage: http://homepages.eawag.ch/-˜vorburch/ ***

Christoph.Vorburger@eawag.ch

Guangxi 2 TreeGenomics

Two postdoctoral fellowships are available with The Plant Ecophysiology and Evolution Group at Guangxi University in Nanning, China to study (1) temperature and drought stress memory in mangroves or (2) the molecular response of Dipterocarps to temperature and drought stress.

Applicants to this position should have a PhD degree with a strong background in gene expression profiling, epigenetics and ecophysiology. Experience in genomics and/or bioinformatics are considered a major advantage when applying. Funding is available for two years with the possibility of a one-year extension. These fellowships include a salary of 10000 RMB per month, health insurance and housing. Conference travel and travel to field sites will also be supported. The working language of our research group is English, however knowledge of Mandarin is of course useful. Postdocs will have the opportunity to develop individual research projects and collaborative work with external groups. They will be part of a creative and stimulating research environment consisting of both Chinese and international researchers.

To apply, please contact Alison Wee at alison-wks@gxu.edu.cn. In your application, please include a cover letter, CV, brief research statement, and a list of references. For further information about our group please see:

http://www.ecologicalgenomicslab.com/Â aidan-wshort@outlook.com

HongKong AdaptationToOceanAcidification

Acclimation to living in natural CO2 seeps.

Applications are invited for an appointment as Postdoctoral Fellow in Molecular Ecology in the School of Biological Sciences at the University of Hong Kong (https://www.hku.hk/) and the SWIRE Institute of Marine Science (http://www.swims.hku.hk/), to commence as soon as possible, for 1-3 years. The University is a long-standing English-speaking institution and counts as one of the top Universities in Asia.

The lab led by Dr. Celia Schunter (https://-www.celiaschunter.com) works on different aspects of acclimation to climate change*. Research topics span from molecular and behavioural impacts of climate change to parental effects and transgenerational acclimation in fishes and other marine organisms*. Previous published work looked at the effects of experimental exposure to ocean acidification on the molecular pathways in fish brains. This new project will look at the natural environment and we have collected/will collect samples from various natural CO2 seeps over the world.

Applicants should possess (or be close to submitting) a Ph.D. in *Genetics/Bioinformatics/Molecular Ecology* or similar with experience in computational biology. In this role you will be able to lead experiments, collect and analyze the data. Large-scale, highly collaborative, international projects are already underway, ensuring a quick and productive start. The successful candidate will take a lead role in preparing manuscripts for publication and disseminating the research at international conferences.

Required criteria: Â Ph.D. in Genetics/Bioinformatics/Molecular Ecology (or related topics) Â If the background is ecological/molecular then strong bioinformatic skills are needed. Â Experience with Next-Generation Sequencing Â Good problem-solving skills

Desirable: Â Knowledge in marine ecology, fish biology/physiology Â Experience in managing collaborative projects

Â Experience assembling *de novo* transcriptomes

A highly competitive salary commensurate with qualifications and experience will be offered, in addition to annual leave and medical benefits.

Interested candidates should send their CV, a cover letter summarising research interests, professional experience, career goals and contact information for three references to Dr. Celia Schunter (schunter@hku.hk). Review of applications will begin immediately and continue until the position is filled.

celiaschunter@gmail.com

JohnInnesCentre PopulationGenomics

Postdoctoral Researcher

The Hogenhout lab at the John Innes Centre (JIC, Norwich, UK) is looking for an enthusiastic Postdoctoral Researcher with experience in population genomics and evolutionary biology and an interest in learning advanced bioinformatics skills.

Background:

The Hogenhout laboratory focuses on understanding the mechanisms that drive interactions between plants and insects and the role of microbes in these interactions. The research spans the fields of (functional) genomics, molecular genetics, entomology, plant pathology, virology and bacteriology, population biology and mechanistic modelling.

The role:

The Postdoctoral Researcher will contribute to a large collaborative project to study froghopper and leafhopper species that are candidate insect vectors of the invasive plant pathogen Xylella fastidiosa. This will include generating draft genome assemblies of multiple froghopper and leafhopper species, carrying out comparative genome analysis, and investigating population structure and species-wide diversity using reduced representation sequencing. The information will be made available in the public domain in a citable format via a genome browser dedicated to the project. The candidate will be assisted by skilled bioinformaticians and evolutionary biologists and be a member of a larger consortium, named BRIGIT (https://www.jic.ac.uk/brigit/), comprising collaborators at multiple UK research institutes and societies, and European research groups.

The ideal candidate:

The successful applicant will possess at least an PhD or

equivalent experience in Population Genomics, Bioinformatics, Genetics or related fields and has experience in the processing and analysis of next-generation sequence data and conducting population genomic analyses, They will have a solid understanding of statistics in biology, possess good scripting skills in Python, Perl or Java and has prior experience with handling high-throughput sequencing data and a Linux/Unix environment. Candidates will have an interest in learning how to generate whole-genome assemblies and de novo genome annotations within a high-performance cluster environment.

Additional information:

Salary on appointment will be within the range £31,250 to £38,100 per annum depending on qualifications and experience. This is a full-time post for a contract of 26 months.

Informal inquiries may be made to Prof. Saskia Hogenhout (Saskia.Hogenhout@jic.ac.uk). For further information and details of how to apply, please visit our web site http://jobs.jic.ac.uk or contact the Human Resources team on 01603 450462 or nbi.recruitment@nbi.ac.uk quoting reference 1003601.

We are an equal opportunities employer, actively supporting inclusivity and diversity. As a Disability Confident organisation, we guarantee to offer an interview to all disabled applicants who meet the essential criteria for this vacancy. The John Innes Centre is also proud to hold a Gold Award from Athena SWAN and is a member of Stonewall's Diversity Champions programme.

The closing date for applications will be 15 Jan 2019.

The John Innes Centre is a registered charity (No. 223852) grant-aided by the Biotechnology and Biological Sciences Research Council and is an Equal Opportunities Employer.

Kind regards

Steph

Stephanie Coker HR Advisor (Recruitment) Human Resources

NBI Partnership Colney Norwich NR4 7UH

Internal Extension: 2149 Direct Line: 01603 450149

"Stephanie Coker (NBI)" <Stephanie.Coker@nbi.ac.uk>

KansasStateU MammalianGenomicsGlobalChange

Fellow (Post Doc) (Mammalian Genomics and Global Change)

About This Role:

The Division of Biology seeks a highly motivated person to fill the open position of postdoctoral scientist working in the laboratory of Dr. Andrew Hope < http://www.k-state.edu/hopelab/ >, to investigate species limits, units of conservation, hybridization dynamics, and adaptive gradients among shrews of the Genus Sorex. Specific goals of this work are to use genomic methods to resolve systematic relationships among species via phylogenetic analyses, and investigate how gene flow through time across admixture zones between lineages has contributed to the process of diversification. While involvement at all levels of the research is encouraged (specimen collection to manuscript preparation), primary responsibilities will include genomic library preparation for reduced representation sequencing (Illumina platform) and comparative analyses of resulting datasets. Thus, the successful candidate will have appropriate laboratory and bioinformatics skills for the handling of next generation sequence data and a publication record demonstrating research expertise in evolutionary genomics, molecular systematics, phylogeography, or a related field.

Why Join Us:

The Division of Biology awards undergraduate degrees in three areas (Biology, Microbiology, and Fisheries, Wildlife & Conservation Biology) and currently serves over 800 majors. Kansas State University is located in the city of Manhattan (http://www.ci.manhattan.ks.us), a pleasant community of about 50,000 located in the scenic Flint Hills of northeastern Kansas, about 2 hours from Kansas City. Local recreational opportunities include a large lake/park system, diverse outdoor activities, athletic events, and a rich program in the performing arts. Manhattan also serves as the regional center for education, health care, commerce, entertainment and communications.

Manhattan, KS - Official Website | Official Website www.ci.manhattan.ks.us The City of Manhattan, Kansas, provides municipal services for more than 50,000 residents.

We Support Diversity and Inclusion:

The Division of Biology < http://www.k-state.edu/-biology/ > in the College of Arts and Sciences seeks to foster diversity in a commitment to recruit < http://-artsci.k-state.edu/about/diversity/index.html >, retain and resource peoples historically under-represented in university education in the United States. Fostering diversity goes beyond increasing the numbers of under-represented students, faculty and staff. It also includes a commitment to substantial curricular offerings, resources, and programming that foregrounds the knowledges, perspectives, cultures, and histories of marginalized communities. A truly diverse college culture and structure will benefit all members of the university community to better serve and excel in an increasingly global and multicultural world.

What Youll Need to Succeed:

Minimum Requirements:

* A Ph.D. must be completed by start date with expertise in evolutionary genomics, molecular systematics, phylogeography, or related field

Preferred Qualifications:

* Knowledge of bioinformatics scripting (e.g., R, Perl, Python)

How to Apply:

Please submit the following documents:

1. Cover letter describing your research interest, goals and past research achievements 2. Curriculum vitae 3. Relevant PDF reprints 4. Names and contact information of two individuals willing to provide letters of recommendation. 5. Questions can be addressed to Dr. Andrew Hope <ahope@ksu.edu>

Screening of Applications Begins:

December 1, 2018, and continue until position is filled.

Salary Range/ Pay Rate:

$ 47,476 - $ 55,000

Equal Employment Opportunity:

Kansas State University is an Equal Opportunity Employer of individuals with disabilities and protected veterans and actively seeks diversity among its employees.

Background Screening Statement:

In connection with your application for employment, Kansas State University will procure a Background Screen on you as part of the process of considering your candidacy as an employee.

Andrew G. Hope, Assistant Professor, Division of Biology, 116 Ackert Hall, Kansas State University, Manhattan, KS 66506 USA. Office: 111 Bushnell Hall; Lab: 423 Ackert Hall

Contact: Email - ahope@ksu.edu Office - 785-532-0155 Lab - 785-532-0157 Cell - 785-477-1876

Andrew Hope <ahope@ksu.edu>

Kiel 3 EvolutionaryBiology

Animal caretaker GEOMAR Kiel Germany

GEOMAR Helmholtz Centre for Ocean Research Kiel is a foundation of public law jointly financed by the Federal Republic of Germany (90 %) and the state of Schleswig-Holstein (10 %) and is one of the internationally leading institutions in the field of marine sciences. Currently GEOMAR disposes over an annual budget of approx. 80 million Euro and has approx. 1000 employees.

The research unit Evolutionary Ecology of Marine Fishes of the research division Marine Ecology is offering a position as

Animal caretaker

starting on 01.03.2019.

In the Junior Group “Parental investment and immune dynamics” we analyze basic evolutionary processes for the adaptation to life in the ocean. To do so, we use pipefishes and seahorses that have evolved male pregnancy as a unique reproduction strategy. We investigate changes in the immune system with male pregnancy evolution in experiments and by studying the molecular basis of pregnancy evolution. We further investigate host-parasite coevolution in a system with three interaction partners: pipefish-bacteria-bacteriophage. To do so, we conduct evolution experiments in the laboratory and infection experiments in aquaria systems and combine them with molecular analyses.

We breed several pipefish and seahorse species that we use for animal experimentation and laboratory analyses.

Job Description

- Maintenance and construction of aquaria systems

- Feeding and cultivation of marine fishes (pipefishes and seahorseses)

- Coordination of student assistants for feeding and cleaning of aquaria

- Support in field work (pipefish catching via snorkeling)

- Support of fish experiments

- Ordering of aquaria material

Qualification

- Animal caretaker or related professional education

- Profound knowledge of saltwater aquaria systems

- Keeping and breeding of marine organisms, particularly fishes

- Experience in planning and construction of aquaria systems

- Good spoken and written English

- Driving license

- Prioritization of multiple tasks, reliability, teamwork

- Experience with the registering of animal experimentation would be desired

- Experience in marine food cultivation and water chemical testing would be desired

- Driving license

- Willingness to work on some weekends/public holidays

The position is available for a funding period of three years. The salary depends on qualification and could be up to the class E9a TVöD-Bund of the German tariff for public employees. This is a half-time position The position cannot be split.

We offer a job that is covering a variety of tasks in a young and dynamic research. The position is financed by a starting grant of the European Research Commission (ERC) focusing on male pregnancy evolution (MALEPREG).

GEOMAR Helmholtz Centre for Ocean Research Kiel seeks to increase the proportion of female scientists and explicitly encourages qualified female academics to apply.

GEOMAR is an equal opportunity employer and encourages scientists with disabilities to apply. Qualified disabled applicants will receive preference in the application process.

Please send your application for this post including CV, certificates and two letters of reference via email in a single pdf-file mentioning the keyword "Tierpfleger_pipefish" in the subject line. Please send your application not later than 31.01.2019 to the following email address:

bewerbung@geomar.de

As soon as the selection procedure has finished, all your application data will be removed according to data protection regulation.

For further information regarding the position and research unit please contact Dr. Olivia Roth (oroth@geomar.de) or visit our group homepage (https://www.geomar.de/en/mitarbeiter/fb3/ev/-oroth/researchgroup-oroth).

GEOMAR is a member of the Helmholtz Association and the German Marine Research Consortium (KDM). For further information please visit www.geomar.de or www.helmholtz.de.

GEOMAR is committed to a non-discriminatory personnel selection. Our job advertisements address all people.

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Biological-technical Assistant GEOMAR Kiel Germany

GEOMAR Helmholtz Centre for Ocean Research Kiel is a foundation of public law jointly financed by the Federal Republic of Germany (90 %) and the state of Schleswig-Holstein (10 %) and is one of the internationally leading institutions in the field of marine sciences. Currently GEOMAR disposes over an annual budget of approx. 80 million Euro and has approx. 1000 employees.

The research unit Evolutionary Ecology of marine Fishes of the research division "Marine Ecology" is offering a position as

Biological-technical Assistant

starting on 01.04.2019 or upon agreement.

In the Research Group "Parental investment and immune dynamics" we

— / —

Madrid EvolutionaryCancerBiology

A 1-year postdoctoral position in Evol. Biology/Computational Biology/Bioinformatics/Statistics is available in Madrid, Spain.

http://www.madrimasd.org/empleo/-inscripcionDemandaProfesional/-mostrar_oferta.asp?codigo0327 Brief description: Simulation and analysis of evolutionary processes in cancer.

Requirements:

- Postdoc younger than 30 years.

- Be registed in the "Fichero del Sistema Nacional de Garantía Juvenil" (http://www.empleo.gob.es/es/-garantiajuvenil/accesoJovenes.html).

- Full details (in Spanish) available from http://-w3.bocm.es/boletin/CM_Orden_BOCM/2016/08/10/-BOCM-20160810-19.PDF - Gross salary is about 24500 euros (see also p.4 of above PDF)

- Ideally, candidates should have experience with R (and possibly also C++ and/or Julia) and be interested in at least some of the areas dealt with in the project (evolutionary biology, statistics, computational biology).

Procedure:

- Interested cantidates should sign up in: http://www.madrimasd.org/-empleo/inscripcionDemandaProfesional/-mostrar_oferta.asp?codigo0327 - Given that the deadlines are extremely tight I'd suggest interested candidates to also contact me directly (ramon.diaz@iib.uam.es, r.diaz@uam.es, or rdiaz02@gmail.com) as soon as possible.

– Ramon Diaz-Uriarte Department of Biochemistry, Lab B-25 Facultad de Medicina Universidad Autónoma de Madrid Arzobispo Morcillo, 4 28029 Madrid Spain

Phone: +34-91-497-2412

Email: rdiaz02@gmail.com ramon.diaz@iib.uam.es

http://ligarto.org/rdiaz Ramon Diaz-Uriarte <rdiaz02@gmail.com>

MaxPlanck Ploen GeneDriveRiskAssessmentTheory

Postdoc in Gene Drive Risk Assessment (Theoretical Biology), Max Planck Institute for Evolutionary Biology

One postdoctoral position (duration of 1 year) is available in the Gokhale lab at the Max Planck Institute for Evolutionary Biology in Ploen, Germany as a part of the project funded by the German Federal Agency for Nature Conservation (Bundesamt fuer Naturschutz). This theory project aims to assess the risks posed by the various gene drive systems if they are to be for released in the European Union. The aim is to assess risks of existing theoretical and experimental drive systems in terms of spread, resistance evolution and ethical concerns. Using gene drive mechanisms, desired genes can be increased in frequency in a target population with an aim of population transformation, suppression or even eradication. It typically involves the distortion of Mendelian inheritance and is thus a property of sexually reproducing populations. This raises questions about the risk of spread of such constructs, their penetrance and ecological effects. Legal and ethical concerns will also be a major point in policy making.

We are seeking a highly motivated candidate with expertise in theoretical models of population genetics, dynamics and ecological modeling. A prior experience in gene drive systems modeling is not required but would be an asset. The project will be developed in close collaboration with BOKU (University of Natural Resources and Life Sciences) in Vienna, Austria. The program is structured and the output is publication based as the goal is to provide the BfN with actionable content in terms of policy making.

Salary and benefits are according to the German public service pay scale (TVoeD Bund) and are commensurate with training and experience. The Max Planck Society seeks to increase the number of women in areas where they are underrepresented, and therefore explicitly encourages women to apply. The Max Planck Society is committed to employing more handicapped individuals and especially encourages them to apply. Consideration of applications will begin in February 2019.

The projected start date is in early-mid 2019. Any informal enquires should be directed to Dr. Chaitanya S. Gokhale or to Dr. R. Guy Reeves (reeves@evolbio.mpg.de). Please visit the group website for further details on the kind of work we do, http://-tecoevo.github.io Complete applications should include: - a statement of research interests and why you have applied for this position, - your CV, and - three reference contacts in a single PDF document.

sent to gokhale@evolbio.mpg.de

Deadline: 31 January 2019

Chaitanya S. Gokhale gokhale@evolbio.mpg.de

Nelson NewZealand FishEvolutionaryEpigenomics

Three year fully funded postdoc in New Zealand on fish epigenomcis

We are seeking a highly motivated postdoctoral re-

searcher to investigate the role of epigenomic vs genomic variation in thermal adaptation of a marine fish species, the Australasian snapper (Chrysophrys auratus). The postdoc will be based in Nelson, New Zealand, and in addition, research visits to the Bernatchez laboratory at Laval University are also planned.

Supervisors

Associate Professor Maren Wellenreuther, Auckland University and Plant and Food Research (PFR), Nelson, New Zealand. https://unidirectory.auckland.ac.nz/-people/profile/m-wellenreuther Professor Louis Bernatchez, Laval University, Quebec, Canada. https:/-/www.bio.ulaval.ca/louisbernatchez/presentation.htm Background This projects seeks to investigate the relative roles of genomic versus epigenomic variation in thermal adaptation of a marine fish, the Australasian snapper (Chrysophrys auratus), to test whether species can change rapidly through (epigenetic) regulation of gene expression in response to new environmental conditions. The postdoc will (1) compare epigenomic and genomic standing variation of wild snapper populations along two thermal transects; (2) test F1 inheritance of temperature-induced epigenetic profiles on fitness-related traits; and (3) using the progeny produced in (2), perform a temperature challenge to test the hypothesis that inherited epigenetic variation has an adaptive basis, resulting in differential survival of progeny based on their epigenetic make-up. This project takes advantage of a unique combination of field population samples, manipulative laboratory experiments and state-of-the-art genomic resources. It will make a significant contribution to understanding what constitutes the material on which evolution can act, and contribute to a broader view of what constitutes heritable variation.

This project will also contribute to a deeper understanding of the mechanisms underlying epigenetic processes, in particular to elucidate which phenotypes respond to trans-generational epigenetic transmission and thus clarify the importance of these mechanisms in the adaptive potential of aquatic species. Ultimately, this knowledge will help better predict adaptation potential to climate change.

Required Qualifications As the recruited person will mainly be in charge of the methylation aspects of the project, we are primarily searching for a prospective candidate with strong and demonstrated bioinformatics and analytical skills to analyse genomic and epigenome (methylation) data sets. The position is for three years and to be filled as soon as possible. Funding comes from a Marsden grant from the Royal Society in New Zealand (MFP-PAF1801).

The salary is established according to local University standards.

To apply, please send a cover letter describing your research interests and qualifications, a complete CV and names of three references by e- mail to Maren Wellenreuther (Maren.Wellenreuther@plantandfood.co.nz).

Do not hesitate to contact me directly for any further details or questions.

Some useful links Wellenreuther's and Bernatchez's lab, research program, publications, people Maren Wellenreuther: http://www.marenwellenreuther.com/ Louis Bernatchez: https://www.bio.ulaval.ca/-louisbernatchez/research_programs.htm Research Institutes Plant and Food Research: https://-www.plantandfood.co.nz/ Laval University: https:/-/www.ulaval.ca/en/research.html Cities Beautiful Nelson City: https://www.nelsontasman.nz/visit-nelson-tasman/reasons-to-visit/ Beautiful Québec City: http://www.quebecregion.com/en/ Louis Bernatchez <Louis.Bernatchez@bio.ulaval.ca>

NewZealand MarinePhylogeography

Postdoctoral Fellow - Marine Phylogeography Department of Zoology Division of Sciences University of Otago NEW ZEALAND

Applications are invited for the 3-year, fixed-term position of Postdoctoral Fellow at the University of Otago, New Zealand. We seek an energetic and dedicated scientist to carry out marine phylogeographic research. The successful candidate will be working on a Marsden-funded research project titled 'Founder Takes All? Tracking the colonisation of New Zealand's newly uplifted shores.

The project is led by Professor Jon Waters, Associate Professor Ceridwen Fraser, Dr Erasmo Macaya, and Professor Dave Craw,

The research will combine evolutionary genomic techniques with marine biogeography, in a geologically-active coastal setting. A PhD and research experience in evolutionary/population genetics/genomics is essential. Experience in marine phylogeography, GBS, and bioinformatics would be an advantage.

The appointment is expected to start within the period March-May 2019.

Postdoctoral Fellow - Zoology https://otago.taleo.net/-

careersection/2/jobdetail.ftl?lang=en&job02337 Specific enquiries may be directed to Professor Jon Waters, Principal Investigator of the Marsden-funded project, Department of Zoology, Tel +64 27 2443018, email jon.waters@otago.ac.nz.

Applications close 11 January 2019.

Professor Jon Waters, FRSNZ Associate Dean Research, Sciences University of Otago Dunedin, New Zealand 03 4795847 027 2443018 http://www.otago.ac.nz/Zoology/-staff/otago008938.html https://scholar.google.com/-citations?hl=en&user=_0w6ZS0AAAAJ Jonathan Waters <jon.waters@otago.ac.nz>

NMBU Norway SystemsBiologyModelling

Dear list,

The Digital Salmon project seeks modellers to build a genome-scale reconstruction of salmon metabolism. The salmonid fishes are a unique model system for evolution following whole-genome duplication, and model-based comparisons of metabolic capabilities will be enabled by this work. Please forward this to anyone you think might be interested! Application deadline 2018-12-15.

Best regards, Jon Olav Vik

Position available: Two researcher/postdoctoral positions - systems biology modelling (NMBU, Ss, Norway)

Application deadline: Saturday 2018-12-15. Email enquiries welcome: Jon Olav Vik, jon.vik.@nmbu.no.

The Norwegian University of Life Sciences has two vacant researcher or postdoc positions (up to two years) in systems biology of Atlantic salmon metabolism. These are part of the Digital Salmon (https://www.nmbu.no/-prosjekter/digisal), a transdisciplinary project using experimental omics data on metabolic reaction networks. Ideal for modellers seeking challenges and exposure to a world-class environment in integrative genetics and systems biology.

The Digital Salmon (2016-2020, 4 M¿) is the national flagship project in digital production biology and part of the national consortium for biotechnology, Digital Life Norway (https://digitallifenorway.org/gb/). Its objective is to establish a systems biology framework for adapting salmon breeding and nutrition strategies to modern feedstuffs. The long-term goal is to accumulate a library of various models of life processes in the salmon body, to quickly construct suit-tailored computer simulations to compute effective use of resources, for food security, fish welfare and human health. Such a knowledge base will enable faster response to challenges such as climate change, diseases, or scarcity of feedstuffs.

Main tasks: * Develop and validate genome-scale and tissue-specific metabolic reconstructions for salmon * Use these models to interpret multi-omics data from experiments on omega-3 metabolism under fish- vs plant-based feed, freshwater vs seawater, and more. * Develop a test suite of metabolic function for automatic quality control, documentation and benchmarking of our models.

Three-minuted animated film about the project: https:/-/youtu.be/hl4b4Q8Hik0 Full advertisement and online application form: https://www.jobbnorge.no/en/-available-jobs/job/160435/two-researcher-postdoctoral-positions-systems-biology-modelling Application deadline: Saturday 2018-12-15. Email enquiries welcome: Jon Olav Vik, jon.vik.@nmbu.no.

Jon Olav Vik Associate Professor, Faculty of Biotechnology, Chemistry and Food Science, Norwegian University of Life Sciences https://www.nmbu.no/emp/jon.vik jonovik@gmail.com

OhioStateU PlantColonizationInvasion

A postdoctoral research position is available in the lab of Dr. Steve Hovick at the Ohio State University's Department of Evolution, Ecology and Organismal Biology (https://u.osu.edu/hovicklab). The postdoc's primary focus will be on projects designed to quantify the nature of phenotypic plasticity and its implications for colonization and invasion success in plants using two model systems: (i) a diverse and global collection of Arabidopsis thaliana natural accessions and (ii) native and non-native wetland plants that tend towards ecological dominance. Specific duties will include overseeing experiments and subsequent data collection, analyzing and curating data and assisting in the preparation of grants and manuscripts.

The successful applicant will have completed a PhD in ecology, evolutionary biology or a related field prior to the start date. A strong background in statistics (preferably using R) and publication record are required, as is the ability to work both independently and with a team of undergraduate and graduate students.

The anticipated start date is January 2019. Funding is currently available for one year, with additional funding actively being sought.

To apply, please send a CV and cover letter to Dr. Steve Hovick (hovick.2@osu.edu), in addition to uploading both documents to the official application form at the following link: https://www.jobsatosu.com/postings/-91238. The cover letter should address your research experience as it relates to the position and list the names and emails of two references.

For more information, please contact Dr. Steve Hovick at hovick.2@osu.edu. Review of applications will begin immediately and continue until the position is filled.

Steve Hovick Assistant Professor The Ohio State University College of Arts and Sciences Dept. of Evolution, Ecology & Organismal Biology 316 Aronoff Laboratory, 318 W. 12th Avenue, Columbus, OH 43210 614-247-7662 (Office) hovick.2@osu.edu http://u.osu.edu/hovicklab
"Hovick, Steve" <hovick.2@osu.edu>

PennsylvaniaStateU DrugResistanceEvolution

Dear Colleagues - apologies for the mass mail.

We are hiring for postdoc, RA, and software developer positions to work on individual-based modeling of malaria drug-resistance evolution.

Ads here: http://mol.ax/opp/ Please share with anyone you think may be interested.

Thanks Maciek

– Maciej F Boni Center for Infectious Disease Dynamics Department of Biology Pennsylvania State University University Park, PA, 16802 Tel +1 814 867 4651 | Skype: maciekoucru Web: cidd < http://cidd.psu.edu > | ili.vn < http://www.ili.vn > | mol.ax

"Boni, Maciej F" <mfb9@psu.edu>

PurdueU PopulationGenomics

A postdoctoral position on the population genomics of White Sands Pupfish is available immediately in Dr. Andrew DeWoodys lab at Purdue University. This position is for 12 months with the possibility of renewal. Interested parties should email a brief letter of inquiry/interest, a CV, and a short summary of research interests to dewoody@purdue.edu; be sure and check out the lab website before doing so. Purdue University is an equal access/equal opportunity institution.

"DeWoody, James Andrew" <dewoody@purdue.edu>

ScrippsInstitOceanography MitonuclearGenomics

Postdoctoral Position: Scripps Institution of Oceanography/UCSD. Evolutionary and Functional Genomics of mitonuclear interactions

A postdoctoral position is available in the Burton lab at Scripps Institution of Oceanography (SIO) at the University of California, San Diego (UCSD). We are looking for a motivated young scientist to undertake physiological and genomic analyses of hybrid breakdown and incipient speciation in the intertidal copepod Tigriopus californicus. Laboratory hybrids between allopatric T. californicus populations show varying degrees of incompatibility between nuclear and mitochondrial genomes and serve as a model for incipient speciation. Populations along the Pacific coast of North America also show a geographic cline in thermal tolerance providing an excellent system for analyses of evolutionary adaptation to local environments. We use a broadly integrative approach including functional genomics, transcriptomics, biochemistry, and mitochondrial physiology. Genomics resources for Tigriopus now include an excellent draft genome and transcriptome data from several populations and laboratory hybrids.

The position requires strong laboratory skills as well as some experience with next-gen sequencing and bioinformatic analysis. Strong interest in experimental and evolutionary physiology (e.g., using RNAi or other approaches to understand genotype/phenotype relationships) is required. Candidates will be given considerable freedom in developing their research projects.

Review of applications will begin immediately and will continue until the position is filled. Starting date is negotiable. Interested candidates should email their CV, and a cover letter describing qualifications, research interests and include a list of at least three references.

UCSD is an Equal Opportunity Employer with a strong

institutional commitment to excellence through diversity.

Ron Burton <rburton@ucsd.edu>

SLU Sweden EvolutionofInsecticideResistance

Postdoc opportunity on the evolution of insecticide resistance at SLU, Sweden.

We look for a highly motivated postdoc to study the impact of host plant range on the evolution of insecticide resistance in pest insects. The project period is 2 years, funded by a taxfree scholarship from Carl Tryggers Foundation.

Project description An increased number of phytophagous pest insects have developed resistance to the available insecticides. According to the pre-adapted hypothesis, insecticide resistance readily evolves in herbivorous insects since they already are adapted to tolerate and resist chemical defences of their host plants. Recent research has suggested that generalists are more prone to evolve insecticide resistance and, moreover, that insecticide resistance may evolve when insects expand their host plant range. This opens up for the converse hypothesis that evolution of insecticide resistance could select for an increased degree of generalism, i.e. an extended use of host plant species, in the insect. This project aims to investigate the pre-adapted hypothesis in a generalist and a specialist moth species, respectively, as well as the converse hypotheses that insecticide resistance increases host plant range. To study this, we will perform selection experiments combined with transcriptome analysis and entometabolomic profiling.

Organisation The project is a collaboration between Dr Kristina Karlsson Green, Prof Peter Anderson and Dr Amit Roy. The postdoc will be based at the department of Plant Protection Biology at the Swedish University of Agricultural Sciences in Alnarp. The molecular analyses may be performed at the Czech University of Life Sciences, Prague. Start date: as soon as possible.

Merits We seek a person with a PhD in Biology or equivalent. Previous experience in working with insecticide resistance, selection experiments with insects or molecular analyses is meriting. High motivation and enthusiasm is important, as well as ability to work both independently and in a team. Personal skills are therefore an important part of the evaluation.

Application and contact Please send your application including CV, list of publications, copy of PhD diploma, references and personal letter directly to kristina.karlsson.green@slu.se, no later than the 11th of January. Do not hesitate to e-mail if you have further questions!

Dr. Kristina Karlsson Green

Swedish University of Agricultural Sciences Box 102 SE-230 53 Alnarp Sweden

Mobile: +46-737 850238

— När du skickar e-post till SLU så innebär detta att SLU behandlar dina personuppgifter. For att läsa mer om hur detta går till, klicka här < https://www.slu.se/om-slu/-kontakta-slu/personuppgifter/ > E-mailing SLU will result in SLU processing your personal data. For more information on how this is done, click here < https://-www.slu.se/en/about-slu/contact-slu/personal-data/ >

TelAvivU MoleRatEvolution

Motivated post-Doc needed for working on the evolution of seismic sensing and communication in the blind mole-rat in Israel, aiming to understand how these animals use vibrations to communicate information and navigate through under-ground tunnels.

The project will include various behavioral experiments in lab and field conditions, advanced computation methodologies of sound and vibration analysis and use of unique new miniature wireless on-board sensors. Moreover, the project may include neurobiology and physiology methodologies.

Applicants must have good computational skills and they *must be US citizens*. The scholarship is for two years with an option for extension of one-two years.

The project is a joint project between the labs of Tali Kimchi: http://www.weizmann.ac.il/neurobiology/-labs/kimchi/ and Yossi Yovel: www.yossiyovel.com For more information please contact: yossiyovel@gmail.com

Yossi Yovel <yossiyovel@gmail.com>

UCalgary SalmonEvolution

The Rogers Lab at the University of Calgary has a PDF opportunity to work on Pacific Salmon evolution and genomics on Vancouver Island, British Columbia

Start date: April 1, 2019 or earlier

Salary: 46,000 annually for two years; standard University of Calgary PDF benefits package

Deadline to apply: Review of applications will start asap and continue until the position is filled

Project: Sustaining Canada's natural resources and food supply for future generations is a rapidly growing challenge that requires an understanding of how populations will respond and adapt to current and future environmental stressors. Salmon produce food and recreation for the people of the Pacific Northwest and are the keystone species of coastal ecosystems and human economies within this area. Yet, salmon populations are under pressure and we do not understand the epigenetic and genetic factors that influence their odds of survival. In particular, while hatchery programs release millions of fish yearly, it remains unclear how many of these released salmon survive and whether they contribute to increasing the wild population size. The PDF will join a unique and growing partnership between the Nitinat River Hatchery, the Bamfield Marine Sciences Centre, Department of Fisheries and Oceans (DFO) and the Ditidaht and Huu-ay-aht First Nations to test the environmental and genomic consequences of alternative hatchery salmon rearing practices. The PDF will work closely with Dr. Kristi-Miller-Saunders (DFO) and Dr. Brad Anholt (University of Victoria). Our ability to raise thousands of Coho salmon families used in enhancement programs under different rearing conditions is a unique and powerful opportunity to understand how hatchery rearing practices may impact salmon survival and the genetics of domestication.

More info on the position and our group can be found here: http://people.ucalgary.ca/ ~ srogers/pdf-opportunity-on-pacific.html An application package consisting of a Curriculum Vitae and the names of three references should be emailed as a single PDF to srogers@ucalgary.ca.

The BMSC is a world-class teaching and research facility located in traditional territories of the Huu-ay-aht First Nations, on the outer west coast of Vancouver Island, Canada. Our campus is situated on 65 hectares in Barkley Sound with access to a remarkable diversity of marine, terrestrial, freshwater and cultural sites of the North East Pacific basin. Located in the heart of Canadas Pacific Rim National Park, the town of Bamfield has a small but exceptionally vibrant community that shares a history of trust and collaboration with the Huu-ay-aht First Nations. The town is also the northern terminus of an iconic Canadian Trail, the West Coast Trail. The stunning surroundings of the rain forest, deserted beaches, uninhabited islands, rugged coastline,

and world class diving inspire creativity and discovery

srogers@ucalgary.ca

"Sean M. Rogers" <director@bamfieldmsc.com>

UCalifornia Riverside EvolutionTESilencingInArabidopsis

A postdoc position is available under the joint supervision of Brandon Gaut, at UC Irvine, and Daniel Koenig, at UC Riverside. The position is NSF funded to study the molecular dynamics of transposable element silencing over time, using transgenic approaches in Arabidopsis. The successful candidate can join either lab, but much of the initial work is likely to proceed more smoothly at UC Riverside, given the concentration of plant molecular biology on that campus. The successful candidate will have a PhD with experience in molecular biology and Arabidopsis genetics. Training in one or more of the following fields would also be beneficial: evolution, molecular biology, bioinformatics, computational biology, statistics, or functional genomics.

The job announcement and application can be found here: https://recruit.ap.uci.edu/apply/JPF05091 The University of California, Irvine is an Equal Opportunity/Affirmative Action Employer advancing inclusive excellence. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, disability, age, protected veteran status, or other protected categories covered by the UC nondiscrimination policy.

bgaut@uci.edu

UChicago ComputationalGenomics

Post-doctoral position in computational single-cell genomics

The Barreiro and Li labs at the University of Chicago are teaming up to recruit a postdoc (possibly more) to work on computational single-cell genomics. Our labs use a combination of functional genomics and genetics to answer central questions in immunology, disease, and gene regulation with strong relevance to medicine. The exact projects for prospective postdocs are flexible and applicants are encouraged to propose their own projects, as long as they fit within the lab's general interests. Examples of ongoing work using single cell genomics in our labs includes (i) characterization of population differences in the immune response in humans at single cell resolution; (ii) evaluating the role of epigenetic changes in the regulation of innate immune responses; and (iii) using single cell RNA-seq to identify biomarkers of response to biologic treatments in Crohn?s disease. Postdoctoral applicants should have demonstrated experience with genomic data analysis. Strong programming and bioinformatics skills are essential. Candidates with experience in gene expression data analysis, particularly using single cell data are strongly encouraged to apply.

Postdocs in our labs are encouraged to develop collaborations with other groups and to start developing an independent research program. To apply for the position please send an email to Luis Barreiro (lbarreiro@uchicago.edu) and/or Yang Li (yangili1@uchicago.edu) including a cover letter and your resume/CV together with contact information for at least two references. Informal inquiries are also welcome. We will start evaluating applicants on January 15th but start dates are negotiable.

lbbarreiro@gmail.com

UChicago PopulationGenetics

I am looking to hire multiple postdoctoral researchers to join my group in the Department of Human Genetics at the University of Chicago. Possible research topics include the evolution and genetics of quantitative traits and complex diseases, polygenic prediction, the causes/consequences of linked selection, or other topics in human population genetics depending on the interests of the applicant. Researchers may work on projects involving the development of mathematical theory or statistical methods, data analysis, or a combination of these, depending on skills, interests and career goals of the researcher. Applicants do not need to have a specific project proposal developed, but should have a general area of interest identified. I am open to working outside the specific areas described above or in non-human systems as well if the suggested project is one where my contributions may be useful.

Researchers will have the opportunity to be part of a terrific community of human geneticists and evolutionary biologists at the University of Chicago. Other labs on the same floor include those of Maanasa Raghavan, Anna Di Rienzo, John Novembre, Matthew Stephens, and Xin He, and faculty in the Ecology and Evolution department are located in nearby buildings.

Applicants could have a background in statistical, population, quantitative or evolutionary genetics, computer science, mathematics or statistics. I am committed to ensuring a safe, friendly, and inclusive workplace for all lab members, regardless of personal background, nationality, race or ethnicity, religion, sex, gender identity, sexual orientation, age, veteran status or medical condition. I especially encourage applications from persons traditionally underrepresented in the sciences.

To apply, email a cover letter describing your research interests, a current CV, and contact information for at least two (and up to three) references with the email subject line "POSTDOC APPLICATION: [FULL NAME]".

The start date must be after April 1 2019, but is otherwise flexible. The position is for one year, renewable up to a maximum of five years of total career time as a postdoc. *All applications received by January 10, 2019 will receive full consideration*, and applications submitted after that date will be considered if a position is still open.

– Jeremy J Berg http://www.jjbpopgen.org/pdoc-ad.html The University of Chicago is an Affirmative Action/Equal Opportunity/Disabled/Veterans Employer. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, protected veteran status or status as an individual with disability.

jeremy.jackson.berg@gmail.com

UCincinnati TickMosquitoAdaptations

Post-Doctoral Associate (Arthropod vector behavior and ecological physiology) A post-doctoral position (up to 3 years) is available in the laboratories of Dr. Joshua Benoit on the behavior and physiology at the University of Cincinnati. The post-doctoral scientist will be examining behavioral and physiological adaptions in ticks or mosquitoes. These studies will be highly multidisciplinary, and include behavioral and physiological assays, RNA-seq, genome comparisons, and genetic manipulation. The post-doc will train in a vibrant and nationally recognized academic setting, and will be supported to develop their own research directions. The participant will be provided with effective mentoring aligned with their individual career goals. Opportunities to contribute to teaching will be provided.

Qualifications: Ph.D. in Entomology, Biology or related field, and publications in peer-reviewed journals. Experience with bioinformatics analyses of sequence data, basic molecular biology/physiology techniques, and insect-based systems, are desired.

The start date, though flexible, is March 1st, 2018.

Interested individuals should send, as a single PDF document, a cover letter, CV, a short statement of research interests, unofficial academic transcripts, and the contact information of 3 to 4 references to Dr. Benoit (joshua.benoit@uc.edu) Also, please apply at https://jobs.uc.edu/job/Cincinnati-Post-Doc-Fellow-Biological-Sciences-OH-45201/520237400/ For more information regarding the position, please contact either Dr. Benoit (joshua.benoit@uc.edu).

Relevant Links: http://www.artsci.uc.edu/-departments/biology.html http://-insectphysiology.uc.edu/ "Benoit, Joshua (benoitja)" <benoitja@UCMAIL.UC.EDU>

UFlorida ButterflyMothEvolution

Two Postdocs, University of Florida, Gainesville, FL USA.

Two postdoctoral positions in phylogenomics and evolution are available on butterflies and moths. The postdoc(s) may also have the opportunity to work on collaborative bat-moth projects with Dr. Jesse Barber and his team at Boise State University.

The selected postdoc(s) will work at the Florida Museum of Natural History, on the University of Florida main campus in Gainesville, FL, USA. The selected candidate(s) should be able to communicate well in verbal and written English, have an understanding of phylogenetic methods, a solid publication record, and have computational experience in phylogenomic and/or comparative methods. Candidates should also be interested in training students, writing grants and be motivated to use genomic high-throughput sequencing data. The selected candidate will join a team of postdocs, graduate students, undergraduates, and staff scientists in the Kawahara Lab. The postdoc(s) will also work closely with local and international collaborators.

Required: 1) A Ph.D. in molecular evolution, systematics, evolution, bioinformatics, genomics, or related field. 2) Solid publication record. 3) Some familiarity with analyzing next generation sequencing data, computer programming/scripting in Python, Perl, Java, C++, R or other language. Candidates with background experience in phylogenomics, biogeography, dating analyses will be highly considered.

Salary: $50,000 USD plus benefits. The appointment can be up to 2 years, but will be made on a yearly basis given satisfactory progress.

Start date: Position available immediately until the positions are filled.

How to apply: To ensure full consideration, please email the following to Akito Kawahara at kawahara@flmnh.ufl.edu: (1) a cover letter, (2) your CV, and (3) 3 names of references all as a single pdf, directly to kawahara@flmnh.ufl.edu. The cover letter should describe your previous research and training, your qualifications for the postdoc as detailed in this advertisement, and should explain how this postdoc position will further your long-term research/career aspirations. Specify in the email subject line: "Postdoc_KawaharaLab"

Evaluations of applicants will begin on immediately, and continue until the position is filled.

About the University of Florida The University of Florida (UF) is one of the nation's leading research institutions with 35,000 undergraduates, 15,000 graduate students, and over 4,500 faculty and academic staff. UF offers all resources of a top research university to study evolution, genomics, and systematics. The Florida Museum of Natural History (FLMNH) serves as

the iDigBio HUB, and is now one of the primary centers for research in evolutionary biology and biodiversity.

The FLMNH is also closely tied to the UF High-Performance Computing Center (HPC) and HiPerGator2 (https://www.rc.ufl.edu/) allowing for the chosen postdoc to utilize this rich computational resource. UF also has a state-of-the-art genome sequencing facility at the Interdisciplinary Center for Biotechnology Research (ICBR), the Florida State Collection of Arthropods (FSCA), and collections of the McGuire Center for Lepidoptera and Biodiversity. The Kawahara Lab also has strong ties to UF's the Department of Biology, Department of Entomology and Nematology, School of Natural Resources and Environment, Department of Wildlife Ecology and Conservation, School of Forest Resources and Conservation, and Department of Microbiology and Cell Science.

For additional information about the lab, visit: http://-www.flmnh.ufl.edu/mcguire/kawahara/ Akito Y. Kawahara Associate Curator/Associate Professor Florida Museum of Natural History McGuire Center for Lepidoptera and Biodiversity University of Florida 3215 Hull Road Gainesville, FL 32611 USA 352.273.2018 kawahara@flmnh.ufl.edu Twitter: @Dr_Akito Lab Twitter: @KawaharaLab

"Akito Y. Kawahara" <kawahara@flmnh.ufl.edu>

UGuelph 3 MolecularSpeciesDetection

Please see below for a recent posting at the University of Guelph. Elements of this research will absolutely touch on population genetics and managing datasets which can be used to address phylogeography and biogeography.

Thank you, and if you have any questions please let me know.

Rob

https://www.uoguelph.ca/graduatestudies/-postdoctoral/postdoctoral-fellow-genomics University of Guelph Department: Integrative Biology, College of Biological Sciences Application Deadline: January 15, 2019 Contract Type: Full-Time Contract Length: Openings are available immediately and while the positions are funded until March 2020, potential for renewal exists The University of Guelph seeks three highly motivated researchers for Postdoctoral Fellow positions. The researchers will work with department faculty and graduate students on Molecular Species Detection using DNA-based tools to support Canadas food security agenda. Work will take place at Robert Hanners lab in the University of Guelph Sumerlee Science Complex. The positions are funded through the Canadian Food Inspection Agency Federal Assistance Program in partnership with the University of Guelphs Biodiversity Institute of Ontario.

Description of Position: The project is focused on developing and validating genomic tools needed to mitigate risks to food security and environmental biodiversity, particularly those stemming from invasive animal and plant diseases and plant pests. The University of Guelph offers a collaborative work environment with excellent ecological genomics facilities. The Postdoctoral Fellows will develop molecular methods for the detection of Invasive Alien Species (IAS), plant pests and plant viruses using a variety of approaches (PCR, Sanger sequencing, next-generation metabarcoding and metagenomics approaches, and targeted detection using qPCR techniques). The candidates will have the opportunity to work closely with governmental and academic researchers and their industrial partners.

Expected Candidate Experience: Experience with PCR, sequencing and/or next-generation sequencing or sequence data and related bioinformatics / computational / programming skills is strongly desired. Familiarity with one or more of the following would be an advantage: genomics, phylogenetic analyses, programming language (R/Unix/Python or Perl). Experience working with plant pests and/or plant viruses is an asset. The candidates should have a good publication record. It is essential that candidates be able to contribute and work in a collaborative research environment.

Salary Information: Salary is competitive and commensurate with experience.

Application Requirements Cover Letter CV Applications should include a brief statement of research interests, three professional/academic references (with contact details), PDFs of up to three publications which best represents the candidates scientific writing abilities. Special Instructions: All qualified candidates are encouraged to apply; however, Canadian and permanent residents will be given priority. Incomplete applications may not be considered, review of applicants will be ongoing starting immediately, applicants may not be contacted unless invited to the next stage of the application process.

Contact Info Dr. Robert Hanner, Associate Professor Email: rhanner@uoguelph.ca Phone Number: 519-824-4120 x53479 Website: https://www.uoguelph.ca/ib/-hanner Posting Date: Tue, 12/04/2018 Closing Date: Tue, 01/15/2019

Rob Young, Ph.D. Post-Doctoral Research Fellow Hanner Lab | University of Guelph | Biodiversity Institute of Ontario ryoung04@uoguelph.ca | ca.linkedin.com/in/RGYoung6

Rob Young <ryoung04@uoguelph.ca>

UHawaii FungalGenomics

Postdoc in marine fungal genomics, University of Hawaii

A postdoc position is available in the Amend Lab in the Department of Botany at the University of Hawaii at Manoa. The successful applicant will join a dynamic group of researchers interested in microbial ecology and evolution within the unique Hawaiian archipelago. The researcher will primarily be responsible for genome sequencing and analysis of marine yeasts from the genus Malassezia. This genus of Basidiomycete yeasts, recently placed within its own class, is hyperdiverse and among the most widespread and numerically dominant fungi in the worlds oceans: found in deep-sea sediments, hydrothermal vents, on and in invertebrate hosts and throughout pelagic water columns. Improbably, Malassezia also dominate mammal skin on land, are prevalent residents of terrestrial animal guts, and are consistent, though low abundance, members of soil and plant fungal communities. There exist excellent genomic resources for this group, and all but one of the fifteen species for which genomes are sequenced contains fewer than 9 Mb and 5,000 genes, placing them amongst the smallest free-living genomes in kingdom fungi. Malassezia are also dikaryotic (N+N), with a genomic signature of bipolar mating types. This and evidence that Malassezia genomes have undergone extensive rearrangements and gene loss/gain events suggests the potential for rapid evolution.

Our main interest is to identify the mechanisms enabling transitions from terrestrial to marine habitats, and to infer how frequently such transitions have occurred. Because none of the marine species have been cultivated yet, the postdoc will be responsible for developing and implementing a single cell genomic workflow targeting habitats in which Malassezia are known to dominate. The researcher will have access to two marine stations, sequencing, microscopy and flow cytometry core facilities as well as access to a large campus supercomputer.

The appointment is for one year. Salary is commensurate with experience, and will be livable given Hawaii's high cost of living.

Start date is as soon as is feasible.

The Amend lab is strongly committed to achieving excellence through diversity. We are aware of biases, conscious and unconscious, in academia and in science and we actively seek to reduce the role of these biases in our own decisions and in those of our colleagues and collaborators. We work together to combat prejudice and work toward equity and inclusion, within the lab and in the communities with whom we interact V on campus and beyond.

Required Qualifications

Successful candidates will hold a Ph.D. degree in biology, marine biology, microbiology, genetics or another relevant field. Researchers must be willing to contribute to a respectful, collegial, honest, and productive lab environment.

Desirable Qualifications

-Experience designing clade specific probes/primers

-Experience using fluorescence activated cell sorting or other flow cytometry capture techniques

-Experience assembling and annotating genomic data

-Experience analyzing genomes within a comparative context

-Creativity

-Evidence of compelling and clear scientific writing.

To apply

Please visit our labs website to learn more about the group and the research we conduct: www.amendlab.com. A short review paper on marine Malassezia is available here: https://journals.plos.org/plospathogens/article/-comments?id.1371/journal.ppat.1004277 As a single PDF, please submit a CV, a cover letter, and the names/contact information for three referees to Anthony Amend: amend@hawaii.edu. Consideration of applications will begin immediately and will continue until the position is filled.

Anthony Amend <amend@hawaii.edu>

UHelsinki ExperimentalEvoDevo

Post-doc in predicting evolution:

1.Job/ project description:

The research will involve using and refining an existing

mathematical model of wing morphogenesis to explore whether it can be used to predict how wing morphology changes over generations in an artificial selection experiment. These predictions would be contrasted with predictions stemming from a quantitative genetics analysis of fly populations.

The research will take place in the Center of Excellence in Experimental and computational developmental biology of the Biotechnology Institute of the University of Helsinki, Finland.

For a full description of the project check the modeling in part of this funded project: http://www.biocenter.helsinki.fi/salazar/-SalazarCiudad_research_plan.pdf The job is for 1,5 years.

2. Background:

Why organisms are the way they are?

Can we understand the processes by which complex organisms are build in each generation and how these evolved?

The process of embryonic development is now widely acknowledged to be crucial to understand evolution since any change in the phenotype in evolution (e.g. morphology) is first a change in the developmental process by which this phenotype is produced. Over the years we have come to learn that there is a set of developmental rules that determine which phenotypic variation can possibly arise in populations due to genetic mutation (the so called genotype-phenotype map). Since natural selection can act only on existing phenotypic variation, these rules of development have an effect on the direction of evolutionary change.

Our group is devoted to understand these developmental rules and how these can help to better understand the direction of evolutionary change. The ultimate goal is to modify evolutionary theory by considering not only natural selection in populations but also developmental biology in populations. For that aim we combine mathematical models of embryonic development that relate genetic variation to morphological variation with population models. The former models are based on what is currently known in developmental biology.

There are two traditional approaches to study phenotypic evolution. One is quantitative genetics and one is developmental evolutionary biology. The former is based in the statistics of the association between genetic relatedness and phenotypic variation between individuals in populations, the latter in the genetic and bio-mechanical manipulation of the development of lab individuals. While the former models trait variation with an statistical linear approach the latter models it by deterministic non-linear models of gene networks and tissue bio-mechanics. For the most, these two approaches are largely isolated from each other.

The current project aims to contrast and put together these two approaches in a specific easy to study system: the fly wing. In brief, we are growing fly populations and, in each generation, we select the founders of the next generation based on how close they resemble an arbitrary optimal morphology in their wings (based on the proportions between several of their traits). In each generation also, we estimate the G matrix and the selection gradient to see how well one can predict evolution in the next generation. The quantitative genetics predictions will be contrasted with the predictions stemming from a wing morphogenesis model that we built based on our current understanding of wing developmental biology (see Dev Cell. 2015 Aug 10;34(3):310-22 for the model and for slightly similar approaches: Nature. 2013 May 16;497(7449):361-4. and Nature. 2010 Mar 25;464(7288):583-6).

Our center of excellence includes groups working in tooth, wing, hair and mammary glands development. In addition to evolutionary and developmental biologists the center of excellence includes bioinformaticians, populational and quantitative geneticists, systems biologists and paleontologists. The group leaders of the center involved in this project are Jukka Jernvall, Salazar-Ciudad and Shimmi.

'The Academy of Finland's Centres of Excellence are the flagships of Finnish research. They are close to or at the very cutting edge of science in their fields, carving out new avenues for research, developing creative research environments and training new talented researchers for the Finnish research system.'

3. Requirements:

The applicant must hold a PhD in either evolutionary biology, developmental biology or, preferably, in evolutionary developmental biology (evo-devo). Applicants with a PhD in theoretical or mathematical biology are also welcome.

Programming skills or a willingness to acquire them is required.

The most important requirement is a strong interest and motivation on science and evolution. A capacity for creative and critical thinking is also required.

4. Description of the position:

— / —

To read the entire message look it up at http://life.biology.-mcmaster.ca/~brian/evoldir.html

ULiverpool RodentMicrobiomes

THE UNIVERSITY OF LIVERPOOL

FACULTY OF HEALTH AND LIFE SCIENCES INSTITUTE OF INTEGRATIVE BIOLOGY DEPARTMENT OF EVOLUTION ECOLOGY AND BEHAVIOUR

POSTDOCTORAL RESEARCH ASSOCIATE GRADE 7

33,518 - 38,833 pa

We are seeking an enthusiastic and able researcher to work on an interdisciplinary project investigating the control of the composition of the microbiome community of wild rodents, specifically studying the interaction between the effects of individual's diet, behaviour and immunological state. This work builds on previous work by Mark Viney investigating the eco-immunology of wild mouse populations and of Jane Hurst investigating the role of scent communication in rodent behaviour. You will join the research group of Mark Viney, and further information about the research interests of this group can be found at: MarkViney.com

The post is available for 3 years.

Best wishes,

Bernie

Bernie King On behalf of

IIB Staffing Administration Account Institute of Integrative Biology University of Liverpool Biosciences Building Liverpool L69 7ZB iib@liv.ac.uk http://www.liverpool.ac.uk/integrative-biology "King, Bernadette" <B.King@liverpool.ac.uk>

UMassachusettsAmherst DarwinFellowship

This is a reminder about the Darwin Fellowship < https://gpls.cns.umass.edu/oeb/darwin-fellows > at the University of Massachusetts at Amherst. The deadline for submitting application materials is *December 15th, 2018*.

The Graduate Program in Organismic and Evolutionary Biology at University of Massachusetts Amherst announces a two-year POSTDOCTORAL FELLOWSHIP/lectureship. OEB draws together more than 90 faculty from the Five Colleges (University of Massachusetts Amherst and Smith, Hampshire, Mount Holyoke and Amherst Colleges), offering unique training and research opportunities in the fields of ecology, organismic and evolutionary biology. Our research/lecture position provides recent PhD's an opportunity for independent research with an OEB faculty sponsor, as well as experience mentoring graduate students and teaching a one-semester undergraduate biology course. To be qualified, a candidate must have a recent PhD in a field relevant to ecology, organismic or evolutionary biology and proven teaching skills. Position subject to availability of funds.

To apply online, please go to http://careers.umass.edu/-amherst/en-us/job/495959/darwin-postdoctoral-fellow and submit (updated for better clarity):

- CV

- Statement of research interests

- Statement of teaching interests

- Contact information (email) for 3 professional references

- Also please arrange to have a letter from your proposed OEB faculty sponsor sent to oeb@bio.umass.edu <oeb@bio.umass.edu%20(link%20sends%20e-mail)>. A list of OEB faculty and additional information is available at http://gpls.cns.umass.edu/oeb < https://-gpls.cns.umass.edu/oeb >. Applicants should apply by the priority deadline of *December 15, 2018 *in order to ensure consideration. The position is expected to start in August 2019. Questions about this search may be sent to: oeb@bio.umass.edu.

*UMass Amherst is committed to a policy of equal opportunity without regard to race, color, religion, gender, gender identity or expression, age, sexual orientation, national origin, ancestry, disability, military status, or genetic information in employment, admission to and participation in academic programs, activities, and services, and the selection of vendors who provide services or products to the University. To fulfill that policy, UMass Amherst is further committed to a program of affirmative action to eliminate or mitigate artificial barriers and to increase opportunities for the recruitment and advancement of qualified minorities, women, persons with disabilities, and covered veterans. It is the

policy of the UMass Amherst to comply with the applicable federal and state statutes, rules, and regulations concerning equal opportunity and affirmative action.*

–

Sarah L. Emel, Ph.D. Darwin Postdoctoral Fellow Organismic and Evolutionary Biology Graduate Program University of Massachusetts Amherst

Sarah Emel <semel@umass.edu>

UMichigan ParasiteEvolutionOfEvolvability

Postdoc at University of Michigan

About The Position: The lab of Dr. Luis Zaman is searching for a postdoc to work on projects bridging community ecology and parasite coevolution using digital organisms in Avida. The overarching goal of these NSF funded projects is to understand what ecological features favor the evolution of increased parasite evolvability. In other words, what is it about the ecology of some host-parasite communities that lead to parasite populations more poised for adaptation, versus other communities that lead to more evolutionarily sluggish parasites?

The successful candidate will be part of an interdisciplinary collaboration combining natural populations of rodents and their bacterial parasites, microbial experimental evolution, and computational models/analyses. This position will be primarily responsible for the computational components, but communication and collaboration with others working on all aspects of this project will be indispensable. In addition, this position will be responsible for mentoring undergraduate and graduate students working on related projects. See a more detailed abstract of the project on NSFs website: http://bit.ly/2qe3L8y Funding is available for at least 2 years, and appointments are renewed annually based on continued progress.

The Zaman Engineered and Experimental Evolution (ZEEE) lab is part of the University of Michigans Ecology and Evolutionary Biology Department as well as the Center for the Study of Complex Systems. The successful candidate will enjoy vibrant interdisciplinary environments that both departments offer. More info about the lab at https://zeeelab.com/ . Required Qualifications: - PhD in a field related to computational biology, molecular/microbiology, or ecology and evolution by the start date

Desired Qualifications: - Programing proficiency (e.g., Python, C++, R) - Background in ecology and evolution, especially of microbes - Evidence of creative and clear writing skills

How to Apply: Send a single PDF document with a CV, a brief (paragraph or two) summary of previous research and other relevant experiences, and the contact information for 2-3 references to Luis Zaman (zamanlh@umich.edu). Application review will begin on February 1st, and continue until the position is filled.

luis.zaman@gmail.com

UOtago NewZealand MarineEvolution

Postdoc: were advertising a 3-year postdoctoral position on evolutionary genetics in New Zealands coastal ecosystems

Postdoctoral Fellow - Marine Phylogeography Department of Zoology Division of Sciences University of Otago NEW ZEALAND

Applications are invited for the 3-year, fixed-term position of Postdoctoral Fellow at the University of Otago, New Zealand. We seek an energetic and dedicated scientist to carry out evolutionary genetic research. The successful candidate will be working on a Marsden-funded research project titled 'Founder Takes All? Tracking the colonisation of New Zealand's newly uplifted shores.

The project is led by Professor Jon Waters, Associate Professor Ceridwen Fraser, Dr Erasmo Macaya, and Professor Dave Craw,

The research will combine evolutionary genomic techniques with marine biogeography, in a geologically-active coastal setting. A PhD and research experience in evolutionary/population genetics/genomics is essential. Experience in marine phylogeography, GBS, and bioinformatics would be an advantage.

The appointment is expected to start within the period March-May 2019.

Postdoctoral Fellow - Zoology https://otago.taleo.net/careersection/2/jobdetail.ftl?lang=en&job02337 Specific enquiries may be directed to Professor Jon Waters, Principal Investigator of the Marsden-funded project, Department of Zoology, Tel +64 27 2443018, email

jon.waters@otago.ac.nz.

Applications close 11 January 2019.

Professor Jon Waters, FRSNZ Associate Dean Research, Sciences University of Otago Dunedin, New Zealand 03 4795847 027 2443018 http://www.otago.ac.nz/Zoology/-staff/otago008938.html https://scholar.google.com/-citations?hl=en&user=_0w6ZS0AAAAJ Jonathan Waters <jon.waters@otago.ac.nz>

UOxford MosquitoPopulationGenomics

Senior Postdoctoral Research Scientist in Population Genomics University of Oxford, Big Data Institute

Salary Range: £40,792 - £48,677 Type of Appointment: Full-time and fixed-term until January 2021 Location: Oxford, UK Application Deadline: 18 Jan 2019

We are sequencing 10,000 whole genomes per year of Anopheles mosquitoes collected from wild populations across Africa and Southeast Asia, as part of the Malaria Genomic Epidemiology Network (www.malariagen.net) and through our collaboration with the Wellcome Sanger Institute (https://www.sanger.ac.uk/science/groups/-kwiatkowski-group). These data are a unique resource for studying population biology, and for investigating the evolution of the Anopheles mosquito species that transmit malaria.

We are looking to recruit a senior postdoc who can lead applied research in the areas of population genomic inference and modelling. We hope to use genomic data to address some of the open questions regarding Anopheles mosquito populations in Africa, including the rate, range and spatial patterns of migration; the impact of seasonal climate variation on population dynamics; the impact of current mosquito control interventions intended to reduce malaria transmission; and the previous history and likely future course of insecticide resistance adaptations.

New methods for population genomic inference and modelling are themselves evolving rapidly, and this role provides an opportunity to leverage the latest methodological advances and apply them to one of the largest genomic datasets available for any species. The results will be of basic scientific interest, but will also be of relevance to public health, as many of these questions need to be answered in order to design better strategies for managing insecticide resistance, and to investigate optimal strategies for the deployment of new vector control tools such as gene drive.

This role will provide an opportunity to collaborate with a large international network of researchers spanning entomology and population genomics. In particular, this role will collaborate with population geneticists and modellers from the Target Malaria project (https://-/targetmalaria.org/) and from the McVean group at Oxford BDI.

Job Details and How To Apply: https://t.co/-wEoIFmBlZ7 Any questions, please feel free to get in touch with me at alistair.miles@bdi.ox.ac.uk.

– Please feel free to resend your email and/or contact me by other means if you need an urgent reply.

Alistair Miles Head of Epidemiological Informatics Centre for Genomics and Global Health Big Data Institute Li Ka Shing Centre for Health Information and Discovery Old Road Campus Headington Oxford OX3 7LF United Kingdom Phone: +44 (0)1865 743596 or +44 (0)7866 541624 Email: alimanfoo@googlemail.com Web: http://alimanfoo.github.io/ Twitter: @alimanfoo < https://twitter.com/alimanfoo >

Alistair Miles <alimanfoo@googlemail.com>

UppsalaU AncientDNA

*Postdoctoral fellowship in ancient DNA and population genomics** *

*Project description: *The process of domestication has fascinated biologists since the early days of the evolutionary theory. Domestication represents observable evolutionary change in a relatively short time span making it an ideal subject to study these processes. Recent technological advances in archaeogenomics allow to study such evolutionary changes through time by obtaining genomic data from populations across time and space. The project will conduct temporal sampling of sheep populations in Central Asia in order to understand how neutral and selective processes changed these populations over time.

Reviewing applications will begin on *January 20*^*th* *2019*and continue until a suitable candidate is found.

More information: https://gunther-lab.org/-postdoctoral-fellowship-in-ancient-dna-and-population-genomics/ Looking forward to your applications!

– Torsten Günther Group Leader/Forskare Human Evolution Program Department of Organismal Biology Uppsala University Norbyvägen 18C 752 36 Uppsala, Sweden https://gunther-lab.org/ När du har kontakt med oss pÃ¥ Uppsala universitet med e-post sÃ¥ innebär det att vi behandlar dina personuppgifter. För att läsa mer om hur vi gör det kan du läsa här: http://www.uu.se/-om-uu/dataskydd-personuppgifter/ E-mailing Uppsala University means that we will process your personal data. For more information on how this is performed, please read here: http://www.uu.se/en/about-uu/data-protection-policy torsten.gunther@ebc.uu.se

URochester EvoDevo

A postdoc position is available in Jenn Brisson's lab in the Department of Biology at the University of Rochester. Our lab is broadly interested in the evolution of morphology. We use interdisciplinary approaches, incorporating ideas and methods from evolutionary biology, developmental genetics, physiology, and bioinformatics. We're looking for someone to join an NIH-funded project investigating the molecular mechanisms underlying the control of the male wing dimorphism in pea aphids. Optimally, the candidate will have experience with gene expression and knockdown studies (RNA-Seq, qRT-PCR, in situ hybridization, RNAi) and some bioinformatics experience. The postdoc will be expected to coordinate and conduct independent research, mentor undergraduate students, and write up results for publication. Additionally, the successful applicant will have the opportunity to develop activities relevant for their career goals, such as independent research directions and outreach or teaching endeavors. The Brisson lab environment is friendly and collaborative, with a focus on mentorship and doing good science.

Appointment for this position will initially be for 12 months, with renewal for up to three years, contingent on sufficient progress. The start date is flexible. Salary is commensurate with experience, and benefits are included.

More information about the lab can be found here: brissonlab.org The lab is part of the 'E2G2' group in the Department of Biology, with strengths in evolutionary genetics and genomics.

Applications should include a cover letter with a short description of research interests and accomplishments (<1 page), a CV, and names and email addresses of three references. Please email these materials to Jennifer.brisson@rochester.edu with 'Postdoc application' in the subject line. Screening begins immediately and continues until a suitable candidate is found. Informal inquiries should be sent to Jenn Brisson at Jennifer.brisson@rochester.edu.

"Brisson, Jennifer" <jbrisso3@UR.Rochester.edu>

UZurich EvolutionProteins

Postdoc in experimental molecular evolution

A postdoctoral fellowship in evolutionary biology is available in the laboratory of Andreas Wagner at the University of Zurich. We are looking for a researcher to use directed evolution and deep mutational scanning of proteins and/or simple regulatory circuits to study how new protein functions originate in evolution. Lab members are a group with very diverse backgrounds and research projects, unified by their interests in evolution and life's fundamental organizational principles. Ongoing work in the lab ranges from the directed evolution of proteins to laboratory evolution of microbes and computational analyses of regulatory networks (e.g., Bratulic et al. Nature Communications 2017; Aguilar-Rodríguez et al., Nature Ecology and Evolution 2017; Sprouffske et al. PLoS Genetics 2018). A sample of the laboratory's research can be found at http://www.ieu.uzh.ch/-wagner/ . We are looking for an individual who has received his or her PhD within the last five years, who is highly self-motivated and can work independently on a project that he or she will help develop. The successful candidate will have a strong background in microbiological techniques and molecular cloning, including high-throughput techniques such as deep mutational scanning. Experience with fluorescent proteins and flow cytometry, as well as with computational analysis of high-throughput DNA sequence data will be a plus, as will be a research history in evolutionary biology. The position offers a highly competitive salary of up to three years on annually renewable contracts.

The working language in the laboratory is English. German skills, although helpful, are not essential. Zurich is a highly attractive city in beautiful surroundings, with a multinational population, and many educational and recreational opportunities.

To be considered, please send a single (!) PDF file merged from the following parts to jobs.wagner@ieu.uzh.ch: CV including publica-

tion list, academic transcripts, a statement of research interests not exceeding three pages, and three academic references. Please include the word "EXPPDOC19" in the subject line. Applications will be considered until January 20, 2019 . The position is available immediately.

Annette Schmid Administrative Assistant of Prof. A. Wagner / HR University of Zurich Institute of Evolutionary Biology and Environmental Studies Wagner lab, Y27-J52 Winterthurerstrasse 190 CH-8057 Zürich Switzerland Mail to: annette.schmid@ieu.uzh.ch Phone +41 (0)44 635 61 42 Fax +41 (0)44 635 61 44 at the office on Monday and Thursday

jobs.wagner@ieu.uzh.ch

VanderbiltU EvolutionGeneticsSymbiosis

Two postdoctoral positions are immediately available to join the Bordenstein Lab in the Departments of Biological Sciences and Pathology, Microbiology and Immunology at Vanderbilt University in Nashville, TN. Candidates may apply to one of two projects.

The first project seeks applicants with interests and skill sets in animal-microbe interactions, evolution, endosymbiosis, phylosymbiosis, quantitative genetics, transcriptomes, fluorescent microscopy, or gene knockdowns/knockouts. The postdoc will in part lead a National Science Foundation project to study the evolutionary genetic basis of symbioses between insects (Nasonia parasitoid wasps) and endosymbiotic bacteria (Wolbachia). The postdoc will also participate in launching a second project on the genetic basis of phylosymbiosis (host phylogenetic signal in the gut microbiome) and speciation.

The second project seeks applicants with interests and/or skill sets in personalized medicine and multi-omic analyses (population genetics, metabolome, metagenome, and metallome) to investigate the consequences of diet, ethnicity, and genetic variation on the human microbiome (Brooks et al 2018, PLOS Biology). The postdoc will join and have the opportunity to take a leading role in the fast growing, trans-institutional Vanderbilt Microbiome Initiative. Strong computational expertise (data analysis, coding, and bioinformatics) will be important in this position.

More information about the Bordenstein lab, research program, and systems can be found at the Symbiontiocism blog: symbionticism.blogspot.com/2018/12/two-postdoctoral-positions-availalbe.html and lab website: lab.vanderbilt.edu/bordenstein

To apply, please send a single pdf including (i) cover letter with earliest start date, statement of intent, career goal, research experience, and areas of growth (ii) full curriculum vitae noting at least three references and (iii) two example publications or other writings. Additional information and resources for supporting postdocs at Vanderbilt can be found at the Office of Postdoctoral Affairs and Postdoctoral Resources pages.

Vanderbilt University campus is a National Arboretum located in the heart of Nashville, the capital of Tennessee, and known internationally as 'Music City USA'. Nashville is also the home to Nashville Hot Chicken, vibrant art and music festivals, professional sports teams, the Nashville Symphony, the Frist Center for the Visual Arts, and numerous activities for outdoor enthusiasts. Nashville, Tennessee is a wonderful place to live, work, and raise a family.

Seth Bordenstein, Ph.D. Departments of Biological Sciences and Pathology, Microbiology, and Immunology Director, Vanderbilt Microbiome Initiative Vanderbilt University Email: s.bordenstein@vanderbilt.edu Twitter: @Symbionticism

"Bordenstein, Seth R" <s.bordenstein@Vanderbilt.Edu>

Vienna Wolbachia-FruitFlyGenomics

A Postdoc position is being offered to study the endosymbiont Wolbachia in invasive cherry fruit flies. The project is funded for three years by the Austrian Science Fund (FWF).

The eastern cherry fruit fly Rhagoletis cingulata is an important economic pest species infesting cherry species in its native range in North America. It was recently introduced to Europe where it co-infests cherries with the native European cherry fruit fly Rhagoletis cerasi. The shared habitat of the two insect species resulted in the horizontal transmission of a Wolbachia strain from R. cerasi to R. cingulata. The project aims to study the early stages of Wolbachia transmission and the spread of the endosymbiont in nature. Moreover the project focuses on the invasion history of the fly and the potential consequences of the new Wolbachia infection for invasion success of its host. Our research objective will

be accomplished by whole genome sequencing of different Wolbachia strains and by studying the spatial and temporal distribution of the newly acquired endosymbiont in natural populations. We will determine the introduction routes of R. cingulata performing extensive genomic characterization of native and invasive fly populations and perform crossing studies to study the phenotypic effects of the endosymbiont.

The project will be in collaboration with Lisa Klasson (Uppsala University, Sweden) and Jeff Feder (University of Notre Dame, USA) and will be performed in the lab of Christian Stauffer (Boku, Vienna).

We are looking for an enthusiastic candidate with a strong background in next-gen sequencing and bioinformatics analysis and a strong interest in experimental and molecular ecology. The candidate should have excellent communication skills and should be fluent in English. The working language in the laboratory is English. German skills, although helpful, are not essential.

The position is based at the University of Natural Resources and Life Sciences, Boku https://-www.boku.ac.at/ in Vienna. Salary is according to the standard personnel costs of the FWF https://-www.fwf.ac.at/en/research-funding/personnel-costs/ . To apply, please send an application letter detailing research background and research interests, your CV and the contact information of at least two references to hannes.schuler@unibz.it. The position is available immediately, but the starting date is negotiable. Review of applications will begin immediately and continue until the position is filled.

For informal inquiries, please contact Hannes Schuler hannes.schuler@unibz.it.

References:

Schuler H, Bertheau C, Egan SP et al. (2013) Evidence for a recent horizontal transmission and spatial spread of Wolbachia from endemic Rhagoletis cerasi (Diptera: Tephritidae) to invasive Rhagoletis cingulata in Europe. Molecular Ecology, 22, 4101'4111.

Schuler H, Köppler K, Daxböck-Horvath S et al. (2016) The hitchhiker's guide to Europe: the infection dynamics of an ongoing Wolbachia invasion and mitochondrial selective sweep in Rhagoletis cerasi. Molecular Ecology, 25, 1595'1609.

Dr. Hannes Schuler Faculty of Science and Technology Free University of Bozen-Bolzano Universitätsplatz 5 39100 Bozen, Italy Tel: +39 0471 017648 https://-sites.google.com/view/hschuler

Schuler Hannes <Hannes.Schuler@unibz.it>

WorkshopsCourses

Arizona UltraLargePhylogenies Apr12-14

Trees in the Desert 2019 (http://treesinthedesert.org)

A workshop on ultra-large phylogenetic trees April 12-14, 2019 Tucson, Arizona

Phylogenetic trees with thousands of species, genes or individuals are now being published regularly, and numerous efforts around the globe are aimed at scaling this up even further. The algorithmic challenges for assembling, evaluating, and applying these large trees remain formidable, however, with plenty of room for novel approaches. We invite graduate students in phylogenetic biology, bioinformatics, mathematics and computer science to join us in a three-day workshop on this topic, supported by a grant from the U.S. National Science Foundation. The goal is to communicate aspects of known approaches to the problem, brainstorm collectively about new ideas, and get our hands dirty with exemplar data sets. The ideal student for this will be a mid- to-late Ph.D. student in one of these fields, with some experience in phylogenetic toolkits, programming and bioinformatics infrastructure (e.g., scripting languages, UNIX shell, etc.). Funds are available to support travel, lodging and meals for students.

Topics will likely include constructing large trees, evaluating their robustness and reliability, and integrating them with various post-phylogenetic analyses. Specific topics will be driven by interests and experience of the participants but may include scalability of conventional tree building methods, alignment-free tree construction, model-selection in large trees, coalescent and gene-tree approaches, missing data and terraces, assembling confidence sets of trees for subsequent study, and scalable inference of tree annotations such as divergence times, ancestral states, etc. Aside from short talks the first day, the format will be almost entirely "hands-on", focusing on developing and testing new ideas and pushing existing ones to their feasibility limits.

The workshop will be held at the University of Arizona's Biosphere 2 (http://biosphere2.org) facility, located in the foothills of the Santa Catalina Mountains about 30 miles north of Tucson. Tucson proper is flanked on its east and west sides by Saguaro National Park, founded as a reserve for the saguaro cactus that is so emblematic of the Sonoran Desert. April is an exceptional time to visit southern Arizona, with the spring desert bloom well underway, sunny warm days and cool nights. Biosphere 2 is located in mesquite grassland not far from trailheads for the Arizona Trail and other hikes into the Catalina Mountains.

Confirmed instructors:

Mukul Bansal, University of Connecticut Mark Holder, University of Kansas Michelle McMahon, University of Arizona Emily Jane McTavish, University of California, Merced Jeff Oliver, University of Arizona Dan Portik, University of Arizona Mike Sanderson, University of Arizona (Organizer) Mike Steel, University of Canterbury John Wiens, University of Arizona Derrick Zwickl, University of Arizona

Application and financial aid

Class size will be kept small, and funds are available to support graduate student travel, meals and lodging. Please copy and paste the questions below and your answers into an email to Mike Sanderson (sanderm@email.arizona.edu) by January 25, 2019, together with a copy of your C.V. Also arrange to have one letter of recommendation from your advisor sent to the same email by the deadline.

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1. Name and email address:

2. University, degree program, years in program, name of advisor:

3. Briefly describe your knowledge of phylogenetic methods and experience with phylogenetic software tools:

4. Briefly describe your programming experience, if any

5. How is the question of constructing large phylogenetic trees relevant to your research interests?

6. What specific topics would you like to see discussed at this workshop?

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sanderm00@gmail.com

Bangkok AgriculturalMetagenomics Jun19

Dear colleague

Empowering agricultural research through (meta)genomics

We are proud to announce the second genomics workshop for Asia Pacific! Held at the North Bangkok campus of the prestigious Kasetsart University, Empowering agricultural research through (meta)genomics will be held in Bangkok on the 25-28th June 2019.

This advanced workshop follows our unique format of combining wet-laboratory techniques with scientific exploration and bioinformatics analysis. We also stream biologists and bioinformaticians so they can learn with their peers and focus on furthering their own expertise.

We start with a Research Seminar day (Prof Roger Hellens - amongst other accomplishments, of Golden Kiwi fame - providing the plenary) and early bird participants can request to submit an oral or poster presentation.

For a four day course, our sponsors have helped keep the cost per participant at the affordable price of 275 AUD (approximately 6500 BHT / 200 USD / 175 EUR). For information, accommodation, and registration please visit: https://thegeneschool.org/ku_workshop_2019 Many thanks, Dr Alexie Papanicolaou

–

Dr. Alexie Papanicolaou http://stressedfruitfly.com Senior Lecturer / Assistant Professor in Bioinformatics < http://www.westernsydney.edu.au/hie/people/researchers/doctor_alexie_papanicolaou > Hawkesbury Institute for the Environment

A.Papanicolaou@westernsydney.edu.au

Barcelona GeometricMorphometrics May27-31

Dear colleagues,The 11th edition of Transmitting Science course "INTRODUCTION TO GEOMETRIC MORPHOMETRICS- 10th edition" has opened registration.INSTRUCTORS: Prof. Chris Klingenberg (University of Manchester, UK) and Dr. Jesús Marugán (UAM, Spain).Dates: May 27th-31st, 2019, Barcelona (Spain)More information and registration: https://www.transmittingscience.org/courses/geometric-morphometrics/introduction-geometric-morphometrics/ or writing to courses@transmittingscience.orgThis course is entitled to teach the main concepts of shape analysis based on landmark coordinates and its multivariate procedures, and how they can be put into practice across any biological discipline in which the phenotype (form) and its variation are the principal sources of information.This successful coursePro-gram:Introduction: Shape, size and biological morphology.Morphometric data: Equipment, landmarks, outlines and surfaces.Visualizing shapes and shape changes.Looking at variation: PCA.Distinguishing groups: CVA and discriminant analysis.Symmetry and asymmetry.Morphometrics in a messy world: outliers and measurement error.Regression and allometry.Covariation between things: PLS.Morphological integration.Modularity.Phylogeny and comparative methods.Putting things together: Combining analyses to solve biological questions.Presentation of group work by participants.Software that will be used during the course: TPS, ImageJ (FIJI) and MorphoJPlease feel free to distribute this information between your colleagues if you consider it appropriate.Do not hesitate to contact me if you have any question regarding this course.With best regardsSoleSoledad De Esteban-Trivigno, PhDScientific DirectorTransmitting Sciencewww.transmittingscience.org Soledad De Esteban Trvigno <soledad.esteban@transmittingscience.org>

Barcelona MappingTraitEvolution,Jun3-7

Dear colleagues,

Registration is open for the second edition of the course 'Mapping Trait Evolution', June 3rd-7th, 2019.

Instructor: Dr. Jeroen Smaers (Stony Brook University, USA) and Carrie Mongle (Stony Brook University, USA).

PROGRAM:

Monday. (R packages: ape, Geiger).

Morning: Phylogenetic data.

* What is the basic structure of phylogenetic data? * How to visualize and manipulate phylogenetic data?

Afternoon: Models of evolution.

* What are models of evolution? * What are the assumptions of the different models of evolution? * How are models of evolution utilized?

Tuesday. (R packages: ape, nlme, caper, evomap).

Morning: Phylogenetic regression.

* Assumptions, properties, and applications of the phylogenetic regression.

Afternoon: Phylogenetic ancova.

* Testing for grade shifts using the phylogenetic regression.

Wednesday. (R packages: phytools, motmot, geiger, ape, evomap, BayesTraits).

Morning: Ancestral estimation.

* Using models of evolution to estimate values of ancestral nodes.

Afternoon: Analysis of rates of evolution.

* Estimation of rates of evolution. * Testing hypothesis about rates of evolution.

Thursday. (R packages: bayou, phylolm, surface, OUwie, mvMORPH).

Morning: Inferring the structure of a macroevolutionary landscape.

* Using Ornstein-Uhlenbeck models to map macroevolutionary patterns.

Afternoon: Testing the structure of a macroevolutionary landscape.

* Applications and assumptions of OU models. * Using OU models to test macroevolutionary hypotheses.

Friday. (R packages: geomorph).

Morning: Modularity and integration.

* What is 'phylogenetic' modularity and integration? * Applications and assumptions.

Afternoon: Case study.

MORE INFO: https://www.transmittingscience.org/-courses/evolution/mapping-trait-evolution/ With best regards

Sole

Soledad De Esteban-Trivigno, PhD Scientific Director Transmitting Science www.transmittingscience.org Soledad De Esteban Trvigno <soledad.esteban@transmittingscience.org>

Berlin MachineLearning Jun3-7

Course: "Introduction to Machine Learning"

When: 3rd-7th June 2019

Registration deadline: 4th May 2019

Instructor: Prof. Paolo Frasconi (University of Florence, Italy; http://ai.dinfo.unifi.it/paolo/)

Overview

This workshop is aimed to students and researchers aiming to understand the basic principles of machine learning. It will focus on supervised learning, starting with linear models (regression, logistic regression, support vector machines) and will extend to the basic technologies of deep learning and kernel methods for vector data, signals, and structured data. Basic principles of learning theory that are useful to analyze results of practical applications will be also covered. Finally, there will be practical sessions using scikit-learn, TensorFlow, and Keras. After completing the workshop, students should able to understand the most popular learning algorithms, to apply them to solve simple practical problems, and to analyze and interpret the results. All course materials (including copies of presentations, practical exercises, data files, and example scripts prepared by the instructing team) will be provided electronically to participants.

Targeted Audience & Assumed Background

This workshop is aimed at all researchers and technical workers with a background in biology, computer science, mathematics, physics or related disciplines who want to understand and apply supervised machine learning algorithms to practical problems. The syllabus has been planned for people with zero or very basic knowledge of machine learning.

Students are assumed to know calculus, linear algebra, and algorithms and data structures at the undergraduate level. Students should also have sufficient programming skills, and preferably previous knowledge of the Python programming language.

Session content: https://www.physalia-courses.org/-courses-workshops/course43/curriculum43/ For more information about the course, please visit our website: https://www.physalia-courses.org/courses-workshops/course43/ Here is the full list of our courses and Workshops: (https://www.physalia-courses.org/-

courses-workshops/)

Happy holidays,

Carlo

Carlo Pecoraro, Ph.D Physalia-courses DIRECTOR info@physalia-courses.org (http://www.physalia-courses.org/) Twitter: @physacourses mobile: +49 17645230846 (https://groups.google.com/forum/-#!forum/physalia-courses)

"info@physalia-courses.org" <info@physalia-courses.org>

Berlin MetagenomicsMetatranscriptomics May27-31

Dear all,

registration for our course "Metagenomics, metatranscriptomics, and multi'omics for microbial community studies" is now open! (https://www.physalia-courses.org/courses-workshops/course33/)

Where: Berlin (Germany)

When: 27-31 May 2019

Instructors:

Dr. Curtis Huttenhower (Harvard School of Public Health, USA, http://www.huttenhower.org/)

Dr. Melanie Schirmer (The Broad Institute of MIT & Harvard, USA)

Cesar Arze (The Broad Institute of MIT & Harvard, USA)

Overview

This course will provide a thorough introduction to microbial community data analysis (metagenomics, metatranscriptomics, and other culture-independent molecular data) through a balanced approach of lectures and hands-on lab sessions. Course participants will learn how to process data from raw metaomic sequencing files through appropriate bioinformatic methods and approaches for subsequent integrative statistical analyses. Participants are invited to bring their own data to the practical session on the final day or can use publicly available data from the Integrative Human Microbiome Project (HMP2).

Format

This course is designed for researchers and students with interest in using culture-independent molecular data (particularly DNA and RNA sequencing technologies) to study microbial communities. This includes both the human microbiome in population studies and techniques generalizable to any microbial communities. The course will mainly focus on the analysis of metaomic sequencing, including workflows for processing raw sequencing data, multivariate analysis of microbial profiles, and visualization techniques.

Assumed Background

The participants should have some basic background in microbiology and/or bioinformatics. Programming experience is advantageous but not required, and a basic introduction to UNIX-based command line applications and R will be provided. All labs/tutorials will be run using pre-built cloud instances provided to students. Statistical analyses and visualizations will also be run in R using RStudio.

Learning outcomes

Familiarity with the goals of typical microbial community studies and common culture-independent molecular technologies used to assay them. Metagenomic and metatranscriptomic data analysis for taxonomic, functional, and strain-level characterization of communities using reproducible workflows. Learning how to perform multivariate statistical analyses, combine multiple measurement types in microbial communities, and how to visualize associated results. Experience in integrative multiomics analysis for large sets of human microbiome or environmental microbial community populations.

For more information about the course, please visit our website: (https://www.physalia-courses.org/courses-workshops/course33/)

Here is the full list of our courses and Workshops: (https://www.physalia-courses.org/courses-workshops/)

Best regards,

Carlo

Carlo Pecoraro, Ph.D Physalia-courses DIRECTOR info@physalia-courses.org http://www.physalia-courses.org/ Twitter: @physacourses mobile: +49 17645230846 https://groups.google.com/forum/-#!forum/physalia-courses "info@physalia-courses.org" <info@physalia-courses.org>

Berlin PopulationGenomics May13-17

Dear all,

happy to inform you that we will run the 4th edition of our Workshop "Introductory Population Genomics: From Data to Inference" in Berlin.

When: 13-17 May 2019

Instructors:

Dr. Martin Taylor(https://www.physalia-courses.org/-instructors/t9/) (University of East Anglia, UK)

Dr. Lewis Spurgin (University of East Anglia, UK)

Website: https://www.physalia-courses.org/courses-workshops/course392/ Course Overview

Next generation sequencing has revolutionized evolutionary biology allowing unprecedented resolution and insight into evolutionary questions that appeared intractable only a few years ago. The course will cover the basics of population genomic analysis from SNP data onwards and will cover the key analyses that may be required to successfully analyze a population genetic data set. The course will NOT cover steps prior to generation of a .vcf file or SNP data set such as NGS data demultiplexing, clustering and SNP calling (This is covered in detail in the Introduction to RADseq course). This course will introduce Linux and the command line environment, basic perl and python usage, file conversions and manipulation, population structure and differentiation in R, outlier analysis, landscape / seascape genomics and introgression. Having completed the course, students should have a good understanding of the software and methods available for population genomic analysis and be competent in population genomic analysis.

Targeted audience & ASSUMED BACKGROUND

This workshop is aimed at postgraduate students and early career researchers who are interested in using population genomic tools in their research. No previous experience of bioinformatics is required, but an underpinning in evolutionary biology and basic population genetics concepts such as Hardy Weinberg Equilibrium and FST are desirable. The course will use a range of software including the Linux operating system and R.

TEACHING FORMAT

The workshop is delivered over ten half-day sessions (see the detailed curriculum below). Each session consists of a combination of lectures and practical exercises, with breaks at the organisers discretion. There will also be time for students to discuss their own problems and data.

Session content: (https://www.physalia-courses.org/-courses-workshops/course9/curriculumpg/)

Here is the full list of our courses and Workshops: (https://www.physalia-courses.org/courses-workshops/)

Best regards,

Carlo

Carlo Pecoraro, Ph.D

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Berlin SingleCellRNAseq Feb25-Mar1

Dear all,

there are still a few spots available for our course "Analysis of single cell RNA-seq data" from the 25th February to 1st March 2019 in Berlin.

Course website: https://www.physalia-courses.org/-courses-workshops/course18/ INSTRUCTORS:

Dr. Ayshwarya Subramanian (Broad Institute of MIT and Harvard)

Dr. Dana Silverbush (Broad Institute of MIT and Harvard)

Dr. Ehsan Habibi (Broad Institute of MIT and Harvard)

Course overview

In recent years single-cell RNA-seq (scRNA-seq) has become widely used for transcriptome analysis in many areas of biology. In contrast to bulk RNA-seq, scRNA-seq provides quantitative measurements of the expression of every gene in a single cell. However, to analyze scRNA-seq data, novel methods are required and some of the underlying assumptions for the methods developed for bulk RNA-seq experiments are no longer valid.

In this course we will cover all steps of the scRNA-seq processing, starting from the raw reads coming off the sequencer. The course includes common analysis strategies, using state-of-the-art methods and we also discuss the central biological questions that can be addressed using scRNA-seq.

Targeted Audience & Assumed Background

This course is aimed at researchers and technical workers who are or will be analyzing scRNA-seq data. The material is suitable both for experimentalists who want to learn more about data-analysis as well as computational biologists who want to learn about scRNASeq methods. Examples demonstrated in this course can be applied to any experimental protocol or biological system.

The requirements for this course are:

i- Working knowledge of unix (managing files, running programs)

ii- Programming experience in R (writing a function, basic I/O operations, variable types, using packages).

iii- Bioconductor experience is a plus.

iv- Familiarity with NGS data and its analyses (using alignment and quantification tools for bulk sequencing data)

Teaching Format

The course will be delivered over the course of five days. Each day will include a lecture and laboratory component. The lecture will introduce the topics of discussion and the laboratory sessions will be focused on practical hands-on analysis of scRNA-seq data. These sessions will involve a combination of both mirroring exercises with the instructor to demonstrate a skill as well as applying these skills on your own to complete individual exercises. After and during each exercise, interpretation of results will be discussed as a group. Computing will be done using a combination of tools installed on the attendees laptop computer and web resources accessed via web browser.

EXAMPLE DATA Please find example datasets here: https://support.10xgenomics.com/single-cell-gene-expression/datasets Here is the full list of our courses and Workshops: https://www.physalia-courses.org/courses-workshops/ Should you have any questions, please do not hesitate to contact us : info@physalia-courses.org

Best regards, Carlo

Carlo Pecoraro, Ph.D Physalia-courses DIRECTOR info@physalia-courses.org http://www.physalia-courses.org/ Twitter: @physacourses mobile: +49 15771084054 https://groups.google.com/forum/-#!forum/physalia-courses "info@physalia-courses.org" <info@physalia-courses.org>

BodegaBay AppliedPhylogenetics May25-Jun2

[LAST CALL: APPLICATIONS DUE FRIDAY] UC Davis WORKSHOP IN APPLIED PHYLOGENETICS at Bodega Marine Laboratory, Bodega Bay, California

May 25-June 2, 2019

Sponsored by the University of California, Davis and Bodega Marine Laboratory

website: http://treethinkers.org/ Introduction Phylogenetic methods have revolutionized modern systematics and become indispensable tools in evolution, ecology and comparative biology, playing an increasingly important role in analyses of biological data at all levels of organization ranging from molecules to ecological communities. The estimation of phylogenetic trees is now a formalized statistical problem with general agreement on the central issues and questions. A nearly standard set of topics is now taught as part of the curriculum at many colleges and universities. On the other hand, application of phylogenetic methods to novel problems outside systematics is an area of special excitement, innovation, and controversy, and perspectives vary widely.

This Spring, for the eighteenth year, we will teach a workshop for graduate students interested in applying phylogenetic methods to diverse topics in biology. The 8-day course is an intensive exploration of problems to which modern phylogenetic approaches are being applied and the most current statistical tools and methods that are used to solve those problems. We cover a wide range of topics in comparative statistical phylogenetics. The course starts with recent advances in phylogenetic inference, and then focuses on methods for making inferences from phylogenies.

The course will be held at the Bodega Marine Laboratory on the beautiful Northern California coast, which has on-site housing. The course format will involve equal parts of lecture and hands-on software training with an emphasis on performing analyses using RevBayes: http://revbayes.github.io, with instruction in other inference software (MrBayes, BEAST, etc.) based on student interest. One afternoon during the week will be left free for field trips to local natural areas.

Topics Covered * Estimating, evaluating and interpreting phylogenetic trees * Recent advances in Bayesian inference of phylogeny * Model specification: model selection, adequacy and uncertainty * Diagnosing MCMC performance * Divergence-time estimation: relaxed clocks, fossil calibration * Species-tree estimation and species delimitation * Character evolution: discrete- and continuous-trait evolution * Lineage diversification: detecting rate shifts, testing key-innovation hypotheses

Instructor Team * Cecile Ane (UW, Madison) * Sebastian Hohna (LMU, Munich) * John Huelsenbeck (UC, Berkeley) * Michael Landis (Washington University) * Mike May (UC, Berkeley) * Brian Moore (UC, Davis) * Bruce Rannala (UC, Davis) * Bob Thomson (U Hawaii, Manoa) * Peter Wainwright (UC, Davis)

Prerequisites Available housing limits course enrollment to ˜30 students. Preference is given to doctoral candidates who are in the early to middle stages of their thesis research, and who have completed sufficient prerequisites (through previous coursework or research experience) to provide some familiarity with phylogenetic methods. Unfortunately, because of limits on class size, postdocs and faculty are generally discouraged from applying.

Admission and Fees Students will be admitted based on academic qualifications and appropriateness of research interests. The course fee is $850. This includes room and board at BML for duration of the course (arriving on Saturday, May 25; departing on Sunday, June 2) and return transportation from Davis to the Bodega Marine Labs.

Application Information Applications are due by Friday, December 7, 2018. Please fill out our application form and send your CV and one letter of recommendation from your major advisor. Applications should be sent via email as PDFs to jsigao@gmail.com. Students will be notified via e-mail by December 14, 2018 of acceptance. Visit the Bodega website for additional information: http://treethinkers.org/ . Send all application materials to:

Jiansi Gao Department of Evolution and Ecology 5343 Storer Hall University of California Davis Davis, CA 95616 email: jsigao@gmail.com

Heraklion Crete MetagenomicsMetabarcoding Apr1-5

Dear colleagues,Registration is open for the Transmitting Science course: AN INTRODUCTION TO METAGENOMICS AND METABARCODING. End of early bird: December 31st.Dates: April 1st-5th, 2019.Place: Heraklion (Crete, Greece).Instructor: Dr. M. Lisandra Zepeda-Mendoza (Chr. Hansen – Bacterial Physiology & Improvement, Denmark).Metagenomics is the study of the collection of genomes in an environment. Environments as diverse as Antarctic lakes, hot springs, or the human gut can be biologically characterized by extracting and sequencing DNA from samples taken from them. A characteristic of many of these samples is their complexity, posing difficulties to their analysis and characterization. However, metagenomics allows the taxonomic and functional characterization of samples. These two kinds of characterizations also enable the comparison of different habitats for biodiversity assessment.In this course, students will be introduced to the command line environment used to analyze high-throughput sequencing data (HTS). The initial cleaning steps that must be performed on every HTS dataset will be described and we will use the processed data for proper functional and taxonomical characterization of a metagenomic dataset. We will use methods such as mapping to whole genome databases, de novo assembly, gene annotation, building of non-redundant gene catalogue, and metagenomic species concept identification. Due to the wide usage of metabarcoding for the taxonomic characterization of an environment, we will also discuss amplicon sequencing strategies and data analysis. The course will be based on both theory and hands-on exercises.More information: http://-www.transmittingscience.org/courses/genetics-and-genomics/introduction-metagenomics-metabarcoding/ or writing to courses.crete@transmittingscience.orgBest regards Soledad De Esteban-Trivigno, PhDScientific DirectorTransmitting Sciencewww.transmittingscience.org Soledad De Esteban Trvigno <soledad.esteban@transmittingscience.org>

JyvaskylaFinland MolecularEvolution Feb20-22

https://www.jyu.fi/en/research/summer-and-winter-schools/ecology/workshop

Workshop: Molecular Evolution: Patterns and Causes Time: 20.-22.2.2019 Place: Konnevesi Research Station of the University of JyvÃÂskylÃÂ, Konnevesi, Finland

Confirmed invited speakers: Prof. Adam Eyre-Walker (Sussex), Prof. Sylvain Glemin (Montpellier), Prof. Richard Goldstein (University College London), Prof. Ville Mustonen (Helsinki), Prof. Andreas Wagner (Zurich) and Dr. Jessica Abbott (Lund).

Organizers: Dr. Mikael Puurtinen (JyvÃÂskylÃÂ), Dr. Ilkka Kronholm (JyvÃÂskylÃÂ), Assoc. Prof. Heikki HelanterÃÂ (Oulu) and Prof. Hannu YlÃÂ(JyvÃÂskylÃÂ)

The rate of molecular evolution varies at several levels of biological organization, e.g. among sites, among proteins, among chromosomes, and among lineages. The forces underlying this variation include mutation rate and the strength of natural selection, which are in turn affected by e.g. population size, linkage, generation time, gene function, gene expression, pleiotropy, and biophysical properties of gene products (e.g. proteins). While there is a reasonable understanding of these patterns and forces, many questions remain, and a holistic view of molecular evolution is still somewhat underdeveloped. The aim of the workshop is to bring together students and researchers from all career stages to discuss recent findings in the field of molecular evolution, and to foster new research and collaborations. The estimated number of participants is 50.

The workshop starts on Wednesday, Feb 20th at 12:45, but it is possible to arrive already on Tuesday, Feb 19th. On Tuesday evening, there will be dinner and sauna provided. The workshop ends on Friday, Feb 22nd at 16:00.

Participation fee includes accommodation, meals, beverages, and banquet during workshop. - Tuesday evening to Friday: 260 âÂÂ¬ – $Wednesdaymorningto Friday$: 210âÂÂ¬ – $forstudentsacceptedtothecourseIntroductiontoMolecularEvolution, andtakingtheworkshopadditionally$: 80âÂÂ¬

How to apply? Please send your application to the workshop by email to mikael.puurtinen@jyu.fi by December 23rd 2018. The application should include: - Name - Home institution - Career stage (e.g. MSc student, PhD student, postdoc, PI, Professor) - For students and postdocs, a contact person for academic reference - Max Â$\frac{1}{2}$ page motivation for attending the workshop - If you wish to present, and if you prefer a poster or a talk (20 min) - Title and abstract of the presentation - If you would need financial support for attending the workshop, and the amount of support requested (our ability to support costs is not yet clear).

Decisions on the applications will be communicated by January 7th 2019.

"Puurtinen, Mikael" <mikael.puurtinen@jyu.fi>

Panama SpongeEvolution Jun24-Jul15

The Smithsonian Tropical Research Institute, Bocas del Toro Research Station presents:

Understanding Basal Metazoan Relationships: Sponges

Dates: June 24 ' July 15, 2019 Location: Bocas del Toro Research Station, Bocas del Toro, Panama Registration Fee: $1000 (includes room and board, STRI registration fee, etc.) Some need-based fellowships are available

Instructors: Dr. Rachel Collin, Smithsonian Tropical Research Institute Dr. Cristina Diaz, Nova Southeastern University, USA Dr. Cole Easson, Middle Tennessee State University, USA Dr. Cara Fiore, Appalachian State University, USA Dr. Chris Freeman, College of Charleston, USA Dr. Eduardo Hajdu, Museu Nacional, Rio de Janeiro, Brasil Dr. Giselle Lôbo-Hajdu, Universidade do Estado do Rio de Janeiro, Brasil Dr. Thierry Perez, CNRS, IMBE, Station Marine d'Endoume, Marseille, France Dr. Robert Thacker, Stony Brook University, USA

This course is intended for graduate students, post-docs, or professionals who are interested in learning and applying knowledge about the taxonomy, evolution, and ecology of one of the most conspicuous organisms in tropical benthic ecosystems, marine sponges. The students participating in this course will: (1) learn to describe and identify the most common sponges living on the mangroves and shallow coral reefs of the Bocas del Toro region; (2) learn general biological and ecological characteristics of marine sponges; (3) gain hands-on ecological and taxonomic experience with tropical marine sponges;

(4) learn basic ecological survey techniques; and (5) learn how to conduct physiological experiments with sponges. This course seeks to give the participants the necessary tools to continue studies on the taxonomy, systematics, ecology, and/or evolution of sponges. This edition of the course will also include discussions of the origins of Metazoa, and the relative phylogenetic placements of sponges, cnidarians, and ctenophores. The course will last 21 days, with seven days mostly dedicated to taxonomic training, seven days to evolutionary and ecological work, and seven days dedicated to a selected project, and its presentation. Daily activities will include: morning and afternoon lectures, field trips, laboratory work, and evening discussions or talks.

Application: This course is directed towards advanced graduate students, post-docs, and young investigators, and will be conducted in English. Please e-mail your CV, 1 letter of recommendation, and a 1-2 page statement explaining your background and reasons for taking the course, to bocasresearchstation@gmail.com before January 31, 2019. To be considered for a need-based fellowship, applicants should send a description of their need, their efforts to obtain funding from other available sources, and a travel budget.

For more information see http://www.stri.si.edu/sites/-taxonomy_training/index.html . This course is supported by the U.S. National Science Foundation's Office of International Science & Engineering through award number 1828949 to Dr. Rachel Collin.

Robert Thacker <robert.thacker@stonybrook.edu>

PennStateU GalaxyAdministratorTraining Jan28-Feb1

A Galaxy Admin Training workshop (https://-galaxyproject.org/events/2019-admin-training/) will be offered January 28 through February 1 at Penn State University. The workshop offers a 2 day introductory session followed by a 3 day advanced topics session. Participants can register for one or both sessions.

Galaxy (https://galaxyproject.org/) is a widely deployed platform for data integration and analysis in the life sciences. It is open source and be deployed on lab servers, institutional computing resources, and public and private clouds. Having your own Galaxy server enables your researchers to have a customized and collaborative analysis environment that enables then to learn, perform, and share their own bioinformatics analysis.

This workshop will cover what you need to know to set up your own high-performance and multi-user production Galaxy instance. Sessions will be intensive and hands-on, and taught by experienced instructors from the Galaxy Community. Participants will learn how to install, configure, customize, and extend their own Galaxy servers. Topics include tool configuration, authentication and user management, using heterogeneous storage and compute services, and many other topics that will enable you to get your own Galaxy server up and running, performing well, and used by your community.

Registration is now open and starts at $65 / day for participants from non-profits and academia. Advance registration ends December 31. The 2016 and 2018 admin training workshops were both full, so you are strongly encouraged to register now.

clementsgalaxy@gmail.com

Portugal 2 EvolBiol January

Subject: Portugal-cE3c-Course: two advanced courses with deadlines January 2019

cE3c ' Centre for Ecology, Evolution and Environmental Changes is organizing several Advanced Courses: see below the two courses with closer deadlines ' January 2019

Additional informations at:

https://bit.ly/2zVfC0n ***** Course Practical Course on Phylogenetics

Taught by Octavio Paulo| February 4-8 2019 @ Lisbon, Portugal

Objectives: Phylogenetics is one of the scientific areas of Biology that has grown fast and evolved in methodological terms in the last years. Its applications go from the studies of the evolution of species and populations to the least expected, as the study of the origin of the AIDS virus or seasonal cycles of the flu. The course is aimed at students and professionals that intend to get started in phylogenetic analysis as well as researchers already with some experience wanting to deepen or update their knowledge in the field. The course consists of theoretical classes as well as hands-on practical sessions using software. Participants are encouraged to bring

their own sequence data for analysis.

Course INSTRUCTOR

Octavio Paulo (octavio.paulo@fc.ul.pt)

Professor at the Faculty of Sciences of the University of Lisbon, researcher at the Centre for Ecology, Evolution and Environmental Changes (http://-ce3c.ciencias.ulisboa.pt/member/octaacutevio-s-paulo), Coordinator of the Computational Biology & Population Genomics Group (http://ce3c.ciencias.ulisboa.pt/-team/COBIG2)

Intended audience: This five days intensive course will be open to a maximum number of 20 participants, being directed to PhD or MSc students in Biology, Evolution, Genetics or related areas, and postdocs and other professionals working in related topics.

Minimum formation: Bachelor in Biology or related area.

The course is free for 1st year PhD students in the Doctoral programme in Biology (FCUL), Biodiversity, Genetics and Evolution (UL; UP) and Biology and Ecology of Global Changes (UL, UA). For information of fees for other participants see the programme details (access link below)

Deadline for applications: January 11th, 20179Candidates should send a short CV and motivation letter to Octavio Paulo (octavio.paulo@fc.ul.pt)

For additional details about the course and to know how to register, click here:

https://bit.ly/2GiyRa9 For further informations please contact:

octavio.paulo@fc.ul.pt

***** Course Introduction to R for Ecology and Evolutionary Biology

Taught by Vitor Sousa and Ines Fragata | February 11-15, 2019 @ Lisbon, Portugal

General Plan:

- Introduction to R variables, data types and graphical output

- Simulate evolution of populations

- Exploratory analysis for ecology and evolution (PCA, MDS, etc.)

- Linear regression, ANOVA and hypothesis testing using resampling techniques (bootstrap, permutations, etc.)

- Bayesian statistics: advanced inference algorithms (Markov chain Monte Carlo)

- Student's case studies.

Course INSTRUCTORS

Vitor Sousa (vmsousa@fc.ul.pt)

(http://ce3c.ciencias.ulisboa.pt/member/vitorsousa)

Researcher at cE3c (with a Marie Curie fellowship) Coordinator of the Evolutionary Genetics Group

And

Ines Fragata (ifragata@igc.gulbenkian.pt)

(http://ce3c.ciencias.ulisboa.pt/member/inesfragata)

Research Collaborator at cE3c (Post-doc at Gulbenkian Institute)

Intended audience: This five days intensive course will be open to a maximum number of 20 participants, being directed to PhD or MSc students in Biology, Evolution, Ecology or related areas, and postdocs and other professionals working in related topics.

Minimum formation: Basic knowledge in R and Rstudio. A tutorial will be provided to be done before the course.

The course is free for a maximum of 10 1st year PhD students in the Doctoral programme in Biology (FCUL), Biodiversity, Genetics and Evolution (BIODIV UL, UP) and Biology and Ecology of Global Changes (BEAG UL, UA). For information of fees for other participants see the programme details (link below).

Deadline for applications: January 11, 2019

Candidates should send a short CV and motivation letter to Vitor Sousa (vmsousa@fc.ul.pt) and Inês Fragata (ir-fragata@gmail.com <mailto:player1331@gmail.com>).

For additional details about the course click here:

https://bit.ly/2LjjMDV For further informations please contact:

Vitor Sousa (vmsousa@fc.ul.pt)

Margarida Matos <mmmatos@fc.ul.pt>

Portugal FunctionalMorphology Feb27-Mar1

Functional morphology aims to link up variation in phenotype to variation in musculo-skeletal function. It is tightly related to ecomorphology which tries to understand the association between variation in ecology and the phenotype of an organism. To understand the relationships between form and function it is essential to understand the structure of the basic elements that make

up the vertebrate body: bone and muscle. Based on the understanding of how these tissues work one can then apply the principles of biomechanics (statics and/or dynamics) to provide 1) a priori testable predictions about the relationship between phenotype and function, and 2) build simple biomechanical models that allow one to vary the input parameters to evaluate how these impact the output of the system. Often these types of analyses go hand-in-hand with analyses of movements and the forces that allow these movements. This is tightly linked to measurements of performance used in an ecomorphological context.

The objectives of this short course are to provide students the basic principles of functional morphology, biomechanics and movement analyses that may allow them to use these to study whole-animal performance in an ecological and evolutionary context.

Click < https://cibio.up.pt/workshops–courses/-details/functional-morphology-evolution-of-form-and-function-from-individuals-to-species > here to see the programme for the course.

COURSE INSTRUCTORS

< http://www.anthonyherrel.fr/ > Anthony Herrel - CNRS | MNHN < http://cibio.up.pt/people/details/-ajpajares > Arie van der Meijden - CIBIO-InBIO | PHENEVOL < http://cibio.up.pt/people/details/-akaliont > Antigoni Kaliontzopoulou - CIBIO-InBIO | PHENEVOL

INTENDED AUDIENCE The course will be open to a maximum number of 25 participants.

75% of available student slots are reserved for BIODIV students. Priority will be given to:

§1st year and other PhD students attending the BIODIV Doctoral Program;

§PhD students attending other courses;

§Other post-graduate students and researchers.

REGISTRATION Registration deadline: December 29, 2018

To apply, please fill the form available < https://docs.google.com/forms/d/e/-1FAIpQLSe0UZBejFqcI0DG7IqYe9q2HQ2fmLzJCGE2dFHl6ilGvZlBRg/-viewform?usp=pp_url > HERE

Participation is free of charge for BIODIV students | 65 âÂÂ¬(*students*)—125âÂÂ¬(*otherparticipants*).*CIBIO–InBIOmemberswillhaveanadditionaldiscountof*20%.*Allapplicantswillbenotifiedaboutwhethertheyareaccepteduntil January*

< https://cibio.up.pt/upload/filemanager/-rulesadvancedcourses.pdf > Please note that new rules apply for all BIODIV students.

For more information about the course, please contact: post.graduation@cibio.up.pt

CIBIO - Centro de InvestigaÃÂem Biodiversidade e Recursos Geneticos

InBIO Laboratorio Associado, Universidade do Porto

Campus de Vairao

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Portugal

t: +351 252 660 400

e: divulgacao@cibio.up.pt

w: http://cibio.up.pt | http://inbio-la.pt

f: https://www.facebook.com/cibio.inbio

CIBIO-InBIO DivulgaÃÂ

Procida Italy EMBOPopulationGenomics Mar30-Apr06

We are pleased to inform you that applications for the upcoming EMBO Practical Course “Population Genomics: background, tools and programming” are now open.

IMPORTANT DATES for this Course:

Deadline for applications: 31/01/2019

Latest notification of acceptance: 13/02/2019

Course date: 30/03-06/04/2019

Venue: Conservatorio delle Orfane, Terra Murata, 80079, Procida, Italy

A maximum of 24 candidates will be selected based on their application.

Notifications of acceptance will be sent shortly after the closing date of registration.

Full details, including the course programme and the application form,

at: http://meetings.embo.org/event/19-population-genomics Instructors:

Anders Albrechtsen (University of Copenhagen, Denmark)

Andrea Manica (University of Cambridge, UK)

Andrew Clark (Cornell University, USA)

Chiara Batini (University of Leicester, UK)

Garrett Hellenthal (University College London, UK)

Margherita Francescatto (Fondazione Bruno Kessler - Trento, IT)

Mathias Currat (Université de Genève, Switzerland)

Vincenza Colonna (National Research Council, IT)

Course description

Study methods in population genomics have been profoundly reshaped in the last few years, fostered by a rapid growth of DNA sequence production and sharing. This unprecedented opportunity guided major steps forward in the field and calls for new approaches and computational skills to become routine in evolutionary genomics laboratories.

The objectives of this EMBO Practical Course are to give an overview of the state of the art methods in population genomics, including programming, and to enable participants to run their project's analyses with high confidence. The course combines lectures from outstanding experienced population geneticists with practice, both at individual and group level. All conceptual innovation will be presented in lectures and applied in practice.

This EMBO Practical Course will cover coalescent, genetic diversity, natural selection, population demography in time and space, admixture, genetic clustering, and genome-wide association studies. Population genetics topics will be complemented by computational ones such as Python programming and machine learning techniques.

This course aims at evolutionary biologists who already have basic bioinformatics skills. Ph.D. students and Postdoc researchers will benefit the most out of this course, but applications from all candidates will be evaluated in their context.

Thank you for your interest,

Chiara Batini (University of Leicester, UK) and Vincenza Colonna (CNR, Napoli, IT)

"Batini, Chiara (Dr.)" <cb334@leicester.ac.uk>

Roscoff EvolutionNetworkBioinformatics Jun23-29

Introduction to the concepts and methods of networks in evolutionary studies (sequence similarity networks, genome networks and multipartite graphs)

This free summer school will be held in Roscoff, France, between June 23rd 2019 (date of arrival) and June 29th (date of departure).

This school is designed in priority for biologists and bioinformaticians (completing a PhD degree or currently post-doctoral fellows, as well as researchers), who wish to learn the bases of network analyses.

The main notions (regarding various types of networks, the relevance of their analyses, and some bases in graph theory) will be introduced by short theoretical classes, followed by practical case-studies, introducing the basics in programming required to run such network analyses as well as to use the existing software/tools. Our goal is that, by the end of this summer school, all applicants will be qualified to perform network analyses of their own datasets.

More precisely, we will focus on the following concepts and methods:

- Introgressive evolution and large-scale diversity studies.

- Construction and analysis of sequence similarity networks (construction and sorting of connected components, definition of gene families, search for composite genes, implementation of centrality measures)

- Construction and analysis of genome networks (construction of weighted genome networks, implementation of their diameter, shortest paths, analyses of labeled nodes, etc.)

- Construction and analysis of gene-genome bipartite graphs (detection of connected components, and their articulation points, and twins)

In addition, 9 conferences on networks and evolution will be delivered by leading European and North American scientists during this school.

Confirmed speakers (so far) :

Dr. Eric Bapteste (UPMC, France): Introduction to sequence similarity networks

Pr. Robert Beiko (Dalhousie University, Canada) : Introduction to phylogenetic networks

Pr. Debashish Bhattacharya (U. Rutgers, USA): Reticulate evolution in eukaryotes

Pr. Eugene Koonin (NCBI, USA) : Viruses and networks

Dr. Damien Eveillard (U. Nantes, France): Co-occurrence networks and the evolution of geochemical cycles in the environment

Pr. Marc-André Sélosse (MNHN, France): The living world as a network

This summer school is funded by ERC grant (FP7/2007-2013 Grant Agreement # 615274). Hence, registration is free, housing and food (breakfast, lunch) are also fully covered. Applicants will only need to fund their travel to Roscoff and their evening dinners.

10 places only are available, with a mandatory requirement: applicants must show basic computer skills (i.e. to be familiar with Linux environment and with at least one programming language, preferably Python).

Applications are to be submitted asap, and no later than February 15th 2019, by email to :

eric.bapteste@upmc.fr , and contain a brief letter describing why this class will be of significant interest for the applicant and his/her future studies.

Applicants will be selected based on their motivation, and their resume, including the names of two scientific referees for PhD and postdoctoral fellows.

We are excited to meet you soon in Roscoff.

Eric Bapteste + Philippe Lopez + Eduardo Corel

– – Dr. Eric Bapteste 7, quai Saint-Bernard, Université Pierre et Marie Curie, UMR 7138 Evolution Paris Seine Bâtiment A, 4eme et. pièce 427, Paris 75005 France - “Les gènes voyageurs: l’odyssée de l’évolution” (Belin) “Conflits intérieurs: fable scientifique” (Editions Matériologiques) “Tous entrelacés! Des gènes aux superorganismes, les réseaux de l’évolution” (Belin)

Bapteste Eric <epbapteste@gmail.com>

UConnecticut RNASeqBioinformatics Jan17-18

The Computational Biology Core within the Institute for Systems Genomics is hosting an RNA-Seq analysis workshop open to advanced undergraduates, graduate students, postdocs, and faculty. Each class enrolls a maximum of 12 students and provides hands-on training and background for genomics data analysis. Two instructors are available to assist participants as they work through the provided exercises. All materials, including sample and processed data files, are available after the course ends.

RNA-Seq: Experimental Design and Analysis (Bioinformatics) *Dates: Jan 17-18, 2019, 9-5:30pm* *Location: Storrs Campus - ESB Building* *Enroll here: *http://-bioinformatics.uconn.edu/cbc-workshop/ *Cost: $600*

Course material will introduce students to HPC, command-line bioinformatics software, and standard informatics pipelines for processing RNA-Seq data. We will look at microbial and eukaryote examples. We will cover the basics for both model (reference genome) and non-model (*de novo *transcriptome) approaches. Previous experience with HPC and/or programming are not required.

Jill L. Wegrzyn Assistant Professor

Department of Ecology and Evolutionary Biology Institute for Systems Genomics: Computational Biology Core University of Connecticut 181 Auditorium Rd Storrs CT 06269-3214

jill.wegrzyn@uconn.edu +1 860-486-8742

Research: http://compgenomics.lab.uconn.edu CBC Core: http://bioinformatics.uconn.edu Office (ESB 306C) / Lab (ESB 315)

UK AdvancingInR Jan21-25

Advancing in statistical modelling for evolutionary biologists and ecologists using R (ADVR08)

https://www.prstatistics.com/course/advancing-statistical-modelling-using-r-advr08/ This course will be delivered by Dr. Luc Bussiere from the 21st 25th January 2019 in Glasgow City Centre Course Overview: This course will provide an introduction to working with real-life data typical of those encountered in the field of evolutionary biology and ecology. The course will be delivered by Dr. Luc Bussiere, Dr. Tom Houslay and Dr. Ane Timenes Laugen who are all practicing academics in the field of evolutionary biology. This five day course will consist of series of modules (each lasting roughly half a day) covering model selection

and simplification, generalised linear models, mixed effects models, and non-linear models. Along the way you will gain in depth experience in data Âwrangling', data and model visualisation and plotting, as well as exploring and understanding model diagnostics. Classes will comprises of a mixture of lectures and practicals designed to either build required skills for future modules or to perform a family of analyses that is frequently encountered in the biological literature. Course programme Monday 21st ' Classes from 09:30 to 17:30 Course introduction; techniques for data manipulation, aggregation, and visualisation; introduction to linear regression. Packages: {tidyr}, {dplyr}, {ggplot2} Tuesday 22nd ' Classes from 09:30 to 17:30 Linear models (diagnostics, collinearity, scaling, plotting fitted values); fitting and interpreting interaction terms; model selection and simplification; general linear models and ANCOVA. Packages: {stats}, {car} Wednesday 23rd ' Classes from 09:30 to 17:30 Generalized linear models (logistic and Poisson regression); predicting using model objects and visualizing model fits. Packages: {broom}, {visreg}, {ggplot2} Thursday 24th ' Classes from 09:30 to 17:30 Mixed effects models in theory and practice; visualising fixed and random effects. Packages: {lme4}, {broom}, {ggplot2}, {sjPlot} Friday 25th ' Classes from 09:30 to 16:00 Fitting nonlinear functions (polynomial & mechanistic models); brief introduction to more advanced topics & combining methods (e.g., generalised linear mixed effects, nonlinear mixed effects, and zero-inflated and zero-altered models). Packages: {nlsTools} Email oliverhooker@prstatistics.com Check out our sister sites,www.PRstatistics.com (Ecology and Life Sciences) www.PRinformatics.com (Bioinformatics and data science)www.PSstatistics.com (Behaviour and cognition) 1. November 26th ' 30th 2018FUNCTIONAL ECOLOGY FROM ORGANISM TO ECOSYSTEM: THEORY AND COMPUTATION (FEER01)Glasgow, Scotland, Dr. Francesco de Bello, Dr. Lars GÃÂ, Dr. Carlos Carmona http://www.prstatistics.com/course/functional-ecology-from-organism-to-ecosystem-theory-and-computation-feer01/ 2. December 3rd ' 7th 2018INTRODUCTION TO BAYESIAN DATA ANALYSIS FOR SOCIAL AND BEHAVIOURAL SCIENCES USING R AND STAN (BDRS01)Glasgow, Dr. Mark Andrews https://www.psstatistics.com/course/introduction-to-bayesian-data-analysis-for-social-and-behavioural-sciences-using-r-and-stan-bdrs01/ 3. January 21st ' 25th 2019STATISTICAL MODELLING OF TIME-TO-EVENT DATA USING SURVIVAL ANALYSIS: AN INTRODUCTION FOR ANIMAL BEHAVIOURISTS, ECOLOGISTS AND EVOLUTIONARY BIOLOGISTS (TTED01)Glasgow, Scotland, Dr. Will Hoppitt https://www.psstatistics.com/course/statistical-modelling-of-time-to-event-data-using-survival-analysis-tted01/ 4. January 21st ' 25th 2019ADVANCING IN STATISTICAL MODELLING USING R (ADVR08)Glasgow, Scotland, Dr. Luc Bussiere, Dr. Tom Houslay http://www.prstatistics.com/course/advancing-statistical-modelling-using-r-advr08/ 5. January 28th' February 1st 2019AQUATIC ACOUSTIC TELEMETRY DATA ANALYSIS AND SURVEY DESIGNGlasgow, Scotland, VEMCO staff and affiliates https://www.prstatistics.com/course/aquatic-acoustic-telemetry-data-analysis-atda01/ 6. February 4th ' 8th 2019DESIGNING RELIABLE AND EFFICIENT EXPERIMENTS FOR SOCIAL SCIENCES (DRES01) Glasgow, Scotland, Dr. Daniel Lakens

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UK PopulationGenetics Feb11-15

Population genetics using R (adegent, ade4) (RDPG02)

https://www.prstatistics.com/course/reproducible-data-science-for-population-genetics-rdpg02/ This course will be delivered by Dr Thibaut Jombart and Dr Zhian Kamvar form the 11th - 15th February 2019 in Glasgow City Centre.

Course Overview: With the increasing availability of various types of genetic and genomic data, population genetics and molecular ecology are becoming largely data driven sciences. Understanding the evolutionary, demographic, and ecological underpinning the genetic makeup of natural populations now relies on a combination of exploratory approaches and models. This course will provide an in-depth introduction to these techniques, with a strong emphasis on reproducibility though the use of modern analytic practices and tools. After an introduction to phylogenetic reconstruction, the course will cover a number of multivariate approaches for the analysis of genetic patterns, including supervised and unsupervised factorial methods, clustering approaches, and advanced methods for describing population diversity and revealing spatial genetic patterns. The approaches introduced will be applicable to most genetic data, including markers such as microsatellites, SNPs, or AFLP, as well as nucleotide and amino-acid

sequence data. Every day will start with a lecture dedicated to a type of problem and methods, followed by an introduction to a specific technique for reproducible data analysis; afternoon will be devoted to hands on praticals. The last day will be devoted to open problems, where participants will be able to analyse their own data.

Course programme: Monday 11th ' Classes from 09:30 to 17:30 Intro to phylogenetic reconstruction Module 1a: reconstructing phylogenies from genetic sequence data. Three main approaches covered: distance-based phylogenies; maximum parsimony; and likelihood-based approaches. Module 1b: reproducible data science using R: an introduction Practical 1: phylogenetic reconstruction using R. Three main approaches plus rooting a tree; assessing/testing for a molecular clock; and bootstrapping. Main packages: knitr, ape, phangorn. Tuesday 12th ' Classes from 09:30 to 17:30 Introduction to multivariate analysis of genetic data Module 2a: key concepts in multivariate analysis. Focus on using factorial methods for genetic data analysis. Module 2b: using R to generate high-quality pdf or word documents. Practical 2: multivariate analysis of genetic data in R. Topics include: data handling, Hardy-Weinberg tests, measures of diversity, tests of population structure, principal component analysis (PCA), multidimensional scaling (MDS). Main packages: knitr, rmarkdown, adegenet, ade4, pegasa, hierfstat, ape. Wednesday 13th ' Classes from 09:30 to 17:30 Exploring group diversity Module 3a: approaches for identifying and describing genetic clusters. Topics include: hierarchical clustering, K-means, genetic distances between populations, supervised factorial methods including between-group PCA and the Discriminant Analysis of Principal Components (DAPC). Module 3b: using R to generate beamer and html5 slides. Practical 3: applying the approaches covered in morning lecture and emphasising their strengths and weaknesses. Main packages: rmarkdown, adegenet, ade4, hierfstat. Thursday 14th ' Classes from 09:30 to 17:30 Spatial genetic structures Module 4a: on the origins of spatial genetic patterns, how to test for them, and how to reveal and visualise them. Module 4b: asking questions the right way with reproducible code. Practical 4: visualising and analysing spatial genetic data. Topics: spatial density estimates, univariate and multivariate tests of spatial structure (Moran and Mantel tests), mapping principal components from unsupervised methods (PCA), spatial PCA. Main packages: reprex, adegenet, spdep, ade4. Friday 15th ' Classes from 09:30 to 16:00 Reproducible data science for population genetics in practice Open problem day ' analyse your own data using R Main packages: knitr, rmarkdown, adegenet, ade4, ape, pegas, phangorn, hierfstat, poppr, ggplot2, etc. Email oliverhooker@prstatistics.com Check out our sister sites, www.PRstatistics.com (Ecology and Life Sciences) www.PRinformatics.com (Bioinformatics and data science) www.PSstatistics.com (Behaviour and cognition) 1. November 26th ' 30th 2018 FUNCTIONAL ECOLOGY FROM ORGANISM TO ECOSYSTEM: THEORY AND COMPUTATION (FEER01) Glasgow, Scotland, Dr. Francesco de Bello, Dr. Lars Götzenberger, Dr. Carlos Carmona http://www.prstatistics.com/course/functional-ecology-from-organism-to-ecosystem-theory-and-computation-feer01/2 .

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ULeipzig FUBerlin Programming-ForEvolutionaryBiology

Course on Programming for Evolutionary Biology

When: March 12th - March 28th 2019

Location: Berlin, Germany

Application deadline: December 31st 2018

Detailed information about the course content and how to apply: http://evop.bioinf.uni-leipzig.de/ In this intensive 17 days course, students will learn how to survive in a Linux environment, get hands-on experience in two widely used programming languages (Python and R), and statistical data analysis. The classes will be given by experts in the field and consist of lectures and exercises with the computer. The aim of the course is to provide the students with the necessary background and skills to perform computational analyses with a focus on solving research questions related to genomics and evolution. The philosophy of the course will be “learning by doing”, which means that the computational skills will be taught using examples and real data from evolutionary biology for the exercises. During the course, students will also propose projects of their own interest and perform them as final projects in small groups under the supervision of a teaching assistant. This summer school is open for students from all countries and targeted toward PhD students and postdocs of evolutionary biology or related

research fields with no or little programming experience who want to become proficient in computational evolutionary biology in a couple of weeks.

The course takes place at the Free University of Berlin.

– Dr. Katja Nowick Professorin für Humanbiologie

Freie Universität Berlin Institut für Zoologie Königin-Luise-Straße 1-3 14195 Berlin

Phone: +49 30 83863761

Katja Nowick <katja.nowick@fu-berlin.de>

USheffield UK PopulationGenomics Feb26-28

POPULATION GENOMICS WORKSHOP 26-28th February 2019 University of Sheffield, UK. This course will be held at the NERC Biomolecular Analysis Facility at the University of Sheffield and introduce participants to a variety of population genomics analyses for large next generation sequencing (NGS) datasets. It will include discussion on single nucleotide polymorphism (SNP) calling and filtering options, an introduction to population genomics statistics using the PopGenome R package, examining genetic structure, Fst-based analyses such as outlier detection/genomic islands of divergence, and genome-wide association analysis (GWAS). The majority of the course will comprise practical computer sessions, giving participants hands-on experience in these analyses. We will perform these on the high performance computing cluster at Sheffield and computers will be provided. Prior experience with the Linux environment and basic command line tools would be advantageous. There is no charge for the course, and successful applicants will be provided with accommodation for two nights and up to £100 towards travel costs to Sheffield. The application closing deadline is at 5pm on Monday 14th January 2019. Further details and how to apply can be found at: http://bit.ly/2ffk8L5 < https://t.umblr.com/-redirect?z=http%3A%2F%2Fbit.ly%2F2ffk8L5&t=-ZWJjNTMwMzcxYWFmMjQzMWM4ZWY5MmJiNzZiYWJlNzdhMzI
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http%3A%2F%2Fevoldir.tumblr.com%2Fpost%2F168215518276%2Fwo
usheffieldukpopul&m=1 > Katy Maher

Kathryn Maher <kathryn.maher@sheffield.ac.uk>

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 notifcation 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 LaTeX files, Excel files, etc. . . . plain old ASCII will work great and can be read by everyone. Add a subject header that contains the correct category "Conference:, Graduate position:, Job:, Other:, Postdoc:, Workshop:" and then the message stands a better chance of being correctly parsed. Note that the colon is mandatory.

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

Afterword

This program is an attempt to automatically process a broad variety of e-mail messages. Most preformating 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 LaTeX do not try to embed LaTeX or TeX in your message (or other formats) since my program will strip these from the message.