E v o l D i r

July 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

ArizonaStateU NonHumanPrimates Nov13-15

Non-human primates V Novel insights into evolution and medicine

Date: November 13-15th, 2019 Location: Arizona State University, Tempe (AZ), USA

Join us on November 13-15th 2019 at Arizona State University's Center for Evolution and Medicine for the "Non-human primates V Novel insights into evolution and medicine" meeting.

Keynote Speakers: * Karen Bales, University of California, Davis * Evan Eichler, University of Washington * Katie Hinde, Arizona State University * Susanne Pfeifer, Arizona State University * Jeff Rogers, Baylor College of Medicine * Anne Stone, Arizona State University * Jeff Wall, University of California, San Francisco * Anne Yoder, Duke University

Organizers: * Susanne Pfeifer, Arizona State University * Anne Stone, Arizona State University

Registration: Registration is free of charge but mandatory. Breakfast, lunch, and coffee will be provided during the meeting. The meeting is limited to 50 participants and priority will be given to those presenting their work at the meeting. The abstract submission deadline is August 31st 2019.

For more information, to apply, and/or to submit an abstract, please visit http://spfeiferlab.org/nhp-meeting/ — Susanne P. Pfeifer Assistant Professor Arizona State University School of Life Sciences

Susanne Pfeifer <spfeife1@asu.edu>

Austin Texas DragonflyEvolution Jul14-19

2019 International Congress of Odonatology

For the first time since 1999, the International Congress of Odonatology will be held in the United States. This is a great opportunity to engage with researchers from around world studying Odonata. The 2019 ICO will be held in Austin, Texas in the southern US from July 14-19th. Austin is a great destination for dragonflies and damselflies with 116 species known from the Austin area and 245 species in Texas! The Sunday night icebreaker and all the meetings will take place in downtown Austin on Lady Bird Lake at the 2nd floor of the Palmer Event Center. On Wednesday night, our Congress Dinner will take place within walking distance from the Palmer Event Center, on boats touring Lady Bird Lake where we'll watch the famous Mexican free-tailed bats emerge from the Congress Street Bridge, the largest urban bat colony in the world.

To make cost more flexible, the mid-conference trip will now be an optional Friday local field trip. We will take you to some of the hotspots for dragonflies in the Austin area. The post-congress trip will travel to the Rio Grande Valley in south Texas to see some of the Neotropical fauna that just makes it into the United States.

Additional details are available on the congress website, https://worlddragonfly.org/meetings/ico2019/. Topics likely on the program will include: Odonata Without Borders, Los Odonatos de Mxico, Natural History of Odonata, Odonate Conservation, Citizen Science as a Tool for Odonate research and Outreach, Identification of Nymphs and digitizing collections.

For more details contact John Abbott <jabbott1@ua.edu>.

Jessica Ware <jware42@newark.rutgers.edu>

Brisbane Qld QuantitativeGenetics Jun14-19

The 6th International Conference of Quantitative Genetics (ICQG6) will bring together leading academics, industry scientists, and postgraduate students in human health, agriculture, and evolutionary genetics from across the world to present and discuss state-of-the-art results, theoretical developments and new methodologies with application across a broad range of both species and traits.

The ICQG holds a unique niche in the conference circuit, uniting researchers by methodology. It has a great history of providing a fertile ground for transfer of ideas across traditional barriers. It is supported by a substantial loyal core of international delegates.

In 2020 ICQG6 will be held on 14-19 June at the Brisbane Convention and Exhibition Centre, in Brisbane, Australia.

Call for abstracts opening 17 June 2019.

ICQG6 2020 invites abstract submissions for oral and poster presentations. Submissions are encouraged across a wide range of themes of relevance to Quantitative Genetics and can be made via the Abstract Submission Portal.

Abstract submissions are invited for the below Conference themes;

Methodology Livestock Plants Model species Human Cells and Vomics G x E (genotype by environment) Evolutionary genetics and natural populations

Call for abstracts close Friday 4 October 2019, 11:59pm AEST. Read more about ICQG6 Registration opening 17 June 2019

Registration for ICQG 6 will be opening on 17 June 2019. See below the registration rates.

Early Bird Rate Until 31 January 2020 Standard Rate from 1 February 2020 Full Registration - Academic $950 $1,200 Full Registration - Industry $1,200 $1,500 Full Registration - Student* $700 $950

Meet a few of our keynote speakers

Yaniv Ehrlich Chief Science Officer, MyHeritage.com, Associate Professor of Computer Science and Computational Biology, Columbia University Yaniv Erlich is the Chief Science Officer of MyHeritage.com and an Associate Professor of Computer Science and Computational Biology. He is currently working on statistical genetics at scale using direct to consumer genomics.

Anne Charmantier Centre dEcologie Fonctionnelle et Evolutive (CNRS, UMR 5175, Montpellier, France) Anne Charmantier is an evolutionary ecologist interested in between-individual variation of life-history, morphological, and behavioural traits in natural populations. She holds a senior CNRS position in the Centre dEcologie Fonctionnelle et Evolutive (CNRS, UMR 5175, Montpellier, France). Her main research interests are focused on understanding the mechanisms involved in the evolution of adaptive traits, especially in a context of climate change and urbanisation.

Ed Buckler USDA-ARS Crop Geneticist, Cornell University Ed Buckler is a USDA-ARS crop geneticist based at Cornell University campus. Eds research focusses on developing genomic, statistical, and bioinformatic meth-

ods with applications in maize and other crops. Key questions are: How does genetic variation give rise to phenotypic variation?; How can we use genetics to make agriculture more efficient and share those efficiencies globally?; How can we reduce the impact of agriculture on the environment?

https://icqg6.org/invited-speakers/ Mark your diaries with these key dates

Call for abstracts opens Monday 17 June 2019 Call for abstracts close Friday 4 October 2019, 11:59pm AEST Notification to authors Monday 2 December 2019 Conference registration opens Monday 17 June 2019 Early bird registration closes Friday 31 January 2020, 11:59pm AEST ICQG 6 2020 14 - 19 June 2020

Express your interest

To register your interest, complete the expression of interest form, https://icqg6.org/mailing-list/, to be added to our mailing list. You will receive the latest updates and news about ICQG 6 as they become available.

Got questions? Get in touch with us

Conference manager The University of Queensland Robyn Evans ICQG6 Manager Institute for Molecular Bioscience Brisbane QLD 4072 Ph: +61 (0) 450 152 866 Email: icqg6@uq.edu.au

Registration & Accommodation Jemma Hampel Conference secretariat ICMS Australasia Delegate Services PO Box 3599 Brisbane QLD 4101 Ph: +61 (0) 7 3255 1002 Email: registration@icqg6.org

Sponsorship & Exhibition Andrea OSullivan Conference secretariat ICMS Australasia Sponsorship & Exhibition PO Box 3599 Brisbane QLD 4101 Ph: +61 (0) 7 3255 1002 Email: sponsorship@icqg6.org

s.chenoweth@uq.edu.au

Cambridge UK EvolutionaryChange Sep24-26

Registration is still open for Mechanisms and Evolution of Intergenerational Change, September 24-26, 2019, Wellcome Genome Campus, UK. https://-dmtrk.net/2SUU-V5PW-DA6U86R3F7/cr.aspx A LIMITED NUMBER OF BURSARIES ARE AVAILABLE FOR PHD STUDENTS. Those applications are due Friday, June 21 at 5pm.

Recent observations strongly suggest that changes in maternal stress signalling can lead to altered development in offspring and changes in offspring physiology across evolutionary lineages. In mammals, studies suggest that maternal exposure to environmental stress during pregnancy can lead to an increased risk of a variety of pathologies in later life including diabetes, cardiovascular disease, depression and anxiety.

This new conference will bring together scientists working on foetal programming and developmental origins of health and disease in humans and animals, with ecologists and evolutionary biologists, to compare and contrast mechanisms of intergenerational change in diverse organisms, to help us understand how the maternal environment contributes to developmental programming and disease susceptibility.

Scientific sessions include: Evolutionary modelling of intergenerational effects Evolutionary models of intergenerational change in plants Evolutionary models of intergenerational change in vertebrates and invertebrates Foetal programming models in mammals Foetal programming in humans

Keynote speakers: Pat Monaghan, University of Glasgow, UK Kent Thornburg, University of Oregon, USA

Confirmed speakers: Tracy Bale ' University of Maryland, USA Ryan Baugh ' Duke University, USA Kathleen Donohue ' Duke University, USA Anne Ferguson-Smith ' University of Cambridge, UK Dino Giussani ' University of Cambridge, UK Bram Kuijper ' University of Exeter, UK Cris Ledon-Rettig ' Indiana University, USA Kirsty MacLeod ' University of Lund, Sweden Susan Ozanne ' University of Cambridge,UK Andrew Pospisilik ' Max Planck Institute of Immunobiology and Epigenetics, Germany Tessa Roseboom ' University of Amsterdam, The Netherlands Karen Spencer ' University of St. Andrews, UK Tobias Uller ' University of Lund, Sweden Jurriaan Ton ' University of Sheffield, UK

"Brisson, Jennifer" <jbrisso3@UR.Rochester.edu>

Debrecen Hungary Reproductive Strategies Nov7-10

REGISTRATION IS NOW OPEN

Reproductive strategies in the 21st Century: The Official Symposium of University of Debrecen, Hungary, 7-9 November 2019 Dear Colleagues, we are delighted to announce that the registration is now open, see

http://konferencia.unideb.hu/en/node/304 IMPORTANT DATES

Early bird registration deadline 31 July 2019

Abstract submission deadline 20 August 2019

Regular registration deadline 30 September 2019

Symposium 7-9 November 2019

FURTHER DETAILS

To celebrate 30 years of research on reproductive strategies of plants and animals at the University of Debrecen (Hungary), we will host a three-day international symposium in November 2019. The Symposium will start with a welcome reception in the University Aula at 7 pm on Thursday 7 November 2019.

The Symposium will provide a forum for researchers of reproductive behaviour of microbes, plants and animals including humans to consider the current state of science and where the field is going. World-leading speakers will overview their recent research and address the future challenges facing the field. The conference will close on Sunday 10 November with an optional excursion to nearby Hortobagy National Park, an UNESCO World Heritage Site.

The Symposium will be opened by Profs Rosemary and Peter Grant (Princeton), and followed by plenary speakers that will include Prof. Hans Hoffmann (University of Texas, Austin), Prof. Ruth Mace (University College London), Prof. Ran Nathan (Hebrew University of Jerusalem) and Dr Beata Oborny (Eotvos Lorand University, Budapest).

Speakers will cover various aspects of reproductive strategies using cutting-edge research in life histories, neuro-genomics, population demography, sexual dimorphism, mating systems and parenting, dispersal and biodiversity conservation. Keynote speakers will include Prof. Andy J. Green (Estacion Biologica de Donana, Sevilla), Prof. Zoltan Barta (University of Debrecen), Prof. Michaela Hau (Max-Planck-Institute for Ornithology, Seewiesen), Prof. Ferenc Jordan (Hungarian Academy of Sciences, Budapest), Prof. Andras Liker (University of Pannonia, Veszprem), Prof. Szabolcs Lengyel (Hungarian Academy of Sciences, Debrecen), Dr. Araxi Urrutia (University of Bath) and Prof. Bela Tothmeresz (University of Debrecen).

To facilitate the attendance of young scientists and to widen participation, costs will be kept at minimum. Debrecen is a one of the top tourist destinations in Hungary with an international airport that has direct flights to several major European destinations. The city has a large international student community and offers an excellent selection of hotels, restaurants and sightseeing facilities.

For further information please contact reproductive.strategies2019@gmail.com

We hope to see you in Debrecen. Please note the symposium will only accommodate 120 participants, so we recommend early registration.

Dr Orsolya Valko (University of Debrecen, valko.orsolya@science.unideb.hu)

Dr Zoltan Nemeth (University of Debrecen, nemeth-zoltan@science.unideb.hu)

Prof Tamas Szekely (University of Bath & Debrecen, T.Szekely@bath.ac.uk)

The Symposium is sponsored by the University of Debrecen, the Hungarian Academy of Sciences, and the ELVONAL program of Hungarian Science and Innovation Agency

bssts@bath.ac.uk

Edinburgh SpeciesDiversityInTelomereDynamics Oct28-31

Workshop on diversity in telomere dynamics - Edinburgh - 28th to 31st Oct 2019

Organised by Pat Monaghan (University of Glasgow) & Dan Nussey (University of Edinburgh).

Registrations open for a workshop on diversity in telomere dynamics - an international, multi-disciplinary workshop (limited to 70 attendants) focussing on the causes and consequences of variation in telomere length across species. This is the sixth such workshop we have run - and registration has been open for a few weeks and spaces are filling up fast.

The dates for the workshop will be Monday 28th October (evening arrival) - Thursday 31st October 2019 (morning departure). It will be held at the the Best Western Kings Manor Hotel, Edinburgh. There are no registration fees - but the cost to attend (which includes accommodation for 3 nights plus breakfast, lunch and dinner) is £405 per person.

At this stage, we would like to invite you to register for the workshop, to ensure your space, through this link: https://-telomeredynamicsworkshop2019.eventbrite.co.uk
For further info, contact Dan (dan.nussey@ed.ac.uk)

The University of Edinburgh is a charitable body, registered in Scotland, with registration number SC005336.

Dan Nussey <dnussey@exseed.ed.ac.uk>

FrancisCrickInst London PhysicsofEvolution Jul8-10 Deadline

Dear All,

Deadline for registration and abstract submission is approaching soon for the Physics of Life network workshop exploring the "The Physics of Evolution".

The aim of this workshop is to bring together physicists, biologists and experimentalists working on different aspects of evolution to explore new avenues and approaches that physics can bring to our understanding of evolution.

It will take place on 8-10 July 2019 at the Francis Crick Institute, London.

Abstract submission deadline: 12 June (contributed talks and posters)

Registration fee: pounds 110 (includes lunches and refreshments)

Registration deadline: 19 June

Register here: www.physicsoflife.org.uk/the-physics-of-evolution.html Themes: (with confirmed invited speakers)

Evolution of pathogens and cancer Rosalind Allen, University of Edinburgh Jamie Blundell, University of Cambridge ' "The Evolutionary Dynamics and Fitness Landscape of Somatic Mutations in our Blood"

Emergence in genotype-phenotype maps Paulien Hogeweg, Utrecht University

Non-equilibrium statistical physics of evolution: analogies and beyond

Susanne Still, University of Hawaii ' "Thermodynamics of adaptive information processing"

Experimental evolution Santiago Elena, Universitat de València & Santa Fe Institute ' "Experimental evolution of RNA viruses in fluctuating fitness landscapes"

Regards,

Bhavin Khatri (bhavin.khatri@crick.ac.uk) Ard Louis Tom McLeish FRS

Dr Bhavin S Khatri Research Fellow in Statistical Genomics Dept of Life Sciences Imperial College London Silwood Park Campus Ascot, Berks SL5 7PY

http://bhavkhatri.io The Francis Crick Institute Limited is a registered charity in England and Wales no. 1140062 and a company registered in England and Wales no. 06885462, with its registered office at 1 Midland Road London NW1 1AT

Bhavin Khatri <Bhavin.Khatri@crick.ac.uk>

Helsinki TreeSelection Jul19-24

We would like to invite submissions to our symposium held during the International Congress of Entomology (ICE 2020) from July 19th - 24th, 2020 in Helsinki, Finland, entitled, *"Exploiting host-location behaviors and host-plant resistance to manage invasive woodborers".*

International trade has increased the rate at which woodboring insects are being introduced into novel habitats. The lack of coevolutionary history with potential host plants, and escape from natural enemies has caused these non-native insects to become ecological and economic threats in their new ranges. Identifying patterns in host-location behaviors by woodborers and their natural enemies, as well as within mechanisms of resistance by these plants to attackers, can lead to management practices that reduce the success of colonization and increase mortality of woodborers in novel habitats.

The goal of this symposium is to spur discussion regarding the theory and application of maintaining robust populations of trees that are resistant to attack by woodboring beetles. This task requires crosstalk among researchers that study host location by woodborers and their natural enemies, as well as those that study plant defense, ultimately leading to the selection of populations of trees that minimize damage and reduce the likelihood of outbreaks of woodboring beetles. We are looking for researchers that are currently conducting research in these topic areas to present and provide further insights.

Topics of interest include:

-Theoretical or synthetic presentations on: plant defense against woodboring insects and host-location by natural enemies

-Host selection cues used by woodborers and their natural enemies, including but not limited to: cues that are chemical, visual, and tactile

-Mechanisms of resistance used by host trees: antibiosis, antixenosis, and/or tolerance

-Patterns in coevolved resistant traits and lack of those mechanisms in novel hosts

If you are interested or have any questions, please feel free to reach out to either of us:

Todd Johnson (sttdj01@gmail.com) and Donnie Peterson (peterson.143@wright.edu)

Submissions to the symposium can be submitted through this link: https://submit.peerageofscience.org/-conference/ICE_2020/109384 More information about the conference can be found here: https://-ice2020helsinki.fi/ Todd D. Johnson Postdoctoral Research Associate | Garnas lab Department of Natural Resources and the Environment University of New Hampshire Website < http://-www.forestentomology.com > | Google scholar < http:/-/scholar.google.com/citations?userÃd1I70AAAAJ&hl=-en > Sttdj01@gmail.com (610) 984-5636

Todd Johnson <sttdj01@gmail.com>

Lisbon PrimateEvolution Oct9-11

DEADLINE FOR ABSTRACT SUBMISSION EXTENDED TO 1ST OF JULY 2019!

7th Iberian Primatological Conference - "Empathy, Education and Conservation: Primates in a shared world"

Lisbon, Portugal, Sociedade de Geografia de Lisboa/Geographical Society of Lisbon (SGL) < http://-www.socgeografialisboa.pt/en/ >

9th to 11th October 2019 (from Wednesday to Friday).

Website: https://7cip.apprimatologia.pt During the 7th edition of the Iberian Primatological Conference, the Associaçao Portuguesa de Primatologia (APP) < https://apprimatologia.pt/ > is responsible for organizing and hosting the congress in straight co-operation with the Asociacion Primatologica Española (APE) < https://www.apespain.org/ >. This joint effort will combine the 7th Portuguese Primatology Conference (APP) with the 12th Congress of APE. This join conference aims to build a strong scientific bridge between the Portuguese and the Spanish primatologists by establishing network contacts and hopefully engaging researches, from both countries, in co-operative research activities. In spite of the name of the conference, other primatologists from all over the world are more than welcome to join us. More bridges can and should be created. Invited Speakers

Katherine Abernethy, University of Stirling, UK Inza Koné, CSRS (Centre Suisse de Recherches Scientifiques en Côte d'Ivore) Michael A. Huffman, Primate Research Institute, Kyoto University, Japan Conference official language

English is proposed as the conference language. All oral and poster communications must be presented in English, and abstracts must be submitted in English also.

Best wishes and hope to see some of you in Lisbon!

The organizing committee

Tânia Minhos <taniaminhos@gmail.com>

Madrid CichlidEvolution Sep9-12

Cichlid Science 2019- Madrid

Dear colleagues, The 6th Cichlid Science meeting will take place from September 9-12 at the Botanical Garden in Madrid, Spain.

The main goal of the meeting is to bring together scientists from various research fields studying cichlid fishes. Researchers from related fields are encouraged to participate.

The previous meetings in Basel (2010), Leuven (2012), Bangor (2013), Graz (2015) and Prague (2017), included different lines of research of the cichlid biology such as speciation, adaptive evolution, behavioural and parasitology research. We hope to continue the tradition and extend our knowledge adding more topics of research.

Confirmed speaker are:

*Sylvie Retaux (Paris Institute of Neuroscience, Paris, France)

*Christophe Eizaguirre (Queen Mary University, London, UK)

*Gerardo Pérez Ponce de Leon (UNAM, Mexico City, Mexico)

*Zuzana Musilová (Charles University, Prague, Czech Republic)

The deadline for abstract submission is July 1st. The general registration fee is 200 €and 150 €for students.

Registration and further information are available at

https://cichlidscience2019.es/ . The organizers look forward to welcoming you in Madrid!

Sincerely,

Mariana Leal Cardín Carlos Lozano Ana Santacruz Marta Barluenga

cichlidscience@mncn.csic.es

CICHLIDSCIENCE MNCN <cichlidscience@mncn.csic.es>

Malawi SMBE EvolGenomics Sep18-22

Abstract deadline approaching for the

SMBE Meeting - Evolutionary genomics at the human-environment interface Malawi, Africa September 18-22, 2019.

https://smbe-malawi.org/ Register now. Travel awards for African researchers available.

Keynote speakers

Alex Cagan, Wellcome Sanger Institute Anne Charmantier, University of Montpellier Richard Durbin, University of Cambridge Sophie van der Heyden, University of Stellenbosch Cyprian Katongo, University of Zambia Peter Visscher, University of Queensland Naomi Wray, University of Queensland

Topics

- Genomics of invasive or alien species - Genomics of hybridization and introgression - Selection and adaptation - Population genetic inference - Meta-genomics - Genomics and resource management - The future of conservation genetics in Africa

Register now at https://smbe-malawi.org/ Abstract Deadline: June 30, 2019

Registration fee: — 50/250 USD per person for African/international researchers

Travel grants available at https://smbe-malawi.org/ For the organising committee, Hannes Svardal

– Hannes Svardal Research Professor in Evolutionary, Ecological and Environmental Omics Department of Biology University of Antwerp

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

Marseilles 23rdEvolutionaryBiology DLSundayJun30

23rd evolutionary biology meeting at Marseilles September : 24-27 2019

The registration dead line is the 30 of June(Sunday) 12 PM

see aeeb.fr

the first accepted abstracts list and the previous years programs are available

web : aeeb.fr twitter :EvolBiolMeetingMarseilles best regards

Pierre

< https://twitter.com/pontarotti >

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

Marseilles EvolBiology FirstAcceptedAbstracts

The list of the first accepted abstracts (23rd evolutionary biology meeting “at” Marseilles) are available see aeeb.fr

the registration DL is the end of june

Pierre web : aeeb.fr twitter :EvolBiolMeetingMarseilles

< https://twitter.com/pontarotti >

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

Miami EvoDevo2019 RegistrationExtendedTo22June

EvoDevoPanAm 3rd Biennial Meeting **Registration Extended to 22 June**

Don't miss the opportunity to share your research with the community, as a part of the 3rd Biennial Meeting of the Pan-American Society for Evolutionary Developmental Biology. We will meet 30 July to 2 August 2019, on the campus of the **University of Miami**, Coral Gables campus, in Florida, USA.

Register Today at http://www.evodevopanam.org/3rd-biennial-meeting.html Confirmed speakers include Kim Cooper, Chi-Hua Chiu, Karen Crow, Scott Gilbert, Tiana Kohlsdorf, Manfred Laubichler, Vincent Lynch, Patricia Schneider, Prashant Sharma, Karen Sears, Ralf J. Sommer, Rajendhran Rajakumar, Alexander Vargas, and Yaowu Yuan. The meeting will feature a symposium honoring G'nter Wagner, ºThe Journal of Experimental Zoology (JEZ) and its role in the birth of Devo-Evo±. Additional speakers will be selected from submitted abstracts, so don't miss the submission deadline!

Financial support is available for students, postdocs, junior faculty and those traveling from Latin America. Look for the check box to request support when you register!

Lodging options include on-campus housing with a meal plan and a variety of discounted local hotels. Details are available on the meeting website.

Please visit our website at www.evodevopanam.org where you can join EvoDevoPanAm and register for the meeting in Miami.

Stay tuned for additional program details!

We look forward to seeing you in Miami! - The PASEDB Executive Council

Dave Angelini <david.r.angelini@gmail.com>

Padova ItalianSocEvolBiol Jun15 Deadline

Few days left to submit an abstract for the 8th Congress of the Italian Society for Evolutionary Biology (ISEB) that will be organized by the Department of Biology of the University of Padova on 1-4 September 2019.

DEADLINE: 15 June 2019

The congress will be hosted in two wonderful locations of the University of Padova: the historical Botanical Garden, the most ancient botanical garden in the world and UNESCO world heritage, and the $B!F(BGalileo Galilei' Main Hall of the XVI century Palazzo Bo.

Six symposia, encompassing many different fields in evolutionary biology and with eminent invited speakers, may host your contribution:

1) Units of diversity: tools, strategies and case-studies to define species limits. Invited speaker: Birgit Schlick-Steiner (University of Innsbruck, Austria)

2) Evolution in marine environments. Invited speaker: Lloyd Peck (British Antarctic Survey, Cambridge, UK)

3) Social behaviour: ecology and evolution. Invited speaker: Daniela Campobello (University of Palermo, Italy)

4) Conservation and evolution. Invited speaker: Christopher Clements (University of Bristol, UK)

5) Phylo3: Phylogenetics, Phylogenomics & Phylogeography. Invited speaker: Daniele Silvestro (University of Gothenburg, Sweden and University of Lausanne, CH)

6) Population genetics and population genomics (organized in partnership with the Italian Anthropological Association on September 4th) Invited speaker: Montgomery Slatkin (University of California at Berkeley, CA, USA)

Participants who want to present studies on topics that do not fall within the themed symposia are also welcome.

$B!D(Band of course you can't miss the rich and surprising programme of social events!

Please, visit SIBE 2019 website https://sibe2019.sibe-iseb.it for all detailed information about the Congress and to register.

Looking forward to seeing you in Padova,

Lisa Locatello on behalf of the Organising Committee

Lisa Locatello Department of Biology University of Padova <lisa.locatello@unipd.it>

Italian Society for Evolutionary Biology: www.sibe-iseb.it Lisa Locatello <lisa.locatello@unipd.it>

Rochester GLAMEvoGen May29

Save the date for the 2020 Great Lakes annual meeting in Evolutionary Genomics (GLAM-EvoGen).

Friday May 29, 2020 in Rochester, NY

Please pass this announcement on to anyone who would like to receive emails about next years meeting. You can add/remove your name from the email list

here < https://docs.google.com/spreadsheets/d/-1sdpuwXrh1Im6CN4EJHy9a5BekKwaf2nTRJMYL1-eLY4 > .

The first GLAM-evogen meeting at U. Buffalo this past May was well attended with 112 participants, including 10 oral presentations and 45 poster presentations.

We are looking forward to hosting the second meeting next summer,

Justin, Amanda & Nancy

–

Justin Fay Associate Professor Department of Biology University of Rochester 319 Hutchison Hall RC Box # 270211 Rochester, NY 14627-0211 585.275.2998

Justin Fay <fayjustin@gmail.com>

Roscoff France VirusEvolution Oct21-25 FinalDeadlineJun27

Dear all,

We have room for a few more registrations for the Jacques Monod Conference entitled “Virus evolution on the mutualist - parasite continuum” that will be held in Roscoff (Britany, France) on October 21-25, 2019.

Anyone wishing to attend the conference should register online by June 27th (GMT) here: https://cjm5-2019.sciencesconf.org/?forward-action=index&forward-controller=index&lang=en The list of invited speakers is the following:

Samuel Alizon (Montpellier, France), chairperson Raul Andino (San Francisco, USA) Megan Baldridge (St Louis, USA) Monsef Benkirane (Montpellier, France) Ignacio Bravo (Montpellier, France) Siobain Duffy (Rutgers, USA) Christophe Fraser (Oxford, United Kingdom) Fernando Garcia-Arenal (Madrid, Spain) Clement Gilbert (Gif-sur-Yvette, France) Katia Koelle (Emory, USA) Eugene Koonin (Bethesda, USA) Philippe Lemey (Louvain, Belgium) Alice McHardy (Helmholtz, Germany) Yannis Michalakis (Montpellier, France) Marie-Agnes Petit (Jouy-en-Josas, France) Gwenael Piganeau (Banyuls, France) Thomas Pradeu (Bordeaux, France) Andrew Read (Penn State, USA) Roland Regoes (Zurich, Switzerland) Marilyn Roossinck (Penn State, USA) Carla Saleh (Paris, France) Rafael Sanjuan (Valencia, Spain) Pauline Scanlan (Cork, Ireland) Manuela Sironi (Bosisio Parini, Italy) Paul Turner (Yale, USA), vice-chairperson Stineke van Houte (Exeter, UK) Anne-Nathalie Volkoff (Montpellier, France) Lena Wilfert (Ulm, Germany)

Please do not hesitate to circulate this announcement!

– Samuel Alizon

samuel.alizon@cnrs.fr

CNRS Research Director

MIVEGEC, CNRS, IRD, Université de Montpellier IRD, 911 Avenue Agropolis, BP 64501 34394 Montpellier Cedex 5, France

http://alizon.ouvaton.org/ Samuel Alizon <samuel.alizon@cnrs.fr>

SanFrancisco Biodiversity Dec9-13

AGU 2019 session: Putting ’Dark Matter’ Biodiversity on the Map

For those of you whose work sits at the intersection of molecules and morphology, please consider submitting an abstract to a session at the 2019 AGU meeting in San Francisco that GBIF and our partners are organizing.

Session B091. Putting ’Dark Matter’ Biodiversity on the Map: Crosslinking Metagenomics, Phylogenetics and Specimen Occurrence Data Infrastructures to Advance Scientific Understanding and Policy Relevance of Cryptic Biodiversity [1]

Many organisms like insects, prokaryotes, fungi and viruses, lack formal Linnaean scientific names, inhabiting a huge gap between described species and true global biodiversity. These ’dark taxa’ are essential to the biosphere, but limited knowledge of their distribution relegates them to the shadows of research and protection policies.

Advances in DNA sequencing and comparative data libraries enable observation and placement of such organisms into operational taxonomic units or directly in the tree of life without Linnaean names.

Collaboration between several international infrastructure networks is linking evidence used by biodiversity, phylogenetics and metagenomics research communities. This cross-disciplinary effort increases open biodiversity data on dark taxa, reduces data gaps and biases, and cost-effectively enhances the value of public infrastructure investments.

Combining this data with occurrences from collections, field surveys and citizen science will open unexplored research horizons, improve evidence for policy decisions, contribute toward biodiversity targets and increase scientific understanding of biodiversity.

Click here [2] to submit an abstract for oral or poster contributions to this session. At the top of the page, click the °Submit an abstract to this session± button [3] below the title.

Abstracts are due Wednesday, 31 July at 23:59 EDT.

The AGU Fall Meeting 2019 [4] will be held in San Francisco from 9-13 December 2019. Note that you must be a registered member of AGU to submit an abstract (learn more about joining AGU [5]).

All best, Kyle

Kyle Copas Communications Manager ORCID: 0000-0002-6590-599X

GBIF Secretariat Universitetsparken 15 DK-2100 Copenhagen Denmark +45 35 32 14 75 | mobile +45 28 75 14 75 | Skype kylecopas https://www.gbif.org

[1] https://agu.confex.com/agu/fm19/prelim.cgi/-Session/76715 [2] https://agu.confex.com/agu/fm19/-prelim.cgi/Session/76715 [3] https://agu.confex.com/-agu/fm19/b/papers/index.cgi?sessionidv715 [4] https://www2.agu.org/Fall-Meeting [5] https://-membership.agu.org/categories-dues/

Kyle Copas <kcopas@gbif.org>

Sydney AustralasianEvolSocConf Nov25-27

Sydney.AustralasianEvolSocConf.Nov25-27

The Evolution & Ecology Research Centre at the School of Biological, Earth and Environmental Sciences at UNSW will be hosting the Australasian Evolution Society conference this year. The meeting will be held on campus at the University of New South Wales from the 25th to the 27th of November, 2019.

Conference web page: http://ausevo.com/conference/ Registration and abstract submission opens June 17th, 2019

Abstract submissions close Aug 12th, 2019

New Research Awards are now open!

AES Student Research Award

The AES Student Research Award will be given in recognition of a single, significant research publication in evolutionary biology that forms part of the applicants Masters or PhD thesis and has been published in the last 2 years.

AES Early Career Researcher Award

The AES Early Career Researcher Award will be given to a researcher less than 5 years post-PhD who has shown substantive and significant contributions to evolutionary biology

Details for both awards are here: http:/-/ausevo.com/prizes/ Joanna Rutkowska <joanna.rutkowska@uj.edu.pl>

UEssex ChromatinAndEpigenetics Sep13

Dear colleague,

The registration for the — 'Chromatin and Epigenetics Symposium' is now OPEN. The meeting will be conducted in the University of Essex (Colchester, UK) on the 13th September, 2019. This one-day meeting follows a previous successful event run at Essex in 2017 (https:/-/gate.essex.ac.uk/2017). This year our workshop will cover all levels of epigenetic regulation in chromatin with a special focus on 3D genome organisation, co-organised by the Genomics and Computational Biology Group at the University of Essex and the COST action "International Nucleome Consortium".

The registration is FREE but mandatory.

We strongly encourage submissions of abstracts from PhD students and postdocs, as we aim to host contributed talks from scientists at different levels in their careers. We will also have a keynote talk by Julie Ahringer (Gurdon Institute, U. Cambridge) and three invited speakers: Sara Buonomo (U. Edinburgh), Nick Gilbert (MRC, Edinburgh) and Lars Jansen (U. Oxford). Our campus is located at Wivenhoe Park, close to Colchester (Essex), which is less than one hour away from Stansted Airport. If you require accommodation, there are plenty of options on campus or in town. For more information and registration please visit our webpage:

https://gate.essex.ac.uk/ Please share this information with your colleagues and/or anyone that may be interested.

Best regards from the organizing committee,

Antonio Marco Radu Zabet Patrick Varga-Weisz Vladimir Teif Leonard Schalkwyk

– Antonio Marco School of Biological Sciences University of Essex

Web: http://amarco.net Blog: http://-eblogution.wordpress.com Twitter: http://twitter.com/-amarcobio Antonio Marco <amarco.bio@gmail.com>

UJena EvolutionMicrobes

Conference

Pre-congress Symposium at the 112th Annual Meeting of the German Zoological Society (DZG)

Microbes as drivers of animal intra- and interspecific interactions

September 9-10, 2019 | University Jena, Germany

We are pleased to host a DZG pre-congress symposium on the role of microorganism in animal ecology to develop and discuss hypotheses of how animal traits evolve in response to interactions with both antagonistic and mutualistic pro- and eukaryote microbes. In particular, we are interested in contributions looking at the influence of animal-microbe interactions for the evolution of social behaviour and host-pathogen interactions.

For details see also a Special Issue in the Frontiers Journals on that topic: https://www.frontiersin.org/-research-topics/8528/microbial-drivers-of-sociality—from-multicellularity-to-animal-societies We invite both undergraduate and graduate students, PhD candidates, post docs, and professors to contribute an oral or poster presentation.

Key-note lectures are delivered by Dr. Heiko Vogel (MPI-CE Jena, DE), Prof. Joel Meunier (Université de Tours, FR), Prof. Dino McMahon (Free University Berlin, DE), Dr. Vienna Kowallik (Australian National University, AUS) and Dr. Christoph Kurze (University Halle, DE)

For further details, and to attend, visit: https://-dzg-meeting.de/de/symposia-workshops/microbes-as-drivers-of-animal-intra-and-interspecific-interactions/ Inquiries can be send to Peter Biedermann peter.biedermann@uni-wuerzburg.de or Marko Rohlfs rohlfs1@uni-bremen.de

Closing date for abstract submission is already on the 23rd of June.

Peter Biedermann <peter.biedermann@uni-wuerzburg.de>

GradStudentPositions

AMU Poznan EvolutionaryGenomics

The Evolutionary Biology Group is recruiting a PhD student for an NCN-funded project that will investigate genomic consequences of artificial introduction, population expansion and population replacement in the Trinidadian guppy. The successful candidate will take part in all parts of the project including sampling fish on Trinidad and Tobago and analyzing population genomic data.

BACKGROUND: A major aim in evolutionary biology is to quantify the effects that demographic history has had and can have on the patterns and dynamics of deleterious and adaptive variation. The project aims at validating theoretical predictions recently developed in this field, especially those related to population expansion and gene flow between species. To address these questions, we will perform large-scale genomic analyses of a population of guppies recently introduced into an area previously occupied only by its sister species. We will study how deleterious and adaptive variation shape the genomic landscape of introgression.

JOB DESCRIPTION: The PhD student will work in close collaboration with project leader (Mateusz Konczal) and a bioinformatician. There will be considerable flexibility in the scope of the students work within the overall main goals of the project. The student will learn simple molecular laboratory techniques, analyze population genomic data, perform population genomic simulations and will have the opportunity to go to Trinidad and Tobago to help local collaborators in sampling fish. S/he will be integrated in the vibrant, highly motivated international research team based at Adam Mickiewicz University in Poznan, Poland. For more information on the research group, see https://sites.google.com/site/-evobiolab/ REQUIREMENTS: The candidate should hold an MSc degree in biological sciences or computer sciences and should have a general interest in evolutionary biology. Experience with molecular lab techniques (specifically DNA extraction), programming and big data analyses are desirable though not required.

FINANCING: The position, starting from October 2019 (negotiable), is planned for three years with a stipend of PLN 4,500 (about 1,050 euro) per month. Extending this contract for extra two years will be possible with financing from local grant agencies.

HOW TO APPLY: Applications should include a letter with a short description of your research interests, CV, summary of MSc work and/or other relevant projects. Future information about the project and application procedure can be obtained from the project leader via email: matusz.konczal(a) amu.edu.pl.

Please apply before 20.08.2019

– Mateusz Konczal https://sites.google.com/site/-evobiolab/team/mateusz-konczal Mateusz Konczal <mateusz.konczal@gmail.com>

Barcelona EvolutionOfGeneNetworks

Graduate position: Barcelona Evolution of gene networks and the origins of organismal complexity.

1.Basic job and project description:

The position is the Autonomous University of Barcelona (UAB) and in the Centre de Recerca MatemÃ—tica (CRM). The CRM is in the UAB campus.

-The main project questions are:

How should gene networks and cell interactions be organized to lead to biological complexity?

How is such organization achieved in evolution?

How does gene network organization affect variational properties of the phenotype (e.g. evolvability)?

Any other question of the applicants interest that is related to the previous questions.

We will use computational models of the genotype-phenotype map and computational models of evolution by natural selection to study such questions for the case of organismic complexity (e.g. anatomy). The genotype-phenotype maps models we develop are based on realistic gene network models of pattern formation and morphogenesis that lead to realistic 3D multicellular phenotypes.

The position is in Salazar-Ciudad's group and it entails obtaining a PhD from the UAB.

2. Background of the project:

There is no consensus definition of complexity, yet it is evident that organisms are complex and explaining such complexity is one of the most fundamental questions of biology. Morphological complexity has not increased in the evolution of all lineages and, in general, it is unclear whether there is a general trend of increasing complexity in evolution. Yet, one may ask about the mechanisms by which such complexity has increased in the lineages where it has increased. How complexity increases during evolution is necessarily related to development: any evolutionary change in morphology is first a change in the development that produces such morphology.

It has been argued that, in spite of the remarkable morphological complexity of organisms, their development is achieved through a limited number of cell behaviors and types of cell interactions. These cell behaviors would be cell division, cell adhesion, cell death, cell growth, cell contraction, extracellular signal and matrix secretion, extracellular signal reception and cell differentiation. In addition to cell behaviors, development involves interactions between cells, either mechanical or through extracellular signalling.

The questions we want to approach in this study are: how should these interactions and cell behaviors be coordinated to produce complex and robust morphologies? The question is, then, whether there are some logical requirements that developmental mechanisms should fulfill in order to lead to complex robust morphologies. Are there, for example, some requirements at the level of gene network topology or at the level of cell behaviors and their coordination during development?

If, as suggested above, pattern transformations in development involve a limited set of cell behaviors and cell interactions, then any mathematical model implementing those and intracellular gene networks should be able to reproduce, to a large extent, the range of pattern transformations possible in animal development. In this project we will use one such model, EmbryoMaker (Marin-Riera et al, 2015)â —, to simulate a large number of possible developmental mechanisms and try to discover what, if anything, do the mechanisms leading to robust complex morphologies have in common.

3. Job description

The main tasks of the student include using and modifying existing models of embryonic development (e.g. EmbryoMaker) in order to simulate the development of complex morphologies. These models will be combined with models of evolution, in a population context with mutation, genetic drift and natural selection on morphology (see for example Salazar-Ciudad and Marin-Riera, 2013). he gene networks found to lead to the development of complex and robust phenotypes in evolution would be analyzed to extract general regularities, if any, these gene networks need to fulfill. The main tasks, thus, consist in simulation, theorizing, data analysis, coding, literature searching, writing and presenting results in conferences. We seek candidates highly motivated for theoretical work and data analysis with a broad understanding of the evolutionary theory and/or developmental biology and/or modeling.

4. Requirements:

- Candidates should have a University Degree and a Master's Degree in biology, physics or mathematics within the European Higher Education System (minimum 300 ECTS) or equivalent by September 2019.

-Scientific 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.

5. Salary and conditions:

-The salary would be the standard one graduate students in Spain. Barcelona is a vibrant, multicultural hub with a high quality of life and a thriving cultural scene.

— / —

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

BielefeldU AphidNicheConstruction

"PhD Position in Chemical Ecology of Niche Construction by Aphids

A PhD position (E 13 TVL, 65%) to study niche choice as well as niche construction by aphids is available in the group of Chemical Ecology (Biology) at Bielefeld University, starting in summer 2019. This project is related to the Collaborative Research Centre Transregio 212 "A Novel Synthesis of Individualisation across Behaviour, Ecology and Evolution: Niche Choice, Niche Conformance, Niche Construction (NC3)". The candidate will investigate this topic using chemo-ecological approaches including bioassays with aphids on plants as well as chemical analyses of plant phloem exudates. Apart from research, the candidate will also be involved in teaching and organisational tasks of the department. The position is available for three years.

We are seeking a bright and highly motivated PhD student with a keen interest in chemical ecology. A master or diploma in biology, environmental sciences or a related topic is a prerequisite. Knowledge in experiments with herbivores as well as a solid experience in statistics are required. Knowledge of chemical analytical techniques (LC-MS and/or GC-MS) and multivariate statistics (preferably with R!) would be ideal. The candidate should be able to work both independently and as member of a team. Fluent verbal and written English communication skills are required.

To apply, please provide (i) a letter of motivation including a statement of your research interest and research experience, (ii) a CV including publication list, (iii) copies of your degrees and (iv) 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 rabea.schweiger@uni-bielefeld.de until July 4th 2019. For further information on our group, please see https://www.uni-bielefeld.de/(en)/biologie/ChemOekologie/ or contact Rabea Schweiger (rabea.schweiger@uni-bielefeld.de) with any informal inquiries."

Thank you very much in advance.

Rabea Schweiger

Dr. Rabea Schweiger Department of Chemical Ecology, W2-121 Faculty of Biology Bielefeld University Universitätsstraße 25 D-33615 Bielefeld GERMANY Phone: +49 (0) 521 106 5636 Email: rabea.schweiger@uni-bielefeld.de

"Schweiger, Rabea" <rabea.schweiger@uni-bielefeld.de>

BlackHillsStateU Genomics

Black Hills State University, Spearfish, South Dakota, Masters of Science in Integrative Genomics

The Masters of Science in Integrative Genomics (MSIG) program at Black Hills State University (Spearfish, SD) is searching for qualified applicants to join us starting in the Fall 2019 semester. We are a small interdisciplinary department that provides one-on-one mentoring and that values close collaboration between advisors and students. Our on campus Center for the Conservation of Biological Resources (CCBR) offers laboratories fully equipped for molecular genetic research and data analysis. Close collaboration with other South Dakota universities allows further opportunities for training. The Black Hills are adjacent and offer a natural laboratory for field projects. Close proximity to the Sanford Underground Research Facility (SURF) at the Homestake Mine (Lead, SD) and the new Sanford Education Research Facility on the BHSU campus allow for inspiration and opportunities in deep underground science. We train our students to move on to academic, professional, government, and private industry careers. Prior graduates have gone on to successful careers in federal agencies, private industry, teaching positions, and to Ph.D. programs.

Graduate Research Assistantships (RAs) are awarded to students and provide a competitive stipend plus additional funding for research. All RAs receive a reduced

tuition rate (1/3 of in-state rate) and assist with instruction of undergraduate-level science labs.

Information about the M.S. in Integrative Genomics program requirements and application process can be found here: http://www.bhsu.edu/Academics/-Graduate-Programs/Integrative-Genomics .There is no deadline for applications; we evaluate prospective students as they apply.

Black Hills State University is located in the heart of the northern Black Hills in Spearfish, South Dakota, and offers over 80 academic programs at the associate, bachelor, and master degree levels. BHSU, with an enrollment of over 4,000 students, has earned a reputation for transforming lives through innovative, high-quality academic programs and a dynamic learning community.

For further information email Dr. Brian Smith, Director of MSIG, at brian.smith@bhsu.edu.

"Smith, Brian" <Brian.Smith@bhsu.edu>

ClarkU AnnelidEvoDevo

A PhD position is available in the laboratory of Nva P. Meyer at Clark University in Worcester, MA USA (https://wordpress.clarku.edu/nmeyer/) beginning as early as August 2019 as follows:

Spiralians are a great group of animals to study evolution of body plans in part because many spiralian taxa develop via a stereotypic and likely ancestral cleavage program. Ultimately, this cleavage program results in formation of highly diverse body plans with diverse arrangements of nervous systems, e.g. compare annelids and gastropod mollusks. Research in Dr. Meyer's lab is currently focused on understanding how the central nervous system develops in annelids with the goal of gaining a better understanding of how nervous systems evolved. The research community that studies evolution and development of spiralians is rapidly growing and is very welcoming and collaborative.

The successful applicant will develop a project focused on molecular control of neural fate specification inthe annelid Capitella teleta, but this can be expanded to include other spiralians and different avenues ofresearch depending on the applicant's interests and goals. Possible avenues of research include analysisof fate specification via blastomere isolation, genetic manipulation, and transcriptomic profiling. We havea lab colony of Capitella teleta, and techniques used in the lab include microinjection of embryos, qRTPCR, immunohistochemistry, imaging of live and fixed tissue, quantification of phenotypes using ImageJ,and gene knockdown and misexpression by injection of morpholinos and mRNA. We are also currentlydeveloping CRISPR/Cas9 gene editing and single-cell RNA sequencing in C. teleta. There will be multipleopportunities for career development, including mentoring undergraduate and accelerated M.S. studentsin the lab, participating as a guest lecturer in courses taught by the PI, and attending national workshopssuch as the Embryology course at the Marine Biological Laboratories.

The successful applicant will enter Clark University's Biology PhD program with an anticipated start date in late August. Previous experience in molecular biology and working with marine larvae and/orbioinformatics is desirable. Additionally, the Meyer lab is interested in creative, engaged applicants whocan contribute to diversity of the academic community, for example via outreach or mentoring studentsfrom historically underrepresented communities. The successful applicant will be guaranteed funding forfive years through a combination of research assistantships and teaching assistantships; two years ofresearch assistantship for this position are currently available.

Clark University is a small but active and highly-respected research university located in Worcester, MA.Worcester has a good combination of urban and outdoor activities and is in close proximity to a variety ofNew England destinations.

Please email a cover letter explaining your interest in the position and qualifications and a CV to nmeyer@clarku.edu

Nicole Webster <NWebster@clarku.edu>

ClemsonU ArthropodBiodiversity

PhD studentship in Arthropod Biodiversity

The Caterino Arthropod Biodiversity Lab at Clemson University is looking for a highly motivated doctoral student (M.S. in-hand) for the Spring 2019 semester. The student will work as part of a team in the NSF-funded Litter Arthropods of High Appalachia project, a collaboration between Clemson and Virginia Tech University. The project will utilize high-throughput metabarcoding techniques as the basis for studying diversification patterns among arthropod lineages occurring in the leaf

litter on the high peaks of southern Appalachia. The Ph.D. project will carve out a set of lineages (Coleoptera preferred) from these communities for detailed phylogenetic and taxonomic analyses, likely integrating other sources of data such as morphology and targeted sequencing of additional markers.

Interested candidates should have a strong background in evolutionary and systematic entomology, as well as familiarity with relevant field and laboratory methods. Prospective students will have to qualify for admission to the Entomology graduate program in the Department of Plant and Environmental Sciences. Applicants should include a prospective project proposal that fits with the larger projects aims within their application for admission. The successful candidate will be funded for up to three years, starting at USD$20,000/yr (plus tuition waiver).

For information on the PI and the lab: sites.google.com/site/caterinolab/

For information on Clemson's entomology graduate program: https://www.clemson.edu/cafls/departments/-entomology/study/graduate.html Interested students are strongly encouraged to contact Dr. Caterino before applying:

Michael S. Caterino Department of Plant and Environmental Sciences 277 Poole Agricultural Center Clemson University Clemson, SC 29634-0310 mcateri@clemson.edu 864-656-3105

Michael S Caterino <mcateri@clemson.edu>

CNRS Toulouse EvolutionOfLearning

PhD position in biology to work on interdisciplinary social learning project.

https://emploi.cnrs.fr/Offres/Doctorant/UMR5314-CHRGIL-003/Default.aspx This PhD position, set within an interdisciplinary collaboration between Institute for Advanced Study in Toulouse (IAST, www.iast.fr), Laboratoire Evolution et Diversité Biologique (EDB, www.edb.cnrs.fr) and Centre des Recherches sur la Cognition Animale (CRCA, www.crca.cbi-toulouse.fr), will undertake a comparative study of conformist learning in humans and non-human species (Drosophila and Poeciliidfish), with the ultimate goal of better understanding the deep nature of human conformity. The PhD grant is funded by the CNRS in the framework of its mission for transverse and interdisciplinary initiatives (MITI) project Prime|80, which encourages and supports interdisciplinary projects between CNRS institutions. The aim of this project is to 1) categorize types of social learning, and of conformist learning among other types of social learning; 2) perform experiments on conformity in the fruit fly; 3) to explore the molecular, cellular, physiol ogical and psychological mechanisms involved; 4) develop a model to explore the populational consequences of conformist learning. Our ultimate goal is to unravel whether human conformist learning has been built on mechanisms that already perform a similar function in other species, or whether on wholly new mechanisms that are specific to humans. The successful applicant will work with members of the three above cited institutions, at the interface of these three approaches to reconcile and integrate the experimental approaches used in our labs in order to establish common protocols and approaches.

The PhD scholarship will be awarded based on merit for 3 years of full-time study to commence in September 2019. This project offers multidisciplinary academic trainingin behavioral ecology, with some elements of neurobiology as well as exposure to economics and other social sciences. The collaboration with the named project partners is subjectto contract.

The project will require an unusually demanding degree of commitment from the successful candidate but offers high upside potential in the form of close interaction with a high-visibility international team of research scientists.

Mandatory requirements:

* Master degree in evolutionary biology, behavioral biology or neurobiology or a related field. * Willingness to work in an interdisciplinary environment and interact on a regular basis with economists, political scientists, psychologists'. This is a central requirement for this project. * Good communication skills in English (oral and written). * Good problem-solving skills, ability to work autonomously, team player. * Willingness to participate in the daily maintenance of the fly stocks. * Be creative, well organized, patient, motivated, work hard.

Skills, which are beneficial but not essential :

* Programming skills, e.g. Python or R. * Good knowledge of statistics. * Experience in planning and conducting behavioral experiments.

The principal investigators of the project are Etienne Danchin, EDB (etienne.danchin@univ-tlse3.fr), Guillaume Isabel, CRCA (guillaume.isabel@univ-tlse3.fr),

Sabine Nobel (sabine.noebel@iast.fr), IAST and Paul Seabright, IAST (director@iast.fr). Informal enquiries about the project can be directed to all of them.

Candidates should send their CV, copies of their graduation andMaster ìs degrees (including final grades) and 2 full reference letters before 20th of June. All applications have to be submitted via CNRS website https://emploi.cnrs.fr/Offres/Doctorant/UMR5314-CHRGIL-003/Default.aspx sabine.noebel@iast.fr

CRG Barcelona CancerEvolution

The 'Evolutionary Processes Modeling' group at the Centre for Genomic Regulation (CRG), Barcelona, Spain, invites applications for two PhD positions.

Read more here:

https://recruitment.crg.eu/content/jobs/position/-phd-position-understanding-interplay-mutations-and-selection-during-cancer Apply here:

https://recruitment.crg.eu/content/fellowships/calls/-phd-call/phd-positiondonate-weghorn Deadline: 23 June 2019

About the institute

The Centre for Genomic Regulation (CRG) is an international research institute of excellence, based in Barcelona, Spain, with more than 400 scientists from 44 countries. The CRG shares principles of an interdisciplinary, motivated and creative scientific team that is supported by high-end and innovative technologies and a flexible and efficient administration.

In 2013, the CRG received the 'HR Excellence in Research' logo from the European Commission. This is a recognition of the institute's commitment to developing an HR Strategy for Researchers designed to bring the practices and procedures in line with the principles of the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers.

For further information, visit https://www.crg.eu/ . About the group

Cancer is a genetic disease, subject to population genetics forces like mutation, selection and stochasticity. We have recently demonstrated that coding sequences of cancer tumors not only exhibit positively selected mutations that drive cancer (www.biorxiv.org/content/-10.1101/485292v1), but that there exist genes that the tumor cannot afford to lose to the mutational pressure (www.nature.com/articles/ng.3987). In addition to genes, we have also identified cancer driver loci in the non-coding part of the genome (www.nature.com/-articles/s41467-017-00100-x). Both coding and non-coding selection can act to promote cancer defense mechanisms against therapy, which can be unveiled through the analysis of time-sequence data of cell-free DNA and of patient survival data.

The group is particularly interested in how the evolution and survival of cancer cell populations relies on mutation influx and in the selection inference from allele frequency information. To this end, we develop mathematical and computational approaches to estimate mutation rates and selection. We use whole-exome sequencing and whole-genome data repositories to analyze selection on coding and non-coding sequences. In addition, we analyze cell-free DNA from tumors and their temporal evolution in response to therapy. Estimates of the strength of selection in cancer allow for a prioritization of genes and non-coding regions by their disease relevance, with the ultimate goal of promoting therapeutic advances.

The Evolutionary Processes Modeling group was established in October 2018 and is part of the 'Bioinformatics and Genomics' program at the CRG in Barcelona, Spain. Further information can be found at www.crg.eu/en/-programmes-groups/weghorn-lab . Your profile

We are looking for two PhD students to join the lab to help elucidate cancer evolutionary dynamics using population genetics predictions and mathematical modeling together with recently published and unpublished cancer sequencing data. Research interests within the field of population genetics but outside this specific topic will also be considered.

The ideal candidate should be highly motivated and eager to work on evolutionary and biological problems using theoretical and computational approaches. Candidates should have a University Degree and a Master's Degree in physics, statistics, genetics, bioinformatics, computer science or related disciplines within the European Higher Education System (minimum 300 ECTS) or equivalent by September 2019. The candidate needs to be proficient in English.

The offer

Contract duration: 4-year PhD position. Estimated annual gross salary: Salary is commensurate with qualifications and consistent with our pay scales.

The successful applicant will enrol in the very active CRG International PhD Program, which includes science and practical courses, a wide range of complementary skills training, access to many courses, mentoring

via a thesis committee, and active participation in the organization of seminars, symposia and retreats.

We provide a highly stimulating environment with state-of-the-art infrastructures, and unique professional career development

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Dayton Ohio EvolutionaryGenomics

We seek one highly motivated and energetic PhD student to join an NSF-funded project between 2 PIs, Hongmei Li-Byarlay (Central State University) and Jeff Peters (Wright State University). Both campuses are located in Dayton, Ohio. The focus of the funded research is the evolutionary genomic and epigenomic mechanisms of honeybee social behavior. The candidate student will gain significant knowledge in honeybee social evolution, behavior, and genetics/genomics.

Funding is available through a combination of graduate research and teaching assistantships, and the student may start as early as Jan. 2020. Research will be conducted at Central State University, while coursework and teaching duties will be centered at Wright State University. The student may have opportunity to travel to University of Illinois at Urbana-Champaign and Mexico for sample collections and collaborations.

The student will be enrolled in Wright State's interdisciplinary Environmental Sciences PhD program (https://science-math.wright.edu/environmental-sciences-phd-program). The student will need to have a vehicle to commute between Central State and Wright State (12 miles apart).

Qualifications include: Bachelor degree in Biology, Ecology, Genetics, or related discipline; GRE scores within the last 5 y (minimum 300—Verbal plus Quantitative); minimum GPA of 3.0; minimum IBT TOEFL score of 100 and ability to pass a verbal English test (foreign students only). Preferred qualifications include: a Master degree or equivalent experience; strong interest and/or experience in laboratory research and bioinformatics (transcriptomics, GWAS, and/or methylomic analyses); strong written and oral communication skills; strong quantitative skills. More information about both labs are at https://sites.google.com/view/libyarlaybee and https://people.wright.edu/jeffrey.peters. Please send a most recent CV, research interest/experience, and contact information for 3 professional references to Drs. Li-Byarlay (hli-byarlay at centralstate dot edu) and Peters (jeffrey.peters at wright dot edu).

Central State University, as a multi-national and culturally diverse University, is committed to providing an inclusive, equitable and diverse place of learning and employment. It is the University's policy to prohibit discrimination and provide equal opportunity to all employees, students and visitors, without regard to their race, sex (including gender identity/expression), sexual orientation, color, religion, ancestry, national origin, age, disability, genetic information, or veteran or military status.

Wright State University is committed to an intellectual, cultural, and social environment in which all are free to make their contribution. The University strives to achieve an environment in which every student may think, learn, and grow without prejudice, without intimidation, and without discrimination. Wright State University promotes the acceptance of every individual regardless of race, gender, age, ethnicity, ability or disability, sexual orientation, socioeconomic status, religious affiliation, or national origin.

Hongmei Li-Byarlay <hli-byarlay@centralstate.edu>

Fudweis CzechRepublic CichlidEvolution

Adaptive radiation of cichlid fish in rivers: Evolutionary genomics of replicated diversification in Neotropical pike cichlids

PhD position at the University of South Bohemia in Ceske Budejovice (Budweis, Czech Republic) available from: July 2019 (negotiable) application deadline: June 5th (revised) scholarship: net income starts at 900 EUR equivalent (revised) otherwise as described below

More information: https://zoo.prf.jcu.cz/wp-content/uploads/2019/05/PhD-position-at-USB-Adaptive-radiation-of-cichlid-fish-in-rivers.pdf

Project background: Adaptive radiations are often too rapid for the emergence of new relevant mutations between successive speciation events and are thus more likely to utilise standing genetic variation. Hybridiza-

tion between species can instantaneously boost genetic diversity and create novel phenotypes, and thus facilitate speciation and adaptive radiation. On the other hand, the question whether interspecific hybridization is important as a mechanism that generates biological diversity is a matter of some controversy due to the argument that reduced fitness would typically render hybrids an evolutionary dead end.

The model system: Our research group has recently discovered and introduced an outstanding evolutionary model of replicated diversification that includes two independent riverine lineages of a South American cichlid genus, Crenicichla, inhabiting adjacent river basins (of the La Plata River) with similar geomorphology. Both clades show an extremely wide range of morphologies and coloration patterns tied closely with trophic ecology, in which the corresponding (and strikingly similar) ecomorphs from different basins have evolved independently. We have recently demonstrated, based on morphological tests of similarities, ancestral states and rates of evolution that the replicated ecomorphs arose via parallel processes of phenotypic and trophic diversification.

Goal of the project: The aim of this project is to bring new resolution into the study of microevolutionary processes of diversification based on whole-genome sequencing and RAD-seq genotyping. Phylogenomic and morphological analyses will be used to better understand the biological and environmental factors underlying rapid speciation with special focus on the role of hybridization. To achieve full employment of the WGS/RAD data we will also sequence and assemble a reference genome of an appropriate congeneric species.

Research team: The student will work in a small team supervised by Lubomir Pialek and Oldrich Rican. The project will be conducted in close collaboration with Jorge Casciotta and Adriana Almirn (National University of La Plata, Argentina), Edward Burress (University of California, USA), and Milan Malinsky (University of Basel, Switzerland).

Time and place: The PhD position is available for three years, starting in July 2019 (starting date negotiable) at the Dept. of Zoology, Faculty of Science, University of South Bohemia, Czech Republic.

Applicant's desired qualification: Master's degree in biological sciences Understanding of the basic principles of population genetics and molecular evolution

See more details about the position and how to apply: https://zoo.prf.jcu.cz/wp-content/uploads/2019/05/-PhD-position-at-USB-Adaptive-radiation-of-cichlid-fish-in-rivers.pdf Lubomir Pialek University of South Bohemia, Dept. of Zoology Branisovska 31, Ceske Budejovice, Czech Republic email: lubomir.pialek@prf.jcu.cz

Lubomr Pilek <lpialek@yahoo.com>

GeorgeWashingtonU HerpBiodiversity

The Pyron Lab at the George Washington University is recruiting PhD students for the 2020 academic year. These positions are part of the Robert Weintraub Program in Systematics and Evolution in the Department of Biological Sciences, which provides fellowships and substantial funding for research and fieldwork. Weintraub-supported faculty work closely with graduate students on research covering a variety of organisms including bacteria, protists, angiosperms, cnidarians, mollusks, polychaetes, arthropods, echinoderms, dinosaurs, mammals and lizards.

The Pyron Lab focuses on systematics and historical biogeography of amphibians & reptiles, with major focuses on tropical snake evolution and cryptic diversity in Nearctic salamanders. We use genome-scale sequence data to infer phylogenies, delimit species, and understand gene-flow within and among lineages. Major opportunities currently available include projects working with phylogenetic analyses of evolutionary diversification and spatial distribution of extinction risk in terrestrial vertebrates as part of the VertLife project (NSF DEB-1441719), and phylogeography and species delimitation in Dusky Salamanders (genus Desmognathus; DEB-1655737). We maintain active field-work programs in Ecuador, Brazil, India, and Sri Lanka.

Applicants interested in systematics, natural history, biogeography, and conservation of any amphibian or reptile group anywhere in the world are welcome. Previous PhD students and postdocs have worked on extinction risk in squamates, evolution of sexual-size dimorphism in vipers, cryptic speciation in tegu lizards, sexual selection on frog calls, and ecomorphological diversification in snake communities. Underlying all of these is an emphasis on biodiversity informatics and phylogenetic comparative analysis to understand the origins of biodiversity from the population level to global species-richness.

Students accepted into the Weintraub program are typically funded for five years, with two years of teaching fellowships, and three years of research funding. World-class facilities in the DC area allow for substantial collaboration, such as Childrens National Medical

Center, various government agencies such as NIH and NSF, and the unparalleled resources of the National Museum of Natural History, which maintains the largest collection of amphibians and reptiles in the world. I encourage any interested applicants to contact me (rpyron@colubroid.org) to discuss project ideas, application procedures, and research in Washington.

More information on our program is here: https://biology.columbian.gwu.edu/graduate R. Alexander Pyron, PhD Robert F. Griggs Associate Professor of Biology Department of Biological Sciences The George Washington University 2023 G St. NW, Lisner 414 Washington, D.C. 20052 Phone: (202) 994-6616 Cell: (706) 489-9727 Email: rpyron@gwu.edu Web: http://www.colubroid.org/ Alex Pyron <rpyron@colubroid.org>

ImperialCollege London HouseSparrowFitness

A PhD position is available on Fitness consequences of IGEs on parental —investment at Imperial College London, Silwood Park Campus, in collaboration with the Zoological Society London.

Project Description The knowledge of how interactions among conspecifics feedback into individual behaviour is crucial to understanding how phenotypic and genotypic variance is maintained, to understand how selection can act, and how behaviours evolve. Interacting individuals can influence each other's phenotypes and even fitness where the variation of an interacting phenotype in a population depends on the social environment ' through indirect genetic effects (IGEs). This concept is similar to the idea of an extended phenotype, where social interactions rather than abiotic factors influence phenotypes. We recently found in a wild bird population, that parental care is partly determined by the genetics of the social partner. This is especially interesting in a trait with mutual consequences for the interacting partners, since not only will an individual pass on its genes to its offspring, but the genes of the mating partner will also be passed on to the offspring. IGEs in social traits between mating partners may therefore be responsible for the maintenance of genetic variance in traits that affect their mutual fitness. This might be one reason for why we fail to find a clear response to selection in wild populations. This PhD will test recent hypotheses on IGEs in the context of fitness to fully understand how parental care can evolve. We have evidence for heritable variation in fitness in the same population, therefore, some of the recently developed theory will be testable in this study system, as a first, in a wild system. —

This project will make use of our long-term data on behaviour in the wild house sparrows of Lundy island, which includes detailed, complete social and genetic pedigrees spanning 20 years. These data will be used in advanced quantitative genetic modelling. The successful applicant is also expected to collect behavioural data of house sparrows. —

Supervison by Dr J Schroeder (Imperial) Dr J Wang (ZSL)

The project is a collaboration between Imperial College and the Zoological Society London. The PhD student will be working mostly on the Silwood Park Campus of Imperial, located about 25 miles West of Central London. Situated in about 100ha of natural parkland, with over 100 post-graduate students and several world-class faculty, research interests include evolution, biodiversity and conservation. The campus contains all the features one would expect of a leading centre for life sciences research as well as a few additional, unexpected attributes, such as Silwood Park being recognised as an important refuge for wildlife. The campus fields include several Priority Habitats like wet woodlands, acid grasslands, traditional orchards and parklands. —

Applicants are expected to have to demonstrate an interest in quantitative data analysis, some experience in field work and handling of birds or small mammals, and to be keen to develop new theory. —

Most applicants will have, or be about to obtain, a (predicted) first class, or high 2:1 Masters qualification (MSc, MRes or MSci/MMath) and a 2.1 or higher undergraduate degree. Exceptional students at Bachelors level without a Masters will also be considered. Relevant post-graduate experience will also be taken into account. —

This is the second round of the 2019 round of NERC funded phd studentships through the QMEE CDT. The QMEE CDT aims to train the next generation of researchers in Ecology and Evolution with the quantitative and modelling skills needed to address real-world problems by connecting theory, data, and practice. The QMEE CDT have assembled a world-leading set of research organisations who develop new ecological and evolutionary theory, new statistical and computational methods, and translate research findings into real-world impacts. Our aim is to bring students together from multiple disciplines to tackle big problems facing the natural world. —

The studentship will start October 1st, 2019. — Please email your CV, a letter of motivation, and contact details of two references by 01/07/2019 to: julia.schroeder@imperial.ac.uk

Studentships will last for 3.5 years. NERC-funded studentships are subject to RCUK eligibility requirements, which are outlined under "Student eligibility" and "Residence Requirements" on the RCUK website. In short you should be a citizen of the UK or other EU country and have been residing in the UK for the last 3 years (apart from temporary or occasional absences). —

Relevant papers: — Schroeder J, Dugdale H, Nakagawa S, Sparks A, Burke T. Sex specific social genetic effects contribute to the total heritable variance in parental care. EcoEvoRxiv doi: 10.32942/osf.io/nh8m2 —

Schroeder J, Burke T, Dawson DA, Mannarelli ME, Nakagawa S (2012) Maternal

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ImperialCollege London MosquitoSwarms

PhD Opportunity at Imperial College London through the NERC Funded Centre for Doctoral Training in Quantitative and Modelling Skills in Ecology and Evolution (QMEE)

Like many other members of the order Diptera, mosquitoes mate in aerial swarms. Swarming is initiated by males which make up the majority of swarm participants with females entering in much smaller numbers. It remains unclear whether these swarms are an example of collective behaviour. Recent work in Anopheles mosquitoes suggest that movements are coordinated between nearest neighbours, but the extent to which swarm dynamics are emergent properties of these interactions is still debated. More recent work on Aedes mosquito acoustic interactions and male hearing mechanisms suggest that males are likely communicating with one another and with females within swarms. The degree to which these acoustic emissions are the result isolated interactions (a cacophony) or a method of coordination (a chorus) are unclear.

This project focuses on exploring these acoustic interactions, their relationship with individual and swarm movement characteristics, and ultimately how these dynamics shape the mating success of the Yellow Fever mosquito, Aedes aegypti. This species is both an important arbo-virus vector and one of the main targets of reproductive control releases. The student will work with experts in sound engineering and data science to investigate the degree that sound is used in communication between individuals and whether this communication is important for swarm formation.

We take advantage of the unique environment offered by Imperial College London to tackle the technical and biological challenges this system presents. The student will be co-supervised by Dr. Lauren Cator (Department of Life Sciences), Dr. Lorenzo Picilani (Dyson School of Engineering), and Dr. Robert Endres Data Science (Department of the Data Science).

Applications Due July 15th Through the QMEE CDT: https://www.findaphd.com/-phds/program/quantitative-and-modelling-skills-in-ecology-and-evolution-a-nerc-centre-for-doctoral-training/?i345p3289 "Cator, Lauren J" <l.cator@imperial.ac.uk>

ImperialCollegeLondon PopulationGenetics

3.5-year PhD studentship funded by NERC at Imperial College London

We are seeking candidates for a fully-funded PhD position at Imperial College London as part of the 'quantitative and modelling skills in ecology and evolution NERC centre for doctoral training' on the topic 'How social stratification in urban admixing populations shaped their genetic structure: novel insights from paleogenomics and deep learning'

The student will lead an interdisciplinary project by integrating population genomics and anthropological data to investigate how assortative mating shaped the genetic of admixed population. The student will also set up a deep learning algorithm for the inference of evolutionary parameters ruling the dynamics of mating in time making use of modern and ancient genomes.

The student will be jointly supervised by Matteo Fumagalli (Imperial College London), Tom Thorne (University of Reading) and Pontus Skoglund (The Crick Institute,

London).

More info on this project can be found here:

https://mhasoba.pythonanywhere.com/qmee_cdt/-default/view_proposals/view/proposals/85 The candidate should meet NERC requirements of eligibility, meaning that she/he needs to have either UK citizenship or be a EU national with a current 3-year UK residency.

More info on the doctoral program and how to apply can be found here:

https://www.imperial.ac.uk/qmee-cdt/ https:/-/www.findaphd.com/phds/program/quantitative-and-modelling-skills-in-ecology-and-evolution-a-nerc-centre-for-doctoral-training/?i112p3289 Applicants should send their CV, supporting letter and contact information for two referees to Matteo Fumagalli (m.fumagalli@imperial.ac.uk) no later than 6th July 2019.

Matteo Fumagalli

m.fumagalli@imperial.ac.uk

"Fumagalli, Matteo" <m.fumagalli@imperial.ac.uk>

IST Austria EvolutionaryBiology

The Institute of Science and Technology Austria (IST Austria) is looking for highly qualified candidates to apply for our PhD program. We offer fully-funded PhD positions in the natural and mathematical sciences in a world-class research environment on the outskirts of Vienna. The research groups that might interest evolutionary biologists include:

Nick Barton Evolutionary theory/Analysis of a snapdragon hybrid zone Sylvia Cremer Social immunity Calin Guet Systems and synthetic biology of genetic networks Max Josch Neuroethology Gasper Tkaèik Evolution of gene regulation Beatriz Vicoso Sex chromosome evolution Fyodor Kondrashov Evolutionary genomics

Our PhD program is characterized by innovative training with a special focus on interdisciplinarity, close mentoring by outstanding faculty within small research groups, and access to first-rate facilities. Students spend the first year completing coursework and rotations before choosing a thesis group and passing the qualifying exam. Our PhD graduates have gone on to top positions in academia and industry all over the world.

Students with a bachelor's or master's degree in a relevant field are encouraged to apply. We offer internationally competitive salaries, full health benefits, and subsidized on-campus housing in the first year.

For more information about thePhD program and application process, as well as faculty profiles, please visit our website at http://phd.pages.ist.ac.at, or come to our Student Open Day on November 22nd 2019.

The deadline for PhD applications is January 8th 2020 for a start date in September 2020.

Nick Barton

Institute of Science and Technology Austria

Nick BARTON <nick.barton@ist.ac.at>

JagiellonianU Poland LearningAdaptation

I seek 2 motivated Ph.D. students to join the project: 'Ecophysiology of learning: The effects of short- and long-term changes in ambient temperature on learning performance in a model songbird', funded by the Polish National Science Centre (NCN) OPUS grant

Project:Given current increase in climate unpredictability and short-term variability, it is particularly important to understand the consequences of environmental variation for cognitive performance. On the one hand, highly variable environmental conditions could induce physiological costs that may set limits to cognitive functions. On the other hand, environmental fluctuations could promote cognitive mechanisms responsible for more versatile behaviors. Those two options could be reconciled if physiological costs are reduced by pre-natal programming and/or developmental plasticity. Yet so far, the research in the field of environmental dependency of learning performance and potential for its modulation at early life stages is scarce. The main aim of the current project is to study the effect of temperature fluctuations in different time scales on learning efficiency in a model songbird, the zebra finch. Specifically, we will verify the following hypotheses:

(i) Highly variable ambient temperature during development affects efficiency of the learning processes. (ii) Maternal effects modify the consequences of variable ambient temperature experienced during development on the efficiency of learning processes. (iii) Mismatch between environmental variability experienced during development and during adulthood affects learning pro-

cesses at adulthood.

Description of work:The research team will consist of PI (Joanna Rutkowska: http://iron2.eko.uj.edu.pl/-rutkowska/index_e.htm), technical assistant and two PhD students. The study will be carried out at the Institute of Environmental Sciences of the Jagiellonian University in Krakow, on a captive population of zebra finches established in 2000. It will involve breeding the birds, cross-fostering eggs, performing basic morphological measurements, and physiological tests such as analyses of blood parameters and hormone levels. Both PhD students will be trained to perform the practical part of the project, guided in skills needed for a successful scientific career, and encouraged to develop his/her own ideas.

Position 1) The PhD student will record and analyse singing performance of fathers/tutors and all of their male offspring. To assess learning accuracy, the student will then assess repertoire size and extract repetitions of each syllable. Dr. Carlos A. Botero (Washington University in Saint Louis) is a collaborator on this project and he will provide training of song analyses.

Position 2) The PhD student will carry out tests on learning performance in relation to food acquisition in juveniles and adults: (i) problem-solving tasks providing an integrative measure of perception, reasoning and decision making; and in adults only: (ii) learning associations, (iii) spatial learning and (iv) social learning.

References:

Botero, C.A. et al. 2015. Evolutionary tipping points in the capacity to adapt to environmental change. Proceedings of the National Academy of Sciences 112:184-189.

Maille, A. and Schradin, C. 2017. Ecophysiology of cognition: How do environmentally induced changes in physiology affect cognitive performance? Biological Reviews 92:1101-1112.

Monaghan, P. 2008. Early growth conditions, phenotypic development and environmental change. Philosophical Transactions of the Royal Society B: 363:1635-1645.

Requirements:MSc in Biology or Animal Psychology and fluency in English. Experience in analyses of sonograms or any behavioural procedures planned in the current project, and previous research experience will be an additional asset.

Financing:The project is financed by the National Science Centre, which ensures a PhD student with a monthly tax-free research stipend of 4500 PLN for three years and a possibility of a short foreign internship. This stipend may be combined with the standard Ph.D. program scholarship if the student is accepted to the doctoral school in one of the following programs:

English-language: Ph.D. Program in Biology: https://-wb.uj.edu.pl/studia/phd-biology, https://wb.uj.edu.pl/-en_GB/studia/phd-biology/recruitment Polish language: https://wb.uj.edu.pl/studia/studia-3-stopnia-biologia/rekrutacja APPLICATION: The candidates are asked to e-mail Dr. Joanna Rutkowska (joanna.rutkowska@uj.edu.pl) attaching PDF files with 1) a cover letter explaining their background and interest in the project; 2) a CV. Contact details of two academics

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JYUFinland SexEvolTardigrade

EVOLDIR : JYUFinland.SexEvolTardigrade

PhD Title: Sexual selection in tardigrades: sex-(in)dependent mechanisms

Duration: January 2020 ' December 2023

We are looking for a highly motivated PhD candidate to join our new and enthusiastic research group led by Dr. Sara Calhim, at the University of Jyväskylä (Finland). We investigate key themes in reproductive evolutionary biology using a little studied but charismatic group of organisms ' tardigrades (a.k.a. water bears).

These transparent, microscopic (<1mm), eight-legged animals are well known for their ability to survive extreme stressors in a cryptobiotic (i.e. ametabolic) state. However, they also have incredibly diverse but largely unexplored reproductive biology which makes them the ideal study system to tackle long standing questions in the field of sexual selection and reproductive trait evolution.

Sexual selection is an important evolutionary force that acts on traits associated with the ability to access mates and/or fertilizations. It is well established that it can affect both sexes. However, most research uses study systems where the traits under sexual selection differ markedly between the sexes and/or the mechanisms by which they evolve are confounded by different aspects of the species' biology (e.g. due to marked sexual

dimorphism in morphology, behavior, physiology or life-history. As a result, male and female phenotypes cannot be studied simultaneously or in a biologically relevant comparable way. Tardigrades have little sexual differentiation, short generation time, and tractable (mating) behavior and development. Therefore, they are ideally suited for researching of sex-(in)dependent mechanisms of sexual selection (i.e. using equivalent measures and experimental protocols). This PhD project will make a valuable contribution to the field beyond increased scientific knowledge, through the development of tools for quantitative assessment chemical signals and parentage assignment in this phylum.

Requirements:

A Master's degree in Evolutionary Biology, Ecology or Molecular Biology. Previous experience with handling microscopic organisms and/or using chemical or genomic laboratory and analytical tools are an advantage. The candidate must show considerable written and verbal communication skills in English, independent and creative thinking, and an ability to work collaboratively. The University of Jyväskylä promotes equal opportunities.

Apply online (DEADLINE: 31.08.2019) at:

https://rekry.saima.fi/certiahome/-open_job_view.html?didV00&jc&id Documents required:

- A one-page cover letter where the motivation for applying for the position is outlined and relevant skills are described. The cover letter should clearly identify which project you are applying for (#6 in https://www.jyu.fi/-science/en/bioenv/research/doctoral- programme/phd-posts/2020/call) - The cover letter should include the contact information for 1-2 referees. Note that reference letters should be made available at very short-notice request (or included in the application). - Curriculum Vitae (CV) - Degree certificates

For more information contact Dr. Sara Calhim

Email: sara.calhim@jyu.fi

Twitter: @SaraFirebolt

"Calhim, Sara" <sara.calhim@jyu.fi>

LaTrobeU PollinatorConservation

Understanding the evolution of mammal pollination in the south-west Australian biodiversity hotspot and its vulnerability to landscape modification

While Australia is a global centre for bird pollination, there is comparatively little evidence for pollination systems specialised on mammal pollination. The honey possum is a specialist nectarivore, endemic to the south-west Australian biodiversity hotspot, where they were originally common in sandplain habitats dominated by Proteaceae and Myrtaceae. While it has long been speculated that plants may be adapted specifically to pollination by honey possums, this hypothesis has never been rigorously tested. The initial aim of this project is to test for specialisation on pollination by honey possums in members of Dryandra, a clade of Banksia that exhibits multiple evolutions of the unusual prostrate flowers thought to be associated with mammal pollination. Secondly, we aim to investigate how resilient this pollination strategy is to anthropogenic landscape modification, given that many prostrate Dryandra are rare local endemics, including in remnant sandplain within the agricultural region. Finally, we aim to test the role of specific floral traits such as floral odour, inflorescence position, and rigid floral structure in pollination by honey possums.

A PhD student is being sought to research the ecology of potential honey possum pollination systems in Dryandra, with the flexibility to investigate issues of either conservation or floral adaptation depending on interest. A PhD scholarship for the project is available through La Trobe University. Suitable PhD students will have: (i) a Masters or strong first class honours (ii) a driver's license (iii) an ability to undertake fieldwork in remote areas (iv) a willingness to undertake fieldwork interstate

This project is a collaboration between Dr Ryan Phillips (La Trobe University, Melbourne), Dr Susan Hoebee (La Trobe University, Melbourne), and Dr Rob Davis (Edith Cowan University, Perth).

Contact Ryan Phillips for further information R.Phillips@latrobe.edu.au

r.phillips@latrobe.edu.au

Lausanne SexualSelectionPathogensDrosophila

PhD position: the role of pathogens in sexual selection in Drosophila

A PhD student position is available in Tad Kawecki's research group at the Department of Ecology and Evolution, University of Lausanne, Switzerland (https://-www.unil.ch/dee/kawecki-group). The position is open from September 2019 (negotiable), initially for one year and extendable for up to three additional years, with an initial salary of CHF 47,040 (about 42,000 euro) per year.

I am looking for a PhD candidate to study interactions between sexual selection and pathogen resistance in the experimental system consisting of Drosophila and its bacterial and fungal pathogens. While traits mediating male sexual success have long been postulated to indicate "good genes" for pathogen resistance, the experimental evidence is surprisingly scarce and equivocal. We have recently found that males that sire offspring more resistant to a bacterial pathogen are more successful in competition for mates ' but only if the competition occurs after the males have themselves been exposed to the pathogen. In the absence of the pathogen, males carrying "good genes" for resistance are less likely to win (Joye and Kawecki 2019, Proc R Soc B, royalsocietypublishing.org/doi/10.1098/rspb.2019.0226). This is the first experimental evidence that the link between genes for resistance and sexual success depends on the epidemiological context in which sexual selection operates. Building upon this discovery, a new project funded by the Swiss National Science Foundation will aim at understanding of the behavioral and physiological mechanisms of this phenomenon, its genomic bases, specificity to the pathogen involved and consequences for Darwinian fitness. The PhD project will be defined within this framework.

The project will be based on laboratory work with Drosophila melanogaster. It will involve mate choice experiments, experimental infections, resistance and fitness assays, as well as behavioral and genomic analyses. The student will be expected to follow the relevant literature, present their work in seminars and external meetings. She or he will enroll in the inter-university doctoral program in ecology and evolution (https://-biologie.cuso.ch/ecologie-et-evolution) and be expected to take part in courses and workshops organized by that program. — A modest contribution to teaching (as a teaching assistant) is possible against a salary supplement.

A master degree is required before starting the PhD. The candidate will have a strong conceptual background and interest in evolutionary biology and behavior, and motivation and skills to carry out laboratory experiments with Drosophila. The project will require a good understanding of experimental design and statistical analysis, and an ability to work in a research team. Basic bioinformatic skills and/or some experience with automatic tracking systems for behavior would be a plus. All research activities, lab meetings and seminars are in English. Knowledge of French is not required, but learning some French would make living in Lausanne more enjoyable.

Lausanne is a medium-sized city on the shores of Lake Geneva, surrounded by a wine growing region recognized as a UNESCO World Heritage Site, and within one hour of the Alps. It offers a great variety of cultural, recreational and outdoor opportunities. The Department of Ecology and Evolution (www.unil.ch/dee) is a vibrant and diverse research community, with 20 research groups, about 100 graduate students and over 40 postdocs, representing over 30 nationalities. It is a strong center for evolutionary biology and hosted the 2015 congress of the European Society for Evolutionary Biology. The doctoral program offers multiple opportunities for continuing education and refining your presentation and writing skills.

Applications should include a motivation letter with a short description of your research interests and experience and your interest for this position, CV, summary of the master work (or other relevant projects) and contact details of 2-3 referees.

Application documents must be submitted through the recruiting platform of the University of Lausanne: https://bit.ly/2XvD2TS. You can switch the language of the platform to English using a switch in the upper right corner of the page. Then click on "Apply". You may have to set up an account first. If so, you may have to wait several minutes before the account becomes active. — To receive full consideration, applications should be received by 23 June 2019.

The University of Lausanne is committed to promoting gender equality and strongly encourages applications from female candidates.

For further information please contact me at tadeusz.kawecki@unil.ch .

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LeidenU BalancedLethalSystem

The Institute of Biology Leiden at Leiden University and Naturalis Biodiversity Center are looking for

PhD candidates: Untangling the Evolution of a Balanced Lethal System

Project description Balanced lethal systems represent an evolutionary enigma as they cut reproductive output in half. Different lethal alleles on two distinct forms of a chromosome compensate each other. Hence, both chromosome forms, including their linked lethal alleles, are required for survival. The most illustrious balanced lethal system is chromosome 1 syndrome, observed in the genus Triturus (the marbled and crested newts). All adults invariably possess two forms of chromosome 1, 1A and 1B. Yet, according to the rules of Mendelian inheritance, 50% of offspring produced is homozygous (possessing two copies of either 1A or 1B). These homozygotes die roughly halfway normal embryological development - half of Triturus embryos never hatch! All we currently know about chromosome 1 syndrome derives from classical karyological studies. In two PhD projects, the candidates will determine the genomic basis of chromosome 1 syndrome. The topics that will be addressed are 1) Ancestral reconstruction of Triturus' chromosome 1 at the point of origin of the balanced lethal system and distillation of the lethal factors; and 2) Comparative genomics of the balanced lethal system in Triturus with related but unaffected salamander species.

Key responsibilities As PhD candidate you will be conducting and publishing scientific research in consultation with your doctoral thesis supervisor. Your key tasks include:

Execute the scientific research as detailed in the project description; Publish results in scientific journals and a thesis; Participate in conferences; Follow the Leiden University Graduate school programme for PhD candidates.

Selection criteria

Master degree in biology with proven experience in bioinformatics; Laboratory skills: DNA/RNA extraction and library preparation for NGS; A good command of the English language and proven writing abilities; Highly motivated and capable of working both independently and as part of a team.

Our Faculty and Institute The Faculty of Science of the University of Leiden is a world-class faculty where staff and students work together in a dynamic international environment. It is a faculty where personal and academic development are top priorities. Our people are driven by curiosity to expand fundamental knowledge and to look beyond the borders of their own discipline; their aim is to benefit science, and to make a contribution to addressing the major societal challenges of the future. The research carried out at the Faculty is very diverse, ranging from mathematics, information science, astronomy, physics, chemistry and bio-pharmaceutical sciences to biology and environmental sciences. The research activities are organised in eight institutes. These institutes offer eight bachelor's and twelve master's programmes. The faculty has grown strongly in recent years and now has more than 2,200 staff and almost 4,200 students. We are located at the heart of Leiden's Bio Science Park, one of Europe's biggest science parks, where university and business life come together.

The Institute of Biology (IBL) is positioned in the Faculty of Sciences. The core business of IBL is to perform top quality innovative fundamental and strategic research that will lead to scientific progress, contribute to solutions for societal challenges, and generate industrial opportunities. The Institute is organised in three multidisciplinary clusters: Animal Sciences & Health, Plant Sciences & Natural Products and Microbial Biotechnology & Health. Presently, over 120 FTE (including postdocs and PhDs) are employed at IBL.

Naturalis Biodiversity Center is the Dutch national research institute and infrastructure on biodiversity and systematics. Employing over 100 researchers (including postdocs and PhD's), the institute provides an innovative and integrated research and BA/MA program towards its core expertise comprising a whole array of disciplines, ranging from taxonomy, systematics, evolution, ethnobiology, biogeography, bioinformatics, and mineralogy. The infrastructure also provides the world's fifth largest natural-history collection with more than 42 million specimens (also digitally accessible), and state of the art laboratories. These facilities include molecular, morphological/imaging, culture and geological facilities and geographic information systems and bioinformatics capacities. In addition Naturalis is one of the leading natural history museums worldwide, receiving over 400.000 visitors a year.

Terms and conditions You will be employed at the Institute of Biology Leiden of Leiden University. We offer a

one year term position with the possibility of an extension of 3 years based on need, funding and performance. The salary

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Montpellier AphidDiSymbioticSystemsEvolution

We are looking for a phd candidate to work on the evolution of di-symbiotic systems in aphids, in Montpellier, France (start date October 2019, Phd Grant funded for three years)

Background: Phytophagous insects are an important part of terrestrial biodiversity. A key factor in their evolutionary success probably lies in the mutualistic associations they have established with some intracellular bacteria. These endosymbionts metabolize some of the nutrients lacking in their host diet and can be essential for successfully shifting to new ecological niches. However long-term obligate associations with bacterial partners have their downsides. Endosymbiotic bacteria generally exhibit drastic genome reduction in comparison with their free-living relatives: this is due to relaxed evolutionary constraints on genes that are not necessary for life within the host and genetic drift caused by severe bottlenecks occurring during the maternal transfer of endosymbionts. This drift leads to the fixation of mildly deleterious mutations and can ultimately alter endosymbiont genomes and increase host vulnerability to environmental changes. This process of genome erosion can sometimes be compensated by the recruitment of a new symbiont that complements the primary one; such multi-partner endosymbioses have been observed in several insect lineages. The aim of this thesis is to study the evolutionary dynamics of a di-symbiotic system in aphids.

Aphids have established an obligate mutualistic relationship more than 100 million years ago with a bacterium; Buchnera aphidicola, which compensates for their sugar-rich phloem diet by providing them with essential amino acids and vitamins. In some aphid lineages, this mutualistic relationship has evolved into a tri-partite association in which Buchnera aphidicola is "assisted" by a second bacterial partner that has been repeated replaced along the evolutionary history of the aphids (Manzano-MarÃÂ'n — 2017, Meseguer et al. 2017). These shifts in symbiotic associations can be associated with the genome erosion of one the symbionts (Manzano-MarÃÂ'n et al. 2018) and favored by Horizontal Gene Transfers between symbionts (Manzano-MarÃÂ'n et al., 2019).

—Using Cinara aphids as a study system, the aim of the thesis will be to: 1) reconstruct the history of aphid/endosymbiont associations using phylogenomic analyzes and cospeciation analyzes ; 2) characterize patterns of molecular evolution in bacterial lineages and identify the signatures of selection and drift in bacterial genomes; 3) investigate — phenotypic and intra host dynamics — of obligate endosymbionts.

—We are looking for a student with a solid background in phylogenetics and/or evolutionary genomics and a strong interest in addressing evolutionary questions in host/symbiont associations. He will be trained in the comparative genomics of bacterial genomes and techniques for investigating symbiont dynamics within hosts.

—Host laboratory and context: The Phd will be supervised by E. Jousselin and A. Manzano- MarÃÂ'n at CBGP (Montpellier) He/she will analyze an already acquired dataset (endosymbiont genome data from about 50 aphid species) using phylogenomics.

He /she will join a collaborative network : - Bastien Boussaud and Vincent Daubin (Univ. Lyon, France) to implement host/symbiont reconciliation analyses and investigate patterns of molecular evolution in endosymbiont genomes. - Federica Calevro (Bf2i, INSA, Lyon) to investigate cell dynamics of aphid di-symbiotic systems.

For any enquiry contact emmanuelle.jousselin@inra.fr https://www6.montpellier.inra.fr/cbgp_eng/Staff/-Permanent-staff/Jousselin Expected start date : no later than 1st of October 2019 To apply, please send a pdf file with (i) Cover letter with a brief summary of previous experience, academic background and motivation for the position (ii) CV (iii) Names and contact details of 2 references.

Deadline for application: 24th of july Informal enquires are welcome. Salary: about 20 KâÂÂ¬/*yearnet*, *includinghealthinsurance*

ejousselin@yahoo.com

NatResInst UK InsectAdaptationBiopesticides

We are looking for a PhD candidate at the Natural Resources Institute to look at the impact, potential behavioural and physiological adaptations of beneficial insects to biopesticides. — Application should be made following link in project details (https://www.gre.ac.uk/research/study/research-studentships-and-scholarships). For any other enquiries, contact —Mandela Fernandez-Grandon on m.fernandez-grandon@gre.ac.uk. —

Title: Impacts of novel multimodal biopesticides on beneficial —insects

Solutions for the global challenge of food security are required urgently, particularly those that support sustainable pest control in developing countries where pesticide regulation is weak and broad-spectrum pesticides are used widely. Dramatic losses to global insect biodiversity have received international attention recently and it is crucial that impacts on non-target organisms of technologies for controlling pests are minimised. —

Environmentally benign pest control technologies include entomopathogenic fungi (EPF) and botanical insecticides, but these have shortcomings associated with slow action and low persistence, respectively. However, this combination pesticide may impact non-target species that contribute importantly to natural pest regulation and pollination which are key ecosystem services in the sustainable intensification of agriculture. —

This project will evaluate the wider impact on the ecosystem of introducing new multimodal biopesticides and explore physiological and behavioural effects on non-target organisms. —

Through this project, the student will collect and analyse volatiles compounds associated with EPF. Using a range of olfactometers and behaviour recording software (Ethovision Â), they will analyse the behaviour of relevant parasitic wasp species in response to volatiles associated with the fungus. Training will be provided on techniques in Chemical Ecology. They will also investigate physiological adaptations of the insects in response to fungal infection including measures of survival and pest control efficacy (attack rate, eclosion rate) in laboratory and semi-field experiments. These are crucial — data for underpinning development of these sustainable pest management tools but are unreported in the literature. Within this broader theme, the student will also be encouraged to develop their own ideas. — This studentship will run alongside a large collaborative project led by the supervisory team on the development of environmentally benign pest control for UK and Chinese markets. This work may help inform the use of sustainable pest control for international producers and help us learn more about the ecology and behaviour of pollinators and natural enemies. The student will be expected to work with the team and the project may involve travel to China for field or laboratory work. The Natural Resources Institute is now in its 125th year as an internationally recognised in improving livelihoods across the world (https://www.nri.org/). This studentship will offer the successful candidate to be part of this exciting research and the postgraduate community at NRI. —

For additional information about the scholarship please go to: — https://www.gre.ac.uk/research/study/-research-studentships-and-scholarships —

Funding Notes

Bursary available (subject to satisfactory performance): — Year 1: pounds 15,009 Year 2: In line with RCUK rate Year 3: In line with RCUK rate — In addition, the successful candidate will receive a contribution to tuition fees equivalent to the university's Home/EU rate, currently pounds 4,327, for the duration of their scholarship. International applicants will need to pay the remainder tuition fee for the duration of their scholarship. This fee is subject to an annual increase. —

Mandela Grandon <mandelagrandon@yahoo.co.uk>

NHM UOslo Norway EvolutionaryBiolBotany

For the following PhD (Jobbnorge ID: 169908), please apply at https://www.jobbnorge.no/en/available-jobs/-job/169908/phd-research-fellowship-in-systematic-botany The deadline for applications is 05.06.2019.

Job advertisement: The University of Oslo is Norway?s oldest and highest ranked educational and research institution, with 28 000 students and 7000 employees. With its broad range of academic disciplines and internationally recognised research communities, UiO is an important contributor to society.The Natural History Museum at the University of Oslo is Norway?s most

comprehensive natural history collection. For almost 200 years, preserved plant specimens, animal specimens, rocks, minerals and fossils have been collected, studied and preserved here. The museum is located at ?kern and in the beautiful Botanical Garden, which is not only popular for recreation, but is a scientific collection in itself.

Natural History Museum PhD Research Fellowship in Evolutionary/Systematic Biology

Job description A PhD fellowship (SKO 1017) is available at the Natural History Museum (NHM), University of Oslo. The position is part of the ?Integrative Systematics of Plants and Fungi (ISOP)? research group and will be affiliated with the NORPART project ?Collaborative learning in biodiversity, excellence in education through two-way North-South mobility? funded by SIU (the Norwegian Centre for International Cooperation in Education). The fellowship period is 4 years, of which 3 years are devoted to carrying out a research project and one year (25%) for compulsory work consisting of teaching and supervision duties, collection work, outreach activities and research assistance. No one can be appointed for more than one PhD Research Fellowship period at the University of Oslo. Starting date no later than 01.10.2019

More about the position The successful candidate will study diversity at multiple levels in space and time of the plant genus Chlorophytum (Asparagaceae). The candidate will use an integrative approach to the diversity studies that includes molecular phylogenetics, phenotypic analyses, distribution modelling, ancestral state analyses, and spatial phylogenetics. Aims with this project are (1) to establish a natural classification of Chlorophytum from tribal to species level, (2) to infer centers of diversity and -origin as well as migration trajectories, and (3) to compare various spatial diversity estimates. The candidate will work in a group with several master students and one PhD candidate studying similar aspects of related taxa and habitats. The research project will involve fieldwork in tropical and southern Africa. The results of this project will have direct implications for both taxonomy and biodiversity management. The project is supervised by Assoc. Prof. Charlotte Sletten Bjor? (NHM), PhD and Head of Botanical Garden Tor Carlsen (NHM) and Assoc. Prof. Mika Bendiksby (University Museum; NTNU)

Qualification requirements A Master?s degree in biology (relevant themes: plant taxonomy, molecular phylogenetics, conservation genetics, ecoinformatics, or bioinformatics for biosystematics). Experience with DNA-based wet lab work Excellent written and verbal communication ability in English.Evaluation of candidates will focus on the following: Relevance and quality of the MSc thesis Scientific publications (not necessarily expected at this level) Grades from relevant university-level courses Application/cover letter including a description of how this position fits the career plan and interests of the applicant Collaborative skills Personal suitability and motivation for the position An interview, including a 15 minutes presentation of your MSc thesis (only short-listed candidates) Applicants must document excellent results from their education or through later research activities, be highly goal-oriented and able to deliver results on time. The successful applicant must fulfil the requirements for admission as a PhD student at UiO (see below). The position requires spoken and written fluency in English. Applicants from non-English-speaking countries outside of Europe are encouraged to document English skills through an approved test (e.g. TOEFL, IELTS, CAE or CPE).Desirable experience Research experience in biosystematics (taxonomy, phylogenetics, biogeography) Experience with field work in the tropics Knowledge of African plant diversity and ecosystems Good computing skills (e.g. distribution modelling or other ecoinformatics using R) Production and handling of high throughput sequencing (HTS) data Experience in chromosome cytology and/or morphometrics Knowledge and interest in angiosperm/monocotyledon systematics and diversity.

Grade requirements for admission to the PhD program: The average grade point for courses included in the Bachelor?s degree

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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

NorthCarolinaStateU PlantEvolution

Ph.D. position in Plant Evolutionary Ecology Department of Plant and Microbial Biology North Carolina State University

The Sheth evolutionary ecology lab invites applications for a Ph.D. position beginning in Fall 2020. We study the ecological and evolutionary processes underlying species climatic niches and geographic ranges, with the aim of understanding evolutionary and plastic responses

to climatic changes. Primarily using monkeyflowers as a model system, we combine field, greenhouse, and growth chamber experiments, quantitative genetics, and comparative analyses to examine constraints to adaptation in plant populations, species, and clades.

NC States Department of Plant and Microbial Biology offers a highly-rated research environment and is situated in a collaborative and scientifically stimulating atmosphere in the Research Triangle, with both UNC Chapel Hill and Duke University nearby. There is a vibrant and growing community of ecologists and evolutionary biologists spread across multiple departments on campus, including Applied Ecology, Biology, Entomology and Plant Pathology, Forestry and Environmental Resources, Soil and Crop Sciences, and Biochemistry, among others. Raleigh is a lively yet affordable city with a high standard of living, and its surroundings offer numerous recreational activities.

We are looking for a highly motivated student with a keen interest in plant evolutionary ecology. Thesis projects can be tied into ongoing research in the lab or developed according to mutual interests. Interested students are encouraged to familiarize themselves with our research and publications at www.seemasheth.weebly.com . *TO APPLY*: Graduate students have the option of applying to the *Plant Biology Graduate Program* or the *Biology Graduate Program with a concentration in Ecology and Evolution**,* and are typically funded through a combination of teaching and research assistantships. Before submitting a formal application (*due January 15*), please send the following information to Dr. Sheth at Seema_Sheth@ncsu.edu no later than *November 1*: 1) CV; and 2) a statement of your academic background and previous research experience, current research interests, and why you want to join the lab.

Seema Sheth, Ph.D. Assistant Professor Department of Plant and Microbial Biology North Carolina State University seemasheth.weebly.com

Seema Sheth <Seema_Sheth@ncsu.edu>

NorthDakotaStateU PoplarHybridization

A PhD position is available to study adaptive introgression in Poplar with Jill Hamilton at North Dakota State University, as part of a new NSF Plant Genome-funded collaboration with Jason Holliday (Virginia Tech), Stephen Keller (Vermont) and Matt Fitzpatrick (U of Maryland).

Understanding how interspecific hybridization leads to the generation of complex adaptive traits across environments is a central objective of species management, particularly considering rapidly changing climates. Natural Populus hybrid zones provide a living laboratory to test the impact a long history of natural selection and weak barriers to reproduction have had on the origins of adaptations and the maintenance of species barriers. In addition, Populus has emerged as a model genus for evolutionary and functional genomic studies on climate adaptation and comprises several species that have been developed as feedstocks for bioenergy. The graduate student will leverage replicate natural hybrid zone transects between Populus trichocarpa and P. balsamifera across North America in conjunction with modern sequencing (whole-genome resequencing, long and short reads), large common garden experiments, and novel computational approaches to study the genomic and phenotypic consequences of hybridization across environments. Broadly this research will ask: (i) how is introgression arrayed across the genome and landscape? and (ii) what regions of the genome contribute to hybrid fitness and what are their environmental drivers? This project will provide the most comprehensive picture to date of the genomics of hybridization and heterosis in a tree species, enhancing our understanding of the relationship between adaptive introgression and fitness across environments.

The ideal PhD student will be prepared to combine field-based research monitoring phenotypic trait variation across replicated common garden experiments with genomic analyses (whole genome resequencing), and environmental and spatial data. The ideal graduate student will have some experience in computational biology; including population genomics and/or quantitative genetics. There is plenty of room to pursue particular interests in adaptive introgression and the origin of species barriers depending on the interest and

experience of the candidate. The student will be involved in a range of outreach activities associated with the project, including engaging with collaborator institutions and ArbNet (based at the Morton Arboretum, Chicago) to develop educational modules on climate adaptation using Poplar mini gardens planted across the United States. The ability to work independently and a strong background in genomics and computational skills are needed. Some experience in quantitative genetics, genome-wide association analysis or previous experience using environmental data to model species ranges is preferred.

For more information on the Hamilton Lab please visit the lab website at: http://www.jillahamilton.com. More information on the Department of Biological Sciences at NDSU can be found at https://www.ndsu.edu/biology/. Fargo is the largest city in the northern Midwest and as Gateway to the West is a vibrant, growing community that has access to numerous outdoor opportunities for all seasons.

For consideration, please send a cover letter summarizing your research interests and experience, a current CV, and contact information for three references to Jill Hamilton (jill.hamilton@ndsu.edu) with the email subject line "PhD application: [your full name]".

This position is funded via the NSF-Plant Genome Research program and includes full tuition waiver plus competitive stipend. Options are available for both US and international students. The start date is flexible with a tentative start date of spring or fall 2020. Applications are being accepted now and the position will remain open until filled.

– Jill Hamilton, Ph.D. Assistant Professor Department of Biological Sciences North Dakota State University http://jillahamilton.com/index.html jill.hamilton@ndsu.edu

Paris EvolutionHumanCooperation

**Three-year PhD position on modeling the evolution of human cooperation in the context of climate change and climate extremes.* * Full-time, fully funded position based in Paris, France. Starting October 1, 2019.

Project summary: Promoting human cooperation towards public goods is particularly challenging, and quantitative theory is scarce. We propose to develop general models for the joint evolutionary dynamics of cooperation and social norms, and apply these models to the problem of cooperation in response to anthropogenic climate change. Of particular interest is the effect of environmental fluctuations, including extreme climatic events, with the goal of predicting their effects across scales of time, space, and social structure. This interdisciplinary project will advance the mathematical framework of cultural evolution and human cooperation, and yield novel insights into the emergence and dynamics of cultures of cooperation' in the face of global environmental challenges.

Key words: Human cooperation. Cultural evolution. Non-vertical transmission. Transmission bias. Variable environment. Environmental extremes. Climate change. Game theory. Adaptive dynamics. Mathematical modeling. Nonlinear stochastic processes. Macroscopic limits.

Advising: The doctoral student will be co-advised by ****Regis Ferriere** (IBENS Paris and CNRS-ENS/PSL UMI iGLOBES at the University of Arizona), ****Sylvie Mlard** (Centre de Mathmatiques Appliques, Ecole Polytechnique, Palaiseau), **Jean-Baptiste Andr** (Institut Jean Nicod du Dpartement d'Etudes Cognitives de l'ENS Paris) and ****Sylvain Billiard** (Laboratoire Evo-Eco-Palo de l'Universit de Lille). The graduate program and primary advisor will be determined according to the student's main areas of training and long-term objectives. The student will be based in Paris, France, with an official affiliation with CNRS-ENS/PSL UMI iGLOBES at the University of Arizona where s/he will be given the opportunity to work for extended time.

Required qualification: We are looking for highly motivated applicants with a strong interest in mathematical and numerical modeling of population dynamics. Applicants' background may be in behavior, cognition, ecology, and/or evolution with strong experience in theory and modeling; or in applied mathematics (stochastic processes, game theory, dynamical systems...), theoretical physics or computational science with strong experience or motivation for applications to behavior, ecology, and evolution.

Applying: Applicants should have completed a Master degree or equivalent by the position start date. Applications should include a detailed CV (including name and contact information of two references) and a cover letter (statement of interest). **Applications should be sent to Regis Ferriere at **regis.ferriere@ens.fr** Review of applications will begin immediately and continue until the position has been filled.

Regis Ferriere <ferriere@biologie.ens.fr>

TexasAMU ComputationalBiology

The Cai Lab (http://www.genomezoo.net/) at Texas A&M University, College Station, is seeking a Ph.D. student in computational biology to work on single-cell data analyses, data mining and omics integration in complex biological problems, relevant to human and animal health.

We are looking for:

- Highly qualified and motivated scientists with expertise in genetics/genomics, bioinformatics, computational statistics, translational medicine, or a related field.

- Candidates should be able to communicate effectively in English and should enjoy working in an interdisciplinary context.

How to apply:

Please send your complete application as a single PDF file to Dr. Cai (jcai@tamu.edu), including:

1. Cover letter, stating your research motivation and interests; including relevant background

2. Detailed CV (with a list of publications or poster presentations)

3. Contact details of three references

For more information, visit http://people.tamu.edu/-˜jcai/ James Cai, Ph.D. Associate Professor Department of Veterinary Integrative Biosciences Department of Electrical & Computer Engineering (affiliated) Faculty of Genetics Texas A&M University 4458 TAMU College Station, TX 77843-4458 Tel (979) 458-5482 jcai@tamu.edu

jcai@cvm.tamu.edu

TrinityCollege Dublin HostParasiteInteractions

Graduate position TrinityCollege-Dublin.HostParasiteInteractions

A four-year funded PhD position (16,000 per year) starting either Sept 2019 or March 2020 is available at the Zoology Department of Trinity College Dublin, on how host density and diversity affect disease outbreaks, under supervision of Pepijn Luijckx.

Interested candidates should send: 1) a curriculum vitae and 2) a cover letter outlining your research interests and why you would like to do a PhD to: luijckxp@tcd.ie.

Project description The health and economic impact of recent outbreaks of Cholera, Zika virus and influenza underline the urgency of understanding how diseases spread and transmit. Transmission efficiency of many diseases is related to the density of the host populations. Lower host densities slow disease spread, until host densities are insufficient to maintain infection. Support for the existence of such host-density thresholds under which diseases cannot spread comes primarily from theory, with only a few empirical case studies. Considering that this theory is critical for our understanding of disease dynamics and forms the basis for vaccination and culling programs, it is thus surprising that the existence of host density thresholds has not been experimentally verified. Moreover, there are ample reasons why disease dynamics may be more complex than portrayed by simple theoretical models. Indeed, different assumptions on the genetic diversity of the host can lead to very different disease dynamics and abiotic (e.g. temperature) or biotic (predation, competition) factors may either facilitate or impede disease spread. To better understand how these factors impact disease outbreak and evolution and to validate the existence of host density thresholds, the candidate will induce epidemics under laboratory conditions with a model host-parasite system (the water flea Daphnia magna and the microsporidium parasite Ordospora colligata). Experiments could be supplemented with theoretical approaches in collaboration with Andrew Jackson (theoretician in the Zoology Department), genetic approaches to gain better insight in the role of host genetics, or field experiments, depending on the candidates interests and strengths.

Requirements - Undergraduate or Masters degree in ecology or evolution (or related field) and a keen interest in host-disease interactions.

Desirable - Creative, motivated and resilient. - Experience running large laboratory experiments. - Experience with aquatic insects. - Knowledge of experimental design and experience using R. - Willingness to contribute to laboratory maintenance and animal care. - Capable of working both independently and as part of a team. - Proficient in written and spoken English.

Research group The candidate will be joining Floriane OKeeffe, a PhD candidate starting in September and Pepijn Luijckx in the waterflea@tcd laboratory at the

Zoology Department in Trinity College Dublin. The lab has a keen interest in empirically testing evolutionary and ecological theories pertaining to disease interactions. For example, past work has tested underlying assumptions of theory on host-parasite evolution (Luijckx et al. 2013 Current Biology), the evolutionary maintenance of sexual reproduction (Luijckx et al. 2017 PNAS) and how a warming climate may alter disease outbreaks (Kirk et al 2018). In addition to the waterflea@tcd laboratory the Zoology Department (https://www.tcd.ie/Zoology/) is home to research groups with expertise in theory (e.g. thermal scaling, host-parasite models), community ecology, parasitology, and aquatic biology providing ample opportunities for collaborative work.

Pepijn Luijckx <LUIJCKXP@tcd.ie>

UBasel PlantAdaptation

PhD position in Plant Adaptation to Climate Change, University of Basel, Switzerland

A 4-year PhD position (100%) is available in the group of Plant Ecology and Evolution at the University of Basel, Switzerland (https://duw.unibas.ch/en/plant-ecology-and-evolution/). Research in the group focuses on plant adaptation to spatial and temporal change in climatic conditions. We estimate the extent to which climate adaptation is possible, what the sources of evolutionary constraints are, and how they will affect future species distribution under scenarios of global warming.

The evolutionary causes of climate niche limits are poorly known. Theory points to changes in the selection regime and genetic limitations. The selection regime may be important if environmental gradients are multivariate or steep in nature. Genetic limits may arise because of low genetic variation in individual environmental tolerances or because of genetic correlations antagonistic to the direction of selection.

Your tasks: Working with the plant Arabidopsis lyrata, the student will assess the tolerance of plants to stressful climatic conditions in greenhouse and outdoors, estimate genetic variances of tolerance and life history traits, and study the quantitative genetic and genomic underpinning of tolerance. Fieldwork will be an important part of the project and take place in eastern states of the US, in collaboration with local universities.

Your profile: Candidates should have an enthusiastic interest in plants and their evolution, and a strong background in quantitative thinking, experimental design, statistical analysis/bioinformatics, and rearing plants. Applicants must have a university degree in the natural sciences that allows entrance to a PhD program (ideally in evolutionary biology or ecology), and very good organizational, analytical, and scientific writing skills. Applicants should have a driver's license.

We offer: The project is based at the Department of Environmental Sciences, University of Basel, Switzerland. The Department offers a stimulating environment, including a rich spectrum of research activities in life sciences (plant ecology, population genetics, evolutionary biology, plant physiology and molecular and cell biology). Students will be enrolled in the PhD program of the Zürich-Basel Plant Science Center. Basel is a mid-sized Swiss city, well connected and offering a broad range of cultural and recreational activities. Ideal starting date is October 2019 but is open to negotiation.

Contact: For more information, contact Yvonne Willi (yvonne.willi@unibas.ch). Motivated applicants should submit (1) a one-page letter that summarizes interests and relevant experience, (2) their CV, (3) copies of undergraduate and masters/diploma transcripts, and (4) contact information of two references (all as a ***single PDF***) to: franziska.grob@unibas.ch. Applications are welcome until the position is filled and will be reviewed starting on July 21, 2019.

Yvonne Willi <yvonne.willi@unibas.ch>

UBologna Italy FishPaleogenomics

Fully-funded EU Marie Sklodowska-Curie PhD Studentship in Paleogenomics and Ancient Biomolecules of Fish Remains

Job description We invite applications for a fully funded 3-years PhD position starting in November 2019 as part of the Marie Sklodowska-Curie Innovative Training Network "SeaChanges < https://-sites.google.com/york.ac.uk/seachanges/ >: Thresholds in Human Exploitation of Marine Vertebrates"(https:/-/sites.google.com/york.ac.uk/seachanges/) available at the GenoDREAM Lab (Genetics & Genomics of Marine Resources & Environment), Dept. Biological, Geological & Environmental Sciences and at the Ancient DNA Lab, Dept. of Cultural Heritage, University of Bologna, Campus of Ravenna, Italy.

SeaChanges provides state-of-the-art training to forge a

new generation of interdisciplinary researchers able to operate at the interface of archaeology and marine biology by joining experts from 7 EU leading institutions in archaeology, zoology, marine ecology & conservation biology. SeaChanges will pool experts' disparate skills and experience in an integrated training programme for PhDs candidates to gain the interdisciplinary understanding & skills required fully to realise the potential of archaeological remains to understand past marine resource use, assess past impacts, and use these to inform the present. The successful candidate will participate in a Marie Curie international training network and will work in a highly interactive international environment with other Marie-Curie PhD students, researchers, authorities, NGOs and industry.

Candidates with backgrounds in disciplines of Marine Sciences (including Biology, Ecology, Evolutionary Biology, Population Genetics/Genomics, Biotechnology, Zooarcheology, and/or Archeogenetics) are all encouraged to apply; each studentship will be developed with the successful applicant.

The candidates are invited to apply for the project hosted by the University of Bologna (SeaChanges ESR 12): Exploring the correlations between environmental/ecological drivers and past/contemporary genetic diversity of Atlantic and Mediterranean Bluefin tuna populations

Among the many fish species commercially exploited since prehistoric times, bluefin tuna (BFT, Thunnus thynnus) is both one of the most economically significant and one of the most threatened. ESR 12 will explore and highlight correlations between environmental and ecological drivers (including anthropogenic ones) and past and present genetic diversity of the Atlantic and Mediterranean BFT populations, by measuring (a) the temporal variation of environmental and ecological proxies and (b) paleo- and neo-genomic adaptive variation. In order to resolve such a complex system of factors and processes, the ESR will take a multidisciplinary approach combining genomic methods (ancient DNA, paleoproteomics) with stable carbon and nitrogen isotope analyses. The availability of archaeological/historical (from c.2,000 to c.100 years before present) and contemporary BFT individuals will provide, for the first time among non-model animals, data on genome variation on a temporal scale in the same taxon.

Using genome scan techniques, ESR 12 will evaluate the effects that environmental disturbances (habitat changes, pollution, industrial fishery exploitation) have on biological adaptation, through the analysis of the evolution of structural/functional genomic components such as adaptive traits. The ESR will use ZooMS for initial identification/ screening of ancient tuna remains, expanding this technique to Scombridae for the first time via a secondment at the University of Copenhagen. Stable isotopes analyses, via secondment at University of York, will provide signatures of environmental and ecological conditions. The student will cooperate with ESR 15 regarding potential additional ancient samples from the Black Sea. Supervisors: Fausto Tinti, Alessia Cariani (Tuna Historical Genetics&Genomics; Dept. Biological, Geological & Environmental Sciences) & Elisabetta Cilli (Fish archeogenetics; Dept. Cultural Heritage). Training secondment opportunities: University of York (UK) and University of Copenhagen (DK), with Prof. Matthew Collins.

More about the position

The fellowship will be for a period of 3 years. Starting date 01.11.2019.

Affiliation:

The successful candidate will be enrolled in the PhD programme in Cultural and Environmental Heritage (https://www.unibo.it/en/teaching/phd/2019-2020/cultural-environmental-heritage) at the Campus of Ravenna < https://www.unibo.it/en/campus-ravenna > (https://www.unibo.it/en/campus-ravenna) of the University of Bologna

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UCalgary PacificSalmonEvolution

The Rogers lab at the University of Calgary is currently looking to recruit a highly motivated MSc student in Ecology and Evolution to research the ecology of wild and hatchery-born Pacific Salmon in the Nitinat River on Vancouver Island, BC. This position would start September 2019.

Scientific context:

Pacific salmon are vital resources in the ecological and human communities in which they occur. However, many stocks of these species have declined from historical levels due to a combination of factors. A widely employed strategy within North America to bolster such stocks is the use of hatchery enhancement. Hatcheries

use captured broodstock (breeding individuals) to produce fertilized eggs which are reared through the egg-to-smolt (seaward-migrating juvenile) phase and then released to the wild. Despite their widespread use, the long-term effectiveness of hatcheries and their effects on wild fish remains uncertain.

The project:

The project will take place within the context of a larger NSERC-funded strategic project in which Coho salmon have been raised under traditional hatchery practices and under enrichment practices aimed at producing fish that more closely resemble their wild relatives. Using a combination of genetic screening and traditional marking strategies, the fates of these fish can be tracked towards testing the ecological and genetic consequences of enhancement. The exact questions addressed by the MSc project are negotiable but should focus on aspects of how wild-born Coho and hatchery-born Coho from both treatments behave (in an ecological sense) in-river. Potential questions include but are not limited to:

Do juvenile and adult phenotypes vary in association with enrichment treatment?

Do returning adults from these groups select different microhabitats for spawning, either increasing or decreasing competition?

What are the distributions of individuals from these groups across the river system, both when returning and as young before migration to sea?

Do individuals from these groups tend to mate assortively due to common learned mating behaviours?

A field season sampling adults returning across the Nitinat for genetic material is currently being planned for the 2019 migration (starting November) and should form the basis of a large component of the project. Lab-based behavioral and / or physiological experiments involving young Coho will also be possible. Whatever the final experimental design, the MSc student should expect to work closely with a PhD student and Post-Doc currently working on aspects of the larger project, as well as our partners, including the Nitinat River Hatchery, Department of Fisheries and Oceans Canada, and the Dididaht and Huu-ay-aht First Nations.

Specifics: This project has the potential to be based out of either the University of Calgary or the Bamfield Marine Sciences Centre. Behavioural and / or physiological experiments on young would be performed at the BMSC. For either option, extended periods of work on Vancouver Island should be expected. Although much of the Nitinat River is accessible by logging roads, hiking in rough terrain with heavy packs and remote camping for several days at a time - in a temperate rainforest - should be expected. This project is fully funded with a guaranteed $23 000/year in funding for two years. Associated graduate-level coursework at the UofC is offered in English only. The ideal candidate should have a strong and demonstrated interest in ecology and evolution, be curious about nature, and be team-oriented.

More details about the Rogers Lab and graduate studies in biology at the UofC can be found at http://people.ucalgary.ca/ ~ srogers/ and https://-bio.ucalgary.ca/graduate respectively.

Candidates should direct questions or applications including a cover letter, cv, academic transcripts and the names of two references to Sean Rogers (srogers@ucalgary.ca). A search will continue until the position is filled.

director@bamfieldmsc.com

UIllinois FishEvolutionGenomics

UIllinois.FishEvolutionGenomics

The Biodiversity Genomics Lab of the Illinois Natural History Survey (Tan Lab), is seeking to recruit a M.S. or Ph.D. graduate student interested in fish evolution and genomics to start in Fall semester of 2020. The lab's theme is in applying genomic techniques to understanding fish biodiversity. Most projects in the lab include studying macroevolutionary patterns, trait evolution, genetic-phenotypic correlations, and diversification of fishes, primarily focusing on diverse fish groups like catfishes and cypriniforms (i.e. carps and minnows). Projects in the lab can apply a variety of methods including transcriptomics, phylogenomics, comparative phylogenetic methods, genomics, population genomics, bioinformatics, and morphological studies including museum specimens. Experience with molecular labwork (specifically DNA/RNA extraction) and bioinformatics are desirable, though not required. For more information on the research occurring in the lab, see this page: https://miltontan.github.io/research/ The University of Illinois is home to a strong collection of faculty researching ecology and evolution in the Department of Animal Biology and the School of Integrative Biology. The student may enroll as a graduate student with either the University of Illinois Urbana-Champaign Department of Animal Biology, soon to be the Department of Evolution, Ecology, and Behavior (http://sib.illinois.edu/-

animalbiology/graduate_admissions) or the interdisciplinary Program in Ecology, Evolution, and Conservation Biology (http://peec.illinois.edu/prospective/-pre_application). Champaign-Urbana has a diverse, affordable, micro-urban community, are great college towns, and are close to three major cities including Chicago. Learn more about Champaign-Urbana here: http://www.yourewelcomecu.com/cu-community/ The Illinois Natural History Survey, is a part of the Prairie Research Institute (PRI) at the University of Illinois at Urbana-Champaign, one of the highest ranked public universities in the country. Since 1858, the Illinois Natural History Survey has been the guardian and recorder of the biological resources of IllinoisXthe states biological memory. With a staff of over 200 scientists and technicians, it is recognized as the premier natural history survey in the nation. The Illinois Natural History Surveys Biological Collections include more than 9.5 million specimens housed in eleven separate collections, including the most complete record of Illinois biota anywhere, as well as having global geographic coverage for many groups. The fish collection alone houses over 1 million specimens and ranks within the top 15 largest in North America, providing an excellent resource for research into fish biodiversity.

Interested students are encouraged to contact Dr. Milton Tan <miltont@illinois.edu> with a brief statement of their research interests, experience, and accomplishments and a CV. Application deadlines for Animal Biology and PEEC programs are as early as December 1st 2019. Interested applicants are encouraged to contact Dr. Milton Tan directly prior to the application deadline.

Milton Tan, Ph.D. Assistant Research Scientist in Biodiversity Genomics Illinois Natural History Survey Prairie Research Institute University of Illinois at Urbana-Champaign

"Tan, Milton" <miltont@illinois.edu>

UMontreal EvolutionaryMtDNAPhysiology

*PhD Position in evolutionary mitochondrial physiology in Montreal**

An opportunity is available for a PhD position in the research group of Dr Sophie Breton at the Université de Montréal.

Project: Organisms respond to environmental factors over time in two ways: (i) short-term changes during their lifetime (*e.g.* epigenetic modifications and gene expression changes) and (ii) long-term changes across generations, *i.e.* heritable evolutionary responses, resulting in genetically distinct populations ' potentially even new species. While empirical examples of rapid responses and evolutionary adaptations involving nuclear epigenetic variation (in the form of DNA methylation) and genetic variation (through the evolution of lineage-specific or adaptive genes or ORFan genes) exist from a range of animals and plants, the importance of mitochondria (the powerhouse of cells) and their genomes (mtDNA) in promoting adaptation to both short- and long-term environmental changes using the same mechanisms is still largely unexplored. This major knowledge gap is surprising given the pivotal role of mitochondria in cell survival and functions, aging and human diseases. The team of *Dr Sophie Breton* (*Canada Research Chair in Evolutionray Mitochondrial Biology*) is interested in this fundamental knowledge gap in our understanding of adaptation and speciation processes through the use an integrative approach combining epigenomics, transcriptomics, physiology and cell biology to investigate the capacity of mitochondria and their genomes to adapt to changing environments. *The PhD project will focus specifically on the estimation of the prevalence of mtORFans and their putative function(s).* Bivalves, with their sex-specific mt-encoded proteins with (still unknown) functions other than energy production, and/or yeast (*S. cerevisiae*), with their important mitochondrial genome size, will offer unique opportunities to test the hypothesis that like the nuclear DNA, the mtDNA possesses several overlooked small protein-coding genes that have key functions and are important sources of functional novelty.

The starting date is scheduled for *May or September 2020 at the Université de Montréal,* under the supervision of *Sophie Breton*. A $ 17,000 / year scholarship is offered for three years with funding available for a fourth year, but the successful candidate will be invited to submit an application to the FRQNT and NSERC as early as autumn 2019.

*Qualifications: *

- Be highly motivated and determined to complete graduated studies;

- Publication experience in scientific journals is valued;

- Have a good academic record (the minimum rating to be admitted is 3.2 / 4.3);

- Having experience in cell / molecular biology is an important asset.

Interested students should contact Sophie Breton s.breton@umontreal.ca *before September 15, 2019* and attach a CV, academic transcript, contact details of two academic referees, and a brief description of their research interests.

– Sophie Breton Professeure agrégée Université de Montréal Pavillon Marie-Victorin, Faculté des Arts et des Sciences CP 6128, Succursale Centre-Ville Montréal QC H3C 3J7 514-343-7460 (tel) 514-343-1025 (lab)

sophie breton <breton.sophie@gmail.com>

UMuenster WaspEvolutionaryGenetics

Open PhD position in Evolutionary Genetics & Analytical Chemistry:

The Molecular Evolutionary Biology and Chemical Communication group at the Institute for Evolution and Biodiversity at the University of Muenster, Germany, are looking to fill a PhD Position (TV-L E13, 65%) for the research project:

Genetic, chemical and behavioral investigation of sexual signaling evolution in parasitoid wasps

The fixed-term position is available for three years and will begin on the 1st of September 2019 or as soon as possible.

One of the most important questions in evolutionary biology is how new species potentially originate. The development and maintenance of barriers to interspecific reproduction has been postulated to be the major driving force of speciation. Variations in sexual signaling have the potential to greatly contribute to keep species reproductively isolated through species-specific communication and recognition mechanisms. In the insect model system Nasonia, a closely related species complex of parasitoid jewel wasps, we could demonstrate that female cuticular hydrocarbons (CHC) function as species-specific sex pheromones distinguishable by the males, hinting at their profound role in reproductive isolation. Curiously though, in one particular Nasonia species (N. giraulti), an apparently recent evolutionary leap shifted the female CHC profile out of the males perceptive range, which, in turn, still retain a potentially ancestral attraction to CHC profiles of females from other species.

In this PhD project, the successful candidate will have the unique opportunity to track this highly unusual evolutionary shift genetically, chemically and behaviorally with the ultimate goal to unravel the key compounds responsible for maintaining the sexual signaling function in Nasonia CHC profiles. The PhD candidate will establish experimental female backcrosses based on Nasonia hybrids to enable the performance of haploid genetics on Nasonia males to assess phenotypic traits related to CHC signaling in the diploid Nasonia females. The sexual attractiveness of the resulting hybrid female backcrosses will be simultaneously accessed by our established male mate choice assays as well as gas-chromatographic coupled with tandem mass spectrometric analysis of their corresponding CHC profiles, utilizing our new, state-of-the-art GC-MS/MS set-up. Furthermore, the successful candidate is expected to generate a high-density genomic map based on Restriction-site Associated DNA (RAD) sequencing for localizing quantitative trait loci (QTL) governing CHC variation in the hybrid female backcrosses. To confirm their function, the unraveled candidate gene regions co-localizing with our predicted QTL for CHC variation and female attractiveness will be selectively knocked down in Nasonia females utilizing double-stranded RNA interference (dsRNAi). Lastly, the successful knockdown in the Nasonia females needs to be confirmed behaviorally (male mate choice assays), chemically (GC-MS/MS) and genetically (qPCR), for unambiguously revealing the crucial components and mechanisms governing the sexual signaling function in Nasonia CHC profiles.

The successful PhD candidate will be supervised by Dr. Jan Buellesbach and integrated into the newly established Chemical Communication within the larger framework of Molecular Evolutionary Biology headed by Prof. Dr. Juergen Gadau. The PhD student will also have the chance to join the Muenster Graduate School of Evolution, one of the largest graduate programs in evolutionary biology in Germany.

How to apply:

The application should be compiled into a single PDF file (max. 5 MB), which should include (1) a cover letter stating the motivation to join the research project, (2) a CV including information about former academic education and degrees, professional experience, publications (if applicable), fellowships/awards, conference contributions, languages, and further relevant skills and abilities, (3) the candidates master thesis abstract, and (4) two letters of recommendation from former supervisors (which can also be sent directly to Dr. Buellesbach by the respective supervisors independently from the applicants other documents).

Applications should be sent by email as one PDF file to

Dr. Jan Buellesbach (buellesb@uni-muenster.de). The deadline for the application is 1st of July 2019.

Requirements:

Applicants are required to have a master or equivalent degree in biology, chemistry or a related field. Applicants are also expected to show a strong interest in evolutionary biology, functional genetics and genomics as well as analytical chemistry. Experience with genomic mapping techniques, particularly RAD-sequencing and QTL mapping as well as functional genetics approaches such as dsRNAi and qPCR are highly desirable. Furthermore, high motivation to be trained in state-of-the-art gas-chromatography coupled with tandem mass spectrometry (GC-MS/MS) analysis and behavioral mate

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UNewSouthWales SexualReproduction

PhD project on sexual conflict and the maintenance of sexual reproduction

Bonduriansky lab,

School of Biological, Earth and Environmental Sciences

University of New South Wales, Sydney, Australia

This project will address a central question in evolutionary biology: why is sexual reproduction so prevalent in animals? It will test a new hypothesis on the potential for sexual conflict to influence the occurrence of sexual and asexual reproduction. The project will involve behavioural and life-history assays as well as population-genetic and microbiome analysis. The research will include a substantial field-work component involving population surveys and field-experiments in natural populations of a facultatively parthenogenetic insect in Australian tropical rainforest habitat. For more information, please contact Russell Bonduriansky (r.bonduriansky@unsw.edu.au).

The ideal candidate for this project is a keen, motivated student with a background in evolutionary ecology and genetics and a demonstrated capacity for research (including publications). The student will have an opportunity to learn specialized skills and techniques required for this project.

A prestigious Scientia PhD scholarship is available for this project. The scholarship includes a tuition waiver, an annual stipend of A$41,209 for four years, and generous funding for relocation costs and career development activities.

Scholarship applications can be lodged at this link:

https://www.scientia.unsw.edu.au/scientia-phd-scholarships/sexual-conflict-and-paradox-sex-insights-stick-insects Russell Bonduriansky <r.bonduriansky@unsw.edu.au>

UNewSouthWales Sydney InvasionGenomics

UNSW is now accepting expression of interest for the next round of Scientia PhD Scholarships, including our project:

Developing genomic resources to advance the molecular ecology of invasions (http://bit.ly/toad_genomics_phd)

These are exciting four-year scholarships to start in 2020 with full fees covered, a generous stipend, and career development funds.

Scheme URL: https://www.scientia.unsw.edu.au/-scientia-phd-scholarships Application closing date:12 July 2019. Location: University of New South Wales, Sydney, Australia

PROJECT DESCRIPTION Invasive species pose a major challenge to biodiversity worldwide but also provide the unique opportunity to study evolution in action. Rapid changes are often associated with invaders introduction to novel environments. Understanding how molecular mechanisms drive these changes enables the creation of innovative solutions to controlling invasions and managing native species response to climatic change. The iconic Australian cane toad invasion is one of the best studied globally and is an emerging model for invasion genomics. This project will use whole genome sequencing, novel bioinformatic approaches and proteomics to identify molecular drivers of invasion success.

IDEAL CANDIDATE We seek a highly motivated, curiosity-driven student with an interest in evolutionary biology and bioinformatics, who would like to understand why invasive species flourish. Ideally, candidates will have demonstrated computer literacy and be willing

to learn new approaches to analysing genomic and proteomic data. Strong writing skills will be an asset. We will consider applicants coming from either a computing background who want to work in evolutionary biology or those with evolutionary biology backgrounds and a keen interest in bioinformatics. The supervisory team offer a high level of support in the fields of evolutionary biology, genomics, proteomics and bioinformatics. This project provides the opportunity for the successful applicant to develop the most current skills and build a successful career in these fields while contributing to solutions for two major global issues: loss of biodiversity and species response to climate change.

SUPERVISORY TEAM: * Dr Lee Ann Rollins, UNSW Scientia Fellow * Dr Richard Edwards, Senior Lecturer in Genomics & Bioinformatics * Prof Marc Wilkins, Professor of Systems Biology

HOW TO APPLY: Complete an expression of interest at: https://www.scientia.unsw.edu.au/scientia-phd-scholarships/developing-genomic-resources-advance-molecular-ecology-invasions The strongest expressions will receive an invitation to submit a full application to the scholarship competition.

CONTACT To discuss the project and related opportunities, please contact Lee Ann Rollins (l.rollins[at]unsw.edu.au / @rollins_lee) or Rich Edwards (richard.edwards[at]unsw.edu.au / @slimsuite).

Richard Edwards <richard.edwards@unsw.edu.au>

UNSW Sydney ClimateChangeAdaptation

UNSW, Sydney has announced another round of prestigious PhD scholarship (http://www.2025.unsw.edu.au/-apply). We have been lucky enough to have been awarded one of these positions.

Stipend $41,209 per year for 4 years Career development: $ 10,000 per year (e.g. conference travel) Tuition fees completely covered

Title: Phenotypic plasticity and aging in a changing world

Abstract: Human-induced changes such as clmate change threaten many populations. Evidence suggests that for many organisms, an increase in temperature expedites aging. Importantly, aging is often associated with the loss of phenotypic plasticity, key for population viability in a changing world. Surprisingly, we know very little about how plasticity changes as organisms age. This project will fill this knowledge gap on age-dependent plasticity using both theoretical and empirical approaches. Our project will reveal not only how phenotypic plasticity can dampen the effect of climate change, but also how, in turn, climate change itself can affect phenotypic plasticity.

Candidate: We are looking for a candidate with a background in ecology and evolution, so they are familiar with the theory and literature, although a candidate with a background in mathematics, statistics and computer sciences is also suitable. Ideally, a candidate should have some experience in empirical work (e.g. having conducted a field or lab experiment of their own) and good quantitative and computational skills (e.g. basic knowledge of linear algebra, competence in R). Also, we seek a demonstrated ability in academic communication in the form of journal publications and/or conference presentations.

Supervisory team: Prof Shinichi Nakagawa (http://-/www.i-deel.org/) Prof Tracey Rogers (https://-www.bees.unsw.edu.au/tracey-rogers) Dr Szymon Drobniak (https://szymekdrobniaken.wordpress.com/)

Procedure: Email letter with CV, academic record, and details of two academic referees, to Prof Shinichi Nakagawa (s.nakagawa@unsw.edu.au). Your letter should explain how your CV is sufficient to allow application for a Scientia PhD Scholarship (you will need to write an application for this scholarship).

Professor Shinichi Nakagawa Deputy Director of Research, Evolution & Ecology Research Centre, EERC (Visiting Scientist at Garvan Institute of Medical Research) Room 5102, Biological Sciences Building (E26) School of Biological, Earth and Environmental Sciences, BEES The University of New South Wales Randwick NSW 2052, Sydney, Australia Mobile: 0422 655 854 Office: 0293 859 138 Website: http://www.i-deel.org/ Shinichi Nakagawa <s.nakagawa@unsw.edu.au>

UNSW Sydney EvolutionHumanBehavior

UNSW, Sydney has announced the latest round of prestigious Scientia PhD scholarships (http://-www.2025.unsw.edu.au/apply). These positions are advertised by project, and one of our projects is listed. The scholarship includes:

Stipend Au$41,209 per year for 4 years Career development: Au$ 10,000 per year (e.g. conference travel) Tuition fees completely covered

Title: Could economic inequality be slowing trends toward gender equity?

PROJECT DESCRIPTION As wealthy Western countries have progressed toward gender equity, differences between women and men in psychological traits, and conditions like anxiety and depression have, paradoxically, increased. One intriguing possibility is that rising income inequality among men and among women has changed incentive structures leading to wider gender gaps. Currently we know little about whether women and men respond differently to inequality.

This project includes experiments (conducted in person and online) and a cross-national study in order to understand individual differences in how people respond to inequality and changing global trends in behaviour.

IDEAL CANDIDATE The candidate may have a background in evolutionary biology, psychology, behavioural ecology, anthropology, or economics. They will be committed to the empirical, theory-driven study of human behaviour and society.

Ideally they will have experience in research design and statistical analysis. Programming experience and advanced computer science skills may be useful.

The phenomena we study are often ideologically polarising, and require an ability to write and speak with clarity and nuance. Evidence of excellent writing and communication skills, in academic and/or non-academic contexts, would be ideal.

We value diversity of background and experience in our team. The cross-national nature of some of our work means experience working in a variety of cultures will be an asset.

SUPERVISORY TEAM:

* Scientia Professor Rob Brooks (UNSW Sydney) - https://research.unsw.edu.au/people/scientia-professor-robert-clinton-brooks * Dr Khandis Blake (Melbourne University from July 2019) - https://-research.unsw.edu.au/people/dr-khandis-rose-blake * Associate Professor Michael Kasumovic (UNSW Sydney) - https://research.unsw.edu.au/people/-associate-professor-michael-matthew-kasumovic

HOW TO APPLY: By 11 July 2019, you should complete the expression of interest for this project at: https://www.scientia.unsw.edu.au/scientia-phd-scholarships/could-economic-inequality-be-slowing-trends-toward-gender-equity These EOIs will be assessed, we will screen applicants at this time, and the two strongest expressions will receive an invitation to submit a full application to the scholarship competition.

To discuss the scheme, project and any other questions you have, please contact Rob Brooks (rob.brooks V at V unsw.edu.au) via email.

rob.brooks@unsw.edu.au

UOttawa 2 MolecularEvolution

Dear All,

I have two PhD positions in my lab to start in September, 2019, on one of the following areas (in decreasing priority):

1. Evolution of splicing machinery and alternative splicing 2. Evolution and optimization of translation control in yeasts, bacteria and bacteriophages 3. Bioinformatics: algorithms and software development for RNA-Seq and ChIP-Seq data analysis 4. Molecular phylogenetics (of deep phylogenies) 5. Large-scale phylogeographic patterns and processes

To gain more information on our current research, please visit our lab publication page at: https://scholar.google.ca/citations?hl=-en&userÃ≫AS_FcAAAAJ&view_op=list_works Best Xuhua http://dambe.bio.uottawa.ca http://-science.uottawa.ca/biology/people/xia-xuhua Xuhua Xia <Xuhua.Xia@uottawa.ca>

UQueensland 2 MolecularEvolution

Two fully funded PhD scholarships (tuition and living allowance) are available from the University of Queensland (UQ) to work on the below projects. The PhD candidature at UQ is a full-time research position (no teaching or service) and is typically completed within 3-3.5 years.

The successful candidates will join the Molecular Evolution, Pharmacology and Structure (MEPS) consortium, which was recently established through Australian government funding. The three cornerstones of the consortium (evolution, pharmacology and structure) are combined to uncover the function of bioactive peptides while improving our ability to engineer novel molecules:

Project: Ion channel structural biology (Biochemistry, biophysics) The research groups have a strong interest in discovery and characterisation of disulfide-rich peptides, many of which are sourced from venomous animals, where they have evolved to exert their function through interactions with ion channels. Subsequently, these peptides have become invaluable tools in elucidating the structure and function of many ion channels. This project involves the use of state-of-the-art biochemical methods for production of peptides and ion channels, and advanced biophysical techniques to study their interactions at atomic resolution.

Project: Ion channel pharmacology (Electrophysiology, pharmacology) The groups have a particular focus on acid-sensing ion channels and voltage-gated sodium channels and their role in pain as well as inflammation / neuroinflammation and their contribution to disorders such as stroke, motor neuron disease and multiple sclerosis. This project will advance our knowledge in these areas through use of electrophysiology methods (two-electrode voltage clamping of Xenopus oocytes / patch clamp of mammalian cells), HPLC, mass spectrometry, molecular biology, peptide and protein production and organ bath assays.

Project: Multidomain disulfide-rich peptides (Biochemsitry, Biophysics) The groups have recently defined a new class of multidomain disulfide rich peptides with unique pharmacological properties, referred to as Secreted Cysteine-rich REpeat Peptides (SCREPs). Using custom bioinformatics tools, they have established a large database of these molecules and have classified them according to predicted structure and activity. The project involves identification, production and characterisation of SCREPs with potentially novel bioactivity. Production, structural characterisation and evolutionary analyses will be performed in-house, while activity and function will be assessed through a network of ongoing collaborations.

UQ is ranked well within the top 100 universities in the world (46 in World Impact Ratings 2019), and hosts a highly productive life science research environment supported by world class research infrastructure. The St Lucia campus, where these projects are based, covers a large area of lakes, sub-tropical plants and wildlife providing a stunning backdrop to a thriving social and academic environment. The campus is located in Brisbane, which is well-known for its relaxed city living, close proximity to beautiful rainforests, excellent diving, and some of the worlds best beaches.

Those interested in applying should send their CV and a cover letter to: m.mobli@uq.edu.au, l.rash@uq.edu.au, or e.undheim@uq.edu.au

For more information, see https://cai.centre.uq.edu.au/-phd-positions-available-brisbane-australia . Eivind Undheim <e.undheim@uq.edu.au>

USherbrooke HumanEvolutionaryBiol

PhD position in human evolutionary biology

The study of pre-industrial human populations offers a unique opportunity to answer questions in evolutionary biology that require longitudinal data over many generations. We use a remarkable database assembled at the Université de Montréal which includes the life-histories of more than 800,000 individuals born between 1608 and 1750. Date of birth and death are known in more than 80% of the cases and the genealogy of married women is known in 95% of the cases, making this dataset one of the most detailed of its kind in the world.

Our goal is to study carry-over effects of early life conditions on fitness and measure how the heritability of fitness is context-dependent (family, environment) and is affected by intergenerational environmental effects. Other questions of interest from the PhD candidate are welcome.

Candidates should possess or have interest in gaining strong biostatistical skills. Funding is available for three years but candidates will also be required to seek for external grants (e.g. FRQNT, NSERC). The expected starting date is September 2019. The PhD candidate will be co-supervised at the Université de Sherbrooke and Bishop's University, Canada, and will be expected to interact with our collaborators in demography at the Université de Montréal.

If interested, send an email to Patrick Bergeron (patrick.bergeron@ubishops.ca) or to Fanie Pelletier (fanie.pelletier@usherbrooke.ca) before June 28th, including a cover letter, a copy of your CV and a transcript.

Patrick Bergeron <pbergero@UBishops.ca>

USunshineCoast 2 SocialEvolution

USC. Disease Outbreak and sociality in reptiles

A PhD project is available in Celine Frere's Lab on the interaction between disease and sociality in eastern water dragons. In particular, the project will focus on the impact of the disease on sociality, whether it is socially transmitted and potential link to genetics (MHC complex). This PhD project will take advantage of 9 years of behavioural, ecological and genetic dataset on eastern water dragons located at the Roma Street Parkland in Brisbane, Australia (www.celinefrerelab.com).

This project is based on our recent discovery of a serious fungal disease outbreak in eastern water dragons, genera Nannizziopsis (Publication currently in Review). As part of this disease outbreak, we have been monitoring its prevalence in our long-term monitoring population at the Roma Street Parkland providing us with a unique opportunity to investigate its prevalence, transmission and potential genetic basis.

This project will require PhD students to develop strong quantitative skills (R coding and modelling), spend time in the field and be willing to learn molecular skills. We also foster strong collaborations, team work and inclusivity.

Applicants will need to have an extremely competitive academic record and obtain an Australian Postgraduate Award or International Research and Fee Remission Scholarships. More information about the application process and internal deadlines for prospective students can be found on the Applying for a Research Training Program web page (for details and scholarship application forms https://www.usc.edu.au/research-and-innovation/researchstudents/hdr-scholarships/-applying-for-a-research-training-program-scholarship). The main application deadlines for these scholarships are 13th of October 2019 (Domestic and International), but application to the HDR/PHD programs must be processed prior to the 13th of October 2019.

Please contact Celine Frere (cfrere@ usc.edu.au) before the 25th of June 2019 if interested.

USC. Social Evolution in dolphins

A PhD project is available in Celine Frere's Lab on the evolution of social behaviour in dolphins. In particular, the project will focus on the role that long-term avoidances play in shaping dyadic social cohesion and population level social structure. This PhD project will take advantage of the 36+ years of behavioural, ecological and genetic dataset on the Monkey Mia, Shark Bay, dolphins (https://monkeymiadolphins.org).

Most research on the evolution of social behaviour has to date focused on affiliative behaviour. This was obviously influenced by our desire to understand the evolution of cooperative behaviour; a threat to Darwin's theory of natural selection. However, affiliation represents only one side of the coin: individuals also can and do choose to actively and consistently avoid conspecifics over long periods of time, even when they share space or habitat. Though avoidance is generally accepted as an alternative to preference in animal societies, few studies have attempted to characterise the ecological or genetic conditions that drive its evolution.

This PhD project will be based at the University of the Sunshine Coast, Australia. You will be supervised by Dr Celine Frere (www.celinefrerelab.com) and co-supervised by Professor Janet Mann (Georgetown University). This project will require PhD students to develop strong quantitative skills (R coding and modelling) as well as spending 2 months per year in the field in Monkey Mia, Shark Bay, Western Australia.

Applicants will need to have an extremely competitive academic record and obtain an Australian Postgraduate Award or International Research and Fee Remission Scholarships. The RTP Scholarship Round will open on Monday 3 June. More information about the application process and internal deadlines for prospective students can be found on the Applying for a Research Training Program web page (for details and scholarship application forms https://www.usc.edu.au/research-and-innovation/researchstudents/hdr-scholarships/-applying-for-a-research-training-program-scholarship). The main application deadlines for these scholarships are 13th of October 2019 (Domestic and International), but application to the HDR/PHD programs must be processed prior to the 13th of October 2019.

Please contact Celine Frere (cfrere@ usc.edu.au) before the 25th of June 2019.

Celine Frere PhD #SuperstarsofSTEM Senior Research Fellow Office: KDM2 Faculty of Science, Health, Education and Engineering University of the Sunshine Coast

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UTuebingen AntibioticGeneClusterEvolution

Dear colleagues,

PhD Position in Evolution of Antibiotic Gene Clusters The research group ºApplied Natural Product Genome Mining± at theEberhard Karls University Tuebingen is looking for a PhD student to study the phylogeny and evolution of antibiotic gene clusters in bacteria. We are a young and highly motivated research team at the interface of bioinformatics and molecular biology with special interest in distribution and evolution of biosynthetic gene clusters of bacterial natural products. We want to understand how chemical diversity in natural environments is created and use this knowledge to improve metabolic engineering efforts as well as bioinformatic predictions. As part of transregional Collaborative Research Center TR261 Antibiotic CellMAP, we seek an enthusiastic scientist with a Masters in Bioinformatics, Molecular Biology, Microbiology, Biochemistry, or closely related disciplines with experience and interests in phylogenetic analyses.The project is focusing on understanding the adaptation and evolution of antibiotic gene clusters in the bacterial cell. Candidates are expected to be highly interested in molecular evolution and natural product biosynthesis.The position is funded for up to 4 years. Interested scientists should submit their application documents (CV, motivation letter, 2 references, grade transcripts) as a single .pdf-file via email to: nadine.ziemert[at]uni-tuebingen.de by June 25th 2018.

Nadine Ziemert, Prof. Dr. rer. nat. Professor for Applied Natural Product Genome Mining German Centre for Infection Research (DZIF) at University of Tuebingen Interfaculty Institute of Microbiology and Infection Medicine Dept. Microbiology and Biotechnology Auf der Morgenstelle 28 72076 T'bingen Germany +49 7071 2978841

Nadine Ziemert <nadine.ziemert@uni-tuebingen.de>

UValencia M tuberculosisEvolution

Host specificity of M. tuberculosis in Valencia, Spain

>>Positions:

There are two new positions to carry out a PhD thesis at the PathoGenOmics lab (www.uv.es/pathogenomic) at the I2sysbio (Valencia, Spain) to explore host specificity in the M. tuberculosis complex. The project provides an opportunity to study the evolution of one of the deadliest pathogens at the interface of immunology, infection biology and population/evolutionary genomics. One of the positions is essentially a bioinformatic project using data from a range of next generation sequencing approaches to be analysed with a range of bioinformatics, population genomics and molecular evolution tools in high performance computing environments to decipher the genomic keys to M. tuberculosis success. A second position is centred around microbiology, infection biology and immunology approaches to interpret the role of host specificity of M. tuberculosis during infection. Although positions are essentially split into bioinformatics and web lab approaches, there will be opportunities to combine wet lab and bioinformatic approaches.

>>Environment:

The institute I2SysBio is a joint collaborative research institute involving Universitat de Valencia and Consejo Superior de Investigaciones Cientificas (CSIC), open to the strategic involvement of biotech companies. The I2SysBio Scientific Programs focus on research into structure, function, dynamics, evolution, and manipulation of complex biological systems that will enrich the preparation of the PhD candidate by providing a multi- and inter-disciplinary work environment to develop high-quality research and achieve excellence in the field of integrative systems biology. It encourages producing high value-added knowledge with potential transfer to industry.

>>Applications:

If you are interested, apply by e-mail to Mireia.coscolla@uv.es until August 20th sending: (i) Cover letter with a brief summary of previous experience, academic background and motivation for the position (ii) CV (iii) Names and contact details of 2 references.

Mireia Coscolla Devis: www.mireiacoscolla.com Princi-

pal investigator: www.uv.es/pathogenomic I2SYSBIO, Parc Cientific - Universitat de València

C/Agustín Escardino, 9, 46980 Paterna (Valencia)

Telephone.: 0034 963543317

e-mail: mireia.coscolla@uv.es

Mireia <mireia.coscolla@uv.es>

UVictoria OpsinGeneEvolution

Dr. John S. Taylor is looking for a graduate student to carry out research on opsin gene repertoires and expression patterns in sablefish (Anoplopoma fimbria) and in an unusual catfish, Phreatobius cisternarum. The sablefish work is a partnership with a local aquaculture facility; we have access to all developmental stages of this normally bathypelagic species for opsin qPCR studies. The subterranean and eyeless cistern catfish comes from the Amazonian region of Brazil. Transcriptome analyses suggest that it has dramatically reduced opsin repertoire and this will be further investigated by genome sequencing. The city of Victoria, on Vancouver Island, BC (Canada) is a beautiful place to carry out graduate research and the University of Victoria has a strong reputation (National and International) for high quality research. Preference will be given to applicants with molecular biology training and experience (e.g., DNA/RNA isolation, qPCR, genome/transcriptome-NGS-bioinformatics), especially in the case of an MSc student applying for entry into the PhD program. For more information please contact Dr. Taylor at taylorjs@uvic.ca.

John Taylor <taylorjs@uvic.ca>

UWuerzburg FungusBeetleEvolution

Job announcement

Research Group Insect-Fungus Symbiosis, Zoology 3, University of Würzburg, Germany

PhD position ' Evolutionary Ecology of Sociality in Ambrosia Beetles

Application deadline: 30.6.2019

Three-year PhD position in "Evolutionary Ecology of Sociality in Fungus-Farming Ambrosia Beetles"

We seek a highly motivated biologist with a keen interest in the ecology and evolution of insect social behaviour to join our research group at the University in Wuerzburg, Germany (www.insect-fungus.com).

Description: Our main models are bark and ambrosia beetles (AB), which live in subsocial to eusocial societies within wood, where they cultivate fungi on walls of their tunnels. Both sociality and fungiculture evolved in several independent lineages under different ecological conditions, levels of relatedness and ploidy. They remained poorly studied although they are excellent models to test pending evolutionary questions.

Details of the project: - Is it possible to artificially select for/against sociality in AB? - How is division of labour chemically regulated in AB societies? - How do AB supress pathogens and promote cultivars in their fungus gardens? - How does AB social evolution affect the evolution of fungiculture and vice versa?

In our work we combine field studies with lab experiments and apply an interdisciplinary approach, combining selection experiments, experimental assays, and culturing methods with state-of-the-art molecular (e.g. metabarcoding) and biochemical (e.g. GC-MS) techniques.

We require: - MSc degree in either Biology, Entomology, Evolutionary Biology or Chemical Ecology - Due to the interdisciplinary nature of the projects, successful candidates must be willing to become acquainted with methods from different fields. - Experience working with insects is a plus. - Proficiency in English and a good team spirit are a must. - Knowledge on basic molecular methods, statistics (R skills), chemical ecology and bioinformatics are a plus.

We offer: - An exciting research project to build on a scientific career. - A cooperative and highly ambitious young research group, as part of a vivid department. - Opportunities to visit collaborating labs worldwide. - Salary according to public service positions in Germany (TVL E13: 65%) for three years. The University of Würzburg is an equal opportunity employer, i.e. female scientists are particularly encouraged to apply and disabled applicants will be preferentially considered in case of equivalent aptitude.

The Host: We are one of a few labs in the world to study AB. For details on our projects see www.insect-fungus.com or directly contact Dr. Peter Biedermann (peter.biedermann@uni-wuerzburg.de; +49(0)17699819095). The University of Würzburg offers tremendous expertise on social insect behaviour, evolu-

tion, chemical ecology and molecular ecology. Würzburg itself is a vivid student city in one of the most beautiful areas of Germany.

Application: Please submit the application (as a single pdf file including a letter of motivation, a short summary of research interests, a CV, certificates, and contacts of two potential referees) via e-mail to info@insect-fungus.com until June 30th 2019.

Peter Biedermann <peter.biedermann@uni-wuerzburg.de>

Vienna PopulationGenetics

Call for PhD students in Population Genetics is open: apply by September 29, 2019

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 love for evolutionary research and a background in one of the following disciplines: evolutionary genetics, functional genetics, theoretical or experimental population genetics, bioinformatics, mathematics, statistics.

Topics include:

- Mathematical models for the adaptation of complex ecological traits. - The evolution of recombination under balancing selection in heterogeneous environments. - Historical demography in horses. - Sequence diversity in mammalian Y chromosomes. - Dissecting the genetic basis of co-selected traits during thermal adaptation in Drosophila simulans. - Complex trait dissection in conifers. - Genome-wide molecular dating. - Efficient detection of variants of polygenic adaptation in Drosophila experimental evolution.

Only complete applications (application form, CV, motivation letter, university certificates, indication of the two preferred topics in a single pdf) received by September 29, 2019 will be considered. Two letters of recommendation need to be sent directly by the referees.

Depending on the project, PhD degrees will be awarded either in genetics, mathematics or statistics. PhD students will receive a monthly salary based on currently EUR 2.162,40 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

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@vetmeduni.ac.at

WageningenU FishCognitionBehaviour Evolution

PhD position *Cognitive evolution in fishes*

* *

We offer a 4 year PhD Position to work in the multidisciplinary project “Cognitive evolution in fishes” within the Behavioural Ecology chair group at the Animal Science Department of Wageningen University & Research, the Netherlands.

The project uses the guppy and other fishes, to comparatively and experimentally investigate the factors driving cognitive evolution. As such, the project spans over multiple disciplines including field collections, artificial selection, assays of behaviour and detailed tests of cognitive ability, brain imaging and neural density estimations, and analyses of the genomic architecture that orchestrates changes in cognitive ability. The focus can be tailored to meet the interests of the candidate. The project will use both animals from wild populations, and from artificial selection experiments. The overall aim of the project is to increase our understanding of the evolutionary relationship between ecology, behaviour, and cognitive ability.

The work will mostly be lab-oriented but can include field trips to Trinidad and/or other field sites. The project will require hard work but at the same time provide excellent opportunities for personal initiatives and development towards a successful academic career.

The project is supervised by Ass. Prof. Dr. Alexander

Kotrschal.

The successful candidate will join the stimulating and international research environment of Wageningen University. Wageningen University is an internationally leading research and education institution. This project will be carried out in the Behavioural Ecology Group within the Department of Animal Sciences with the potential of running experiments at the Stockholm University, Department of Zoology, Sweden.

WE ASK:

ÂMSc-degree in Biology, ideally with specialization in Animal Behaviour / Behavioural Ecology / Evolutionary Ecology or equivalent experience

ÂStrong experimental and analytical skills

ÂPassion for fishes desirable but not essential

ÂGood organizational and (written and spoken) communication skills in English

ÂAbility to collaborate with others.

ÂWillingness to conduct extensive laboratory work.

ÂWillingness to travel internationally, to attend conferences and visit other institutes.

WE OFFER:

Full time position for an initial period of 15 months with the possibility of extension to 4 years. Gross salary per month âÂÂ¬2325, −.*inthefirstyearrisinguptoâÂÂ¬2972, −permonthinthefourthyear.*

In addition, we offer:

Â8% holiday allowance;

Âa structural year-end bonus of 8.3%;

Âexcellent training opportunities and secondary employment conditions;

Âexcellent pension plan through ABP;

Â232 vacation hours, the option to purchase extra and good supplementary leave schemes;

Âa flexible working time: the possibility to work a maximum of 2 hours per week extra and thereby to build up extra leave;

Âa choice model to put together part of your employment conditions yourself, such as a bicycle plan;

Âa lively workplace where you can easily make contacts and where many activities take place on the Wageningen Campus. A place where education, research and business are represented;

Âparticipation in the training program of the Graduate School WIAS at Wageningen University;

Âan excellent opportunity to develop an international scientific network;

Âuse the sports facilities at reduced prices on our campus .

We offer a versatile job in an international environment with varied activities in a pleasant and open working atmosphere.

Further information:

For questions about this vacancy you can contact Ass. Prof. Alexander Kotrschal:*alexander.kotrschal@wur.nl* <mailto:alexander.kotrschal@wur.nl>.

*HOW TO APPLY: *

We would like to receive your motivation letter and CV by the 29th of July. Applications should include a letter of motivation, CV and names of three references.

You can only apply via our website https://-www.wur.nl/en/Jobs/Vacancies/Show/PhD-position-Cognitive-evolution-in-fishes.htm Alexander Kotrschal <alexander.kotrschal@zoologi.su.se>

CarnegieStanford Tech PlantAdaptation

Technician / Researcher in Molecular Ecological Genetics Carnegie Institution for Science at Stanford Moi Exposito-Alonso Lab - www.moisesexpositoalonso.org Starting September 2019 on

We aim to recruit a highly motivated and skillful researcher with training in molecular, developmental biology or bioengineering.

We seek to understand the impacts of climate change on the genetic diversity and evolutionary potential of plant species. Combining computational tools with experimental data, we can find the genetic loci involved in past and current adaptations, which can then be manipulated in the lab with novel genetic engineering techniques to understand the mechanisms of such adaptations and potentially speed up adaptation to future climates (see www.moisesexpositoalonso.org/research). The successful candidate will be involved in conducting next generation sequencing of samples from the international GrENE-net project and the development of molecular genetics tools to catalyze plant adaptation to simulated climate change conditions in the lab.

Depending on the candidate, this position can be filled as technician, staff researcher, or postdoc. This is a full-time position with competitive salary and benefits (conditions negotiable). The lab is located at the Carnegie Institution on Stanford campus, with access to Stanford facilities. Stanford campus is a vibrant community embedded in the San Francisco Bay area, with opportunities for extensive social and scientific interactions. The initial term will be for one year with potential renewal of up to five years depending on performance.

The required qualifications for this position are a BSc or a PhD degree (depending on position level) in biology, molecular biology, biotechnology, or bioengineering, and some laboratory experience in at least one of the following: next generation sequencing, gene cloning, gene transformation, and CRISPR/Cas9 editing. We prefer candidates willing to work closely with collaborators and lab members and to interact with the dynamic research community at the Carnegie Plant Biology and Global Ecology departments, and the Stanford Biology, Genetics and Bioengineering departments.

Informal inquiries about this position can be made by emailing Moises (Moi) Exposito-Alonso at moisesexpositoalonso@gmail.com. To be formally considered, please include a cover letter and CV, and indicate 3 referees that I can ask for letters of recommendation.

Additional information:

The Department of Plant Biology of the Carnegie Institution is located on the campus of Stanford University. Formerly known as the Carnegie Institution of Washington, the Carnegie Institution for Science is a U.S.-based non-profit, private endowment. Andrew Carnegie

founded the Carnegie Institution of Washington in 1902 as an organization for scientific discovery to serve as a home to exceptional individuals - men and women - with imagination and extraordinary dedication capable of working at the cutting edge of their fields. Today, Carnegie scientists work in six scientific departments on the west and east Coasts and at the Las Camapanas Observatory in Chile. Carnegie investigators are leaders in the fields of plant biology, developmental biology, Earth and planetary sciences, astronomy, and global ecology. The Department of Plant Biology and Department of Global Ecology have state-of-the-art facilities for molecular genetic studies of plants and computer resources. To learn more about the Department of Plant Biology and Global Ecology, visit https://dpb.carnegiescience.edu https://dge.carnegiescience.edu.

Carnegie is an equal opportunity employer. All qualified applicants will receive consideration for employment without regard to race, religion, color, national origin, sex, sexual orientation, gender identity, age, veteran status, disability or any other protected status in accordance with applicable laws.

moisesexpositoalonso@gmail.com

ClemsonU DirectorGenomicsCenter

A permanent position is available for a molecular geneticist to direct the Genomics Core in the Clemson University Center for Human Genetics. The Clemson Center for Human Genetics is located on the Greenwood campus adjacent to the Greenwood Genetic Center. This is a non-tenure track high level Research Scientist position, which requires a Ph.D. degree or equivalent experience with a record of productivity. The ideal candidate will have expertise in preparation of libraries and performing next generation sequencing (DNA, RNA, ChIP, ATAC) and CRISPR gene editing. The successful candidate will conduct experiments with a great deal of independence, is expected to publish, and will provide advice and support to faculty members, postdocs and students in the Center for Human Genetics. The position requires excellent interpersonal and communication skills. Application and enquiries should be addressed to Dr. Trudy F. C. Mackay, Self Family Endowed Professor and Director of the Center for Human Genetics, Clemson University, Self Regional Hall, 114 Gregor Mendel Circle, Greenwood, SC 29646 (tmackay@clemson.edu).

Applications must include a cover letter explaining the qualifications for this position, a curriculum vitae with list of publications, and the names of three references. The position is available immediately. Salary is competitive and commensurate with experience. Clemson University is an equal opportunity employer.

Trudy Frances Mackay <tmackay@clemson.edu>

ClemsonU ResTech Drosophila

The laboratories of Trudy Mackay and Robert Anholt at the Clemson University Center for Human Genetics invite applications for a Drosophila Research Technician to support NIH funded research. A major challenge of modern biology is to determine how DNA sequence variants give rise to phenotypic variation for complex organismal traits through modulation of regulatory gene networks. Our research utilizes natural genetic variation in Drosophila melanogaster, whole genome DNA and RNA sequencing and CRISPR/Cas9 gene editing to generate and test hypotheses regarding genetic associations of common and rare molecular variants, variation in transcriptional networks and variation in complex trait phenotypes. Ideally, the successful applicant will have previous experience in Drosophila genetics, genetic transformation, CRISPR/Cas9 gene editing, and basic molecular biology (PCR, genotyping). Salary will be commensurate with credentials and experience.

Enquiries should be addressed to Dr. Trudy F. C. Mackay, Self Family Endowed Professor and Director of the Center for Human Genetics, Clemson University, Self Regional Hall, 114 Gregor Mendel Circle, Greenwood, SC 29646 (tmackay@clemson.edu). Applications must include a cover letter explaining the qualifications for this position and the names of three references. The position is available immediately. Clemson University is an equal opportunity employer.

Trudy Frances Mackay <tmackay@clemson.edu>

CONABIOMexico BioinformaticsSoftwareDevelopment

Hi EvolDir,

We are developing a platform to integrate data on genetic and agricultural diversity into CONABIO's biodiversity information system. This type of data is normally published as files with arbitrary formats that are difficult to relate to each other and that become obsolete with time. This restricts the usefulness of data to generate knowledge beyond the immediate project for which they were generated. There are public databases specialized in this type of data (e.g., NCBI, EBI, TAIR), but they do not store all the information of interest for CONABIO and are separated from other useful information (e.g. geolocation, environmental variables, phenotypic measurements).

The goal of CONABIO is to provide a standardized and modular platform that allows to store, manage and retrieve data easily and quickly. For this, data models that can cover complex data belonging to the same concept will be defined and repeated within the projects. The platform is being implemented using GraphQL accessible via HTTP and a graphical interface. The programming language is NodeJS.

We have software developer open position to join a Mexican-German team working in the project mentioned above. The job is based at Mexico City, but there is flexibility for remote working. Understanding of written Spanish is required. The call for applications is directed to candidates with a computing science background, but biologist or other fields with strong bioinformatics are also encouraged to apply.

Full details and requirements are available at the following link http://conabio.gob.mx/web/pdf/trabajo/-desarrollador_software_bioinformatico.pdf Cheers,

Alicia

Dra. Alicia Mastretta-Yanes

Alicia Mastretta <ticatla@gmail.com>

FloridaAtlanticU ResearchSpecialist CavefishEvolution

Florida Atlantic University's Kowalko Laboratory is seeking a Research Specialist to perform research in molecular biology and behavior in a laboratory that studies the evolution of a small freshwater fish, the blind Mexican cavefish. Primary responsibilities include, but are not limited to, breeding and maintaining cavefish and zebrafish, performing general molecular biology techniques (genome editing, immunohistochemistry, in situ hybridization), performing behavioral analyses, imaging, collecting and analyzing data, and contributing to publications. The Research Specialist will perform these tasks under the supervision of the principal investigator. Apply at: https://fau.wd1.myworkdayjobs.com/en-US/FAU/-job/John-D-McArthur-Campus—Jupiter/Research-Specialist_REQ06463 For more information, please contact Johanna Kowalko (jkowalko@fau.edu)

jkowalko@gmail.com

HarvardMedicalSch 3Techs ancientDNA

3 Ancient DNA Research Technicians at Harvard Medical School (Apply here: https://-sjobs.brassring.com/TGnewUI/Search/Home/-Home?partnerid%240&siteidS41#jobDetails=-57736_5341)

Research Assistant II, Harvard Medical School, 49407BR

Job Code 403112

Duties & Responsibilities We offer an opportunity to support a cutting edge ancient DNA laboratory at Harvard Medical School that is studying the impact of human history on biology and disease. The successful candidate will assume a research technician position and will work closely with scientists studying DNA from human remains dating back over the last 20,000 years. Please visit our website for more information about our research: https://reich.hms.harvard.edu/ An article on the work in ancient DNA carried out in our laboratory

can be found here: https://www.nytimes.com/2018/-03/20/science/david-reich-human-migrations.html We have three positions available. This is an ideal opportunity for candidates with several different backgrounds: (1) Experienced research technicians with a background in sterile technique and/or genomics who seek employment in an exciting and rapidly moving field. (2) Undergraduates interested in a career in the field of Ancient Biomolecules and seeking experience in a world-class ancient DNA lab. (3) Physical anthropologists with experience in analyzing skeletal material (we would train candidates with this background in molecular work).

The Research Assistant II will be responsible for the following: - Sample preparation in a clean room environment to prepare for DNA extraction - Extracting of DNA and preparation for sequencing in a clean room environment - Amplification of DNA, cleanup, and enrichment of libraries - Sequencing the DNA - Working with liquid handling robots - Keeping a meticulous record of experiments and analyses in a lab book and database - Amplification of DNA, cleanup, and enrichment of libraries - Sequencing the DNA - Working with liquid handling robots - Keeping a meticulous record of experiments and analyses in a lab book and database - Decontaminating equipment and work surfaces after every experiment - Cleaning the clean rooms and equipment on a regular basis - Frequent discussions with laboratory colleagues working on ancient DNA - Occasional sample preparation in a non-cleanroom environment such as museum - Preparing, ordering, and maintaining stocks of necessary - Documenting, compiling, and analyzing experimental data - Updating supervisors by presenting oral and written reports - Reading relevant scientific literature - Working well in a team of research technicians with identical duties

Basic Qualifications College background or equivalent work experience. At least one-year laboratory experience required (relevant coursework may count towards experience). Laboratory experience in addition to course work required.

Additional Qualifications Bachelor's degree in the life sciences with hands-on research experience in basic laboratory techniques and understanding of molecular biology principles or a bachelor's degree in physical anthropology or archaeology preferred. Familiarity with genomics (library preparation and sequencing) and sterile techniques, or alternatively skeletal analysis. Meticulous work habits including keeping a detailed and accurate lab notebook.Skilled at trouble-shooting experiments and critical thinking about experiments and results.The ability to multi-task to take care of the general well-being of the laboratory.Previous work in an Ancient DNA laboratory. Familiarity with genetics and next-generation sequencing Medical Diagnostics or Microarray Fabrication (either in academia or industry).Familiarity with Cell Culture with training in sterile technique.Excellent written, documentation and oral communication skills.Computer skills, including familiarity with Microsoft Word and Excel.

Harvard offers an outstanding benefits package including: - Time Off: 3 - 4 weeks paid vacation, paid holiday break, 12 paid sick days, 11.5 paid holidays, and 3 paid personal days per year. - Medical/Dental/Vision: We offer a variety of excellent medical plans, dental & vision plans, all coverage begins as of your start date. - Retirement: University-funded retirement plan with full vesting after 3 years of service. - Tuition Assistance Program: Competitive tuition assistance program, $40 per class at the Harvard Extension School and discounted options through participating Harvard grad schools. - Transportation: Harvard offers a 50% discounted MBTA pass as well as additional options to assist employees in their daily commute.

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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

HarvardU EvolutionaryBiology

I wanted to draw your attention to the following opportunity at Harvard. It is a completely open field/ open department search.

http://academicpositions.harvard.edu/postings/9104
The Division of Science at Harvard University is searching for tenure-track faculty (at the rank of Assistant or Associate Professor) who will be appointed in one or more of the following departments: Astronomy, Chemistry and Chemical Biology, Earth and Planetary Sciences, Human Evolutionary Biology, Mathematics, Molecular and Cellular Biology, Organismic and Evolutionary Biology, Physics, Statistics, and Stem Cell and Regenerative Biology. This is an open-field search, and we invite scholars whose research overlaps with one or more departments or disciplines to apply. This open-field search is independent of and concurrent with other department/discipline-specific searches (https://academicpositions.harvard.edu/). We are committed to building a culturally diverse intellectual

community, and we particularly encourage applications from individuals who identify as members of historically underrepresented groups. The appointee will direct an independent research program, and teach and advise undergraduate and graduate students. This appointment is expected to begin on July 1, 2020, or as soon as possible thereafter.

Please feel free to disseminate this among your networks.

Best

Zoe

Zoë Fonseca-Kelly, PhD Assistant Dean for Science Faculty of Arts and Sciences Harvard University Tel: 617 495 5083

"Fonseca-Kelly, Zoe" <zoefonseca-kelly@g.harvard.edu>

HarvardU HrdyFellowship ConservationBiology

The Sarah and Daniel Hrdy Fellowship in Conservation Biology Department of Organismic and Evolutionary Biology Harvard University Application deadline: October 1, 2019 The Department of Organismic and Evolutionary Biology at Harvard University invites applications or nominations for the Sarah and Daniel Hrdy Visiting Fellowship in Conservation Biology. The Hrdy Fellowship is open to researchers at any rank; we encourage applications from both established scientists as well as those who have recently received their Ph.D. The fellowship supports visits of either one or two semesters.

The Hrdy Fellowship is awarded to an individual who will engage in scientific study in the Department of Organismic and Evolutionary Biology. Recipients of this fellowship are expected to have a strong and transformative effect on the study of conservation biology at Harvard University. Applicants from any research field within conservation biology are welcome to apply. Examples of previous Hrdy Fellows has included conservation paleobiology, marine evolution and conservation, conservation biology of amphibians and reptiles, and the impact of human activities on the environment. Information about previous fellows is available here: http://oeb.harvard.edu/hrdy-fellowship . Eligibility Applications are sought from researchers whose work focuses on contemporary issues in conservation biology. Applicants should be well positioned to conduct original, independent research and to publish their findings in peer-reviewed publications. Applicants are required to be fluent in English and expected to have a record of effective teaching. Applicants are required to have a terminal degree by the start date of the position.

Fellowship Details The Hrdy Fellowship award provides a stipend of up to $80,000 per year, depending on professional status, need, and duration of the fellowship. Modest support is also available for research and travel costs. Hrdy Fellows are ordinarily employees of Harvard University during their tenure and are eligible for health insurance benefits. Fellows must be in residence for the full term of the Fellowship.

Primarily, the Hrdy Fellow is expected to engage in leading-edge research, where possible in collaboration with members of the Harvard community. Additional responsibilities include a public lecture by the Fellow in any area of conservation biology. Finally, the Fellow is required to teach a one-semester, seminar-style course aimed at upper-level undergraduates (for more information on teaching, contact OEB Chair Elena Kramer, at ekramer@oeb.harvard.edu).

Application Process Application review will begin on October 1, 2019. Applicants should contact a faculty sponsor with whom they will collaborate, before applying. Interested individuals with general questions about the program may contact Christian Flynn at cflynn@fas.harvard.edu.

Fellowships are awarded through a competitive review process. To be considered for a fellowship, applicants should submit a concise proposal in PDF format that includes the following: * Cover letter. The cover letter should clearly state (i) the applicant's interest in the fellowship; (ii) the length of the term desired by the applicant and potential start-date; and (iii) the applicant's contact information.

* Research Statement. The statement should be no longer than 4 pages, single-spaced, and should clearly describe the research project. The statement should detail: (i) the nature and scope of the proposed research project, (ii) the approach and methods to be employed, (iii) how Harvard resources would be utilized, (iv) all laboratory and equipment requirements, and (v) how the project will advance knowledge about conservation biology.

* Research Budget. A modest level of funding is available for research and travel costs. Applicants should submit a simple, one-page budget which itemizes the research and travel costs associated with the proposed project.

* Curriculum vitae.

* Three letters of recommendation. Letters of recommen-

dation should clearly indicate the name, title, mailing address, phone, and email address of the person providing the recommendation. Letters may be sent under separate cover, provided they meet the deadline.

All four components should be submitted to http://-academicpositions.harvard.edu/postings/9057 . Selection Criteria The selection of the Hrdy Fellow will be based on: * The range and depth of the applicant's education and professional experience. Applicants will be judged by his/her track record as an independent researcher and educator.

* The overall quality of the applicant's research proposal. The

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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

IGC Lisbon BioinformaticsTech

Bioinformatics/ Computational biology Technician position call at the Instituto Gulbenkian de Ciencia, Lisbon

The Population and Conservation Genetics group - PCG, https://www.facebook.com/PCG.IGC/, at the Instituto Gulbenkian de Ciencia, http://www.igc.gulbenkian.pt/ - is looking for a "computational biology technician". We are looking for a smart, open and independent person (with a Masters degree) who is interested in using genomic data to infer the demographic history of species. The candidate's background could be pretty much anything as long as s/he can count and think: biology, physics, maths, computer science, engineering, geography, you-name-it. Some scripting or programming are of course a big plus!

This 12 + 12 months recruitment is part of the FCT funded DISPO project (Demographic Inference in Structured Populations). One post-doc has been recruited and we strongly collaborate with mathematicians and biologists in Toulouse.

Applications only are open until 5th July 2019.

More details on the position and how to apply here: http://www.igc.gulbenkian.pt/-mediaRep/igc/files/uploads/recruitment/-DISPO_2017_COMPUT_Tech_L_Chikhi_2019_17_05.pdf Bárbara Parreira Post-Doctoral Researcher Population and Conservation Genetics Group Instituto Gulbenkian de Ciência, Portugal http://compbio.igc.gulbenkian.pt/-pcg/pcg_home.html bparreira@igc.gulbenkian.pt

IGC Portugal CompBiolTechnician

The Population and Conservation Genetics group - PCG (http://www.igc.gulbenkian.pt/lchikhi) at the Instituto Gulbenkian de Ciência (http://www.igc.gulbenkian.pt/) is looking for a "computational biology technician".

We are looking for a smart, open and independent person who is interested in using genomic data to infer the demographic history of species. The candidate's background could be pretty much anything as long as s/he can count and think: biology, physics, maths, computer science, engineering, geography, you-name-it.

Some scripting or programming are of course a big plus!

This 12 + 12 months recruitment is part of the FCT funded DISPO project (Demographic Inference in Structured Populations).

One post-doc has been recruited and we strongly collaborate with mathematicians and biologists in Toulouse. Applications only are open until 5th July 2019 (in one week)

More details on the position (Masters degree required) and how to apply here:

http://www.igc.gulbenkian.pt/-mediaRep/igc/files/uploads/recruitment/-DISPO_2017_COMPUT_Tech_L_Chikhi_2019_17_05.pdf Lounes CHIKHI

Lounès Chikhi <chikhi@igc.gulbenkian.pt>

IllinoisStateMuseum Paleontology

See the job posting below. Please note the application requirements (under "where to apply") and the short window to apply (until June 25). The CMS-100 application is available at http://work.illinois.gov Meredith Mahoney Curator of Zoology Illinois State Museum

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* ILLINOIS DEPARTMENT OF NATURAL RE-

SOURCES #5816*

AN EQUAL OPPORTUNITY EMPLOYER

CAREER OPPORTUNITY BID NOTICE

*The Illinois Department of Natural Resources is inviting applications for the following position: *

*Position Title: **Curator 1, Geology** Monthly Salary Range: ** $3792-5601 *

*Position Location:** IL State Museum Research & Collections Center, 1011 E. Ash St., Springfield V Sangamon County*

*Work Schedule: **Monday V Friday 8:30 a.m. V 5:00 p.m (1 hour unpaid lunch), Saturday, Sunday Off *

Due to scheduled public programs or special events, some evenings or weekends may be required.

Description of Duties

Manages Geology/Paleontology collections of the Illinois State Museum, with strengths in Quaternary mammals and Paleozoic flora; works with Illinois State Museum staff and others to develop and improve access to collection information through digital technology. Conducts and promotes collections and/or field research on Illinois and Midwestern or Central U.S. geology, paleontology, paleobiology, and topics related to the Museums mission. Participates in exhibit development and educational programming. Generates external funds for collection management, research and education. Works generally at his/her own direction in consultation with Museum Director and/or other senior staff. Conducts and publishes original scholarly research contributing to new knowledge and interpretations on topics associated with Midwestern geology, paleontology, and related themes. Writes reports and articles for publication in professional peer-reviewed journals, museum publications, and popular outlets that bring state, national, and international recognition to the Illinois State Museum. Presents research and programs for public and scholarly professional audiences. Oversees the completion of loan forms, donor forms, and accession & catalog records for objects in the geology/paleontology collection. Performs at a level that reflects national standards and best practices of an accredited museum. Must be familiar with all relevant state and federal laws. Abides by professional, museum, and State Employees ethics. Participates in state and national professional organizations. Works with senior and subordinate staff to establish objectives, implement programs, and conduct evaluations. Performs other duties as assigned by the Museum Director and/or other senior staff. All curators are ambassadors for the Illinois State Museum and its programs.

Desirable Education, Training and Experience

Minimum of a Ph.D. is preferred in geology, paleontology, or related discipline, with 3 years of curatorial experience and research experience in a museum, university, or similar institution. Educational background and experience in Midwestern or Central U.S. geology paleontology, paleobiology, and other disciplines relevant to the Museums geology/paleontology collections and programs preferred. Experience with field and laboratory research and procedures required; Experience in the development and management of geology/paleontology collections and related databases required; Demonstrable accomplishments in geological/paleontological research, with experience in interdisciplinary research projects preferred; Experience with public education and exhibition programming desired; and record of grant and contract awards preferred.

Where to Apply:* Send a compelling cover letter, curriculum vitae, CMS100 Employment Application, and contact information for three professional references by e-mail to *tammy.wheeler@illinois.gov*. Please contact Tammy Wheeler, HR Coordinator/IL State Museum, by e-mail or phone (217-785-4919), with any questions concerning the position.*

*Applicants should note that this position is exempt from the State Personnel Code and is under the Board of the Illinois State Museum. This is a Bargaining Unit position. *

Bargaining unit employees interested in bidding for this position should complete a Bid Form, attach it to an application, and submit it directly to the name and address listed above. Bid Forms may be obtained at any Department of Natural Resources facility.

*The Department of Natural Resources does not discriminate on the basis of race, color, sex, national origin, age, religion, handicap, sexual orientation, marital or parental status, physical stature and/or any non-merit factor in admission, treatment or employment in programs or activities in compliance with the Illinois Human Rights Act, the Illinois

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MonashU ResAssist IVBD WorldMosquitoProgram

The Institute of Vector-Borne Disease at Monash University is looking for an experienced Research Assistant / Research Fellow to support a broad range of studies that relate to the World Mosquito Program and their global network of Wolbachia-based interventions into dengue and Zika transmission. This position will play a key role in the development of our genomics research program, being responsible for all tasks relating to the generation of high-quality genomic data for a wide range of vector, bacterial and viral species.

The successful candidate will need experience in the preparation of Illumina sequencing libraries, excellent technical molecular biology skills and experience of genomic data management. Candidates who have experience in the particular demands of pathogen sequence, complex/mixed sample sequencing, hybrid-capture techniques, or who have experience working with low-quality input samples such as desiccated, aged, or otherwise degraded DNA are strongly encouraged to apply.

Full ad and application details here, closing date 8 July: http://careers.pageuppeople.com/513/cw/en/job/593310/research-assistant-research-fellow Seth Redmond <seth.redmond@monash.edu>

MuseumKoenig 3yr ConservationBiol CellCultureSpecialist

The Biobank at Zoological Research Museum A. Koenig in Bonn, Germany, is looking for a full-time CELL CULTURE SPECIALIST (m/f/d)

The position can be filled immediately and is funded for three years within the project "Forensic Genetics for Species Protection", aimed at protecting endangered animals.

Your tasks:

* Establishing cell cultures and cryopreservation * Developing methods and coordination of lab workflows, especially for cell culture; data analyses * Management of the cell culture lab; responsible for instruments * Handling biobank samples (incl. DNA, tissue): documentation, databasing, preparation, preservation * Sample acquisition & research: international correspondence on samples; organizing logistics * Supervision of research assistants, students and interns

Your profile: * Extensive, documented hands-on experience in the cell culture lab (ideally, but not necessarily with animals) * Finished vocational training or university degree in life sciences * Capacity to organize and manage molecular infrastructures and projects * Good IT skills (esp. with spreadsheets, database knowledge) * Fair knowledge of the English language for international correspondence etc. * High interpersonal skills; most meticulous and responsible, proactive way of working; competent at problem-solving

We offer a highly motivating environment at a renowned and pioneering research facility and the possibility to work independently. Salary and benefits are according to a public service position in Germany, TV-L E 9.

Equally qualified severely disabled applicants will be given preference.

Please send your application by e-mail attachment, including a detailed CV, until July 19, 2019 to Mrs. Heike Lenz: h.lenz@leibniz-zfmk.de. In case of questions concerning the position please contact Jonas Astrin: j.astrin@leibniz-zfmk.de, tel. +49-228-9122 357.

For more information about our institution see http://www.leibniz-zfmk.de/en –

Jonas Astrin Molecular Taxonomy & Biobank Tel: +49 (0)228 9122-357 Fax: +49 (0)228 91226357 E-Mail: J.Astrin.ZFMK@uni-bonn.de http://biobank.zfmk.de http://bolgermany.de Zoologisches Forschungsmuseum Alexander Koenig Leibniz-Institut fur Biodiversität der Tiere Adenauerallee 160, 53113 Bonn, Germany www.zfmk.de Stiftung des offentlichen Rechts; Direktor: Prof. J. W. Wägele Sitz: Bonn

Jonas Astrin <J.Astrin.ZFMK@uni-bonn.de>

NatlSciFoundation DeputyDirector EnvironmentalBiology

The Directorate for Biological Sciences at the National Science Foundation (USA) is seeking a Deputy Division Director for the Division of Environmental Biol-

ogy (DEB). This position is posted as SES Career (Senior Executive Service, permanent), SES Limited Term (1-3 years) or IPA. Please refer to the USAJOBS announcement for further information on the position and on how to apply: https://www.usajobs.gov/GetJob/ViewDetails/536933400 Katharina Dittmar, Program Director SBS Cluster, EEID, Dimensions of Biodiversity Division of Environmental Biology National Science Foundation 2415 Eisenhower Ave Alexandria, VA 22314

Phone: 703.292.7799 Fax: 703.292.9064 email: kdittmar@nsf.gov

"Dittmar, Katharina" <kdittmar@nsf.gov>

NewMexicoC 5mnth TeachingEvolution

POSITION: Biology Adjunct Faculty

PLACE: Biology, College of Arts and Sciences, Northern New Mexico College, Espanola, New Mexico, USA

DESCRIPTION: Northern New Mexico Colleges Biology program is looking for an adjunct for Current topics in Biology (3cr) and the associated lab (1cr) for the Fall of 2019, starting August 19 V Dec 16, 2019. Northern New Mexico College is a small, 4-year, state college located in Espanola, New Mexico near Santa Fe, Los Alamos, and Taos. Course size is capped at 24 students.

FROM THE COURSE CATALOG: 1110 CURRENT TOPICS IN BIOLOGY You will study important current issues in biology, including changes in the biosphere, evolution, genetics, medical advances, and biotechnology. This course is suitable for non-science majors. Prerequisite: ENG 109N; Co-requisite: BIOL 1110L. (3, 3T+0S). Meets New Mexico Lower Division General Education Core Curriculum Area III Laboratory Science (NMCCN BIOL 1114 with lab) 110L CURRENT TOPICS IN BIOLOGY LAB Co-requisite: BIOL 110. (3, 3T+0S) Meets New Mexico Lower Division General Education Core Curriculum Area III Laboratory Science (NMCCN BIOL 1114 with lecture)

INFORMATION: Course materials and lectures will be provided. The lecture materials may be modified as the faculty sees fit. Mentoring will be provided. We will provide a laptop, projector, office space, and a lab technician sets up the labs in collaboration with the faculty.

QUALIFICATIONS: Candidates must hold a Masters degree in a related field. Ph.D. and/or experience teaching related courses is preferred. ABD are welcome to apply.

APPLICATION PROCEDURE: via email to Rhiannon.West@nnmc.edu. Include 1) a cover letter; 2) a current CV; and 3) the contact information of 3 referees.

Rhiannon West <rhiannon.west@nnmc.edu>

NorthernArizonaU ResTech VertebrateGenomicsCancer

Job Description:

The Tollis Lab (https://tollislab.org/) at Northern Arizona University is searching for a genomics research technician who can contribute to diverse projects in vertebrate comparative genomics and cancer evolution. The successful candidate will be responsible for lab management including overseeing both independent and student-led projects, writing/managing bioinformatics workflows, potential field work, and the co-authorship of scientific manuscripts where warranted.

The duration of this position is contingent upon the continued availability of funding. Anticipated duration is 12 months with a desired start date in August 2019.

NAU is currently engaged in an Organizational Growth and Effectiveness Initiative, which focuses on positioning the University for future success of its operational practices. As a result, some aspects of this position may be subject to change, such as, but not limited to: duties, titles, reporting structure, etc.

Specific duties will vary by project and experience, but generally the successful candidate will be expected to work with next generation sequencing (NGS) and genomic datasets. These duties may include:

- downloading/accessing/storing NGS datasets - aligning NGS data to reference genomes using popular softwares (such as bwa, STAR or bowtie) - calling variants with GATK, samtools, or freebayes - performing population genetic tests for selection, migration, structure or recombination using packages such as ANGSD, DAPC - We will also be handling a lot of RNA-Seq data and testing for differential expression using packages such as edgeR

A lot of work time will be spent manipulating .bam files and .gff/.gtf files using programs such as vcftools and

bedtools

Minimum Qualifications:

1) Bachelor's degree in a biology or genomics-related field; OR, 2) Four years research or experience appropriate to the area of assignment; OR, 3) Any equivalent combination of experience, training and/or education.

Preferred Qualifications:

1) Knowledge of programming (such as Perl, Python or R) and UNIX environments 2) Experience analyzing genomic datasets 3) Excellent organizational and documentation skills 4) Able to work both independently and as part of a collaborative team 5) Experience with high performance computing clusters 6) IT experience including server maintenance 7) Experience preparing samples for Illumina sequencing 8) Experience with differential expression, GWAS, and/or phylogenetic analyses 9) Experience with scientific collection of samples of animals such as reptiles

Knowledge Skills and Abilities:

1) Knowledge of the principles and techniques of the subject discipline 2) Ability to effectively communicate. 3) The ability to work effectively with people from a variety of culturally diverse backgrounds.

Background Information:

Northern Arizona University requires satisfactory results for the following: a criminal background investigation, an employment history verification and a degree verification (in some cases) prior to employment. You may also be required to complete a fingerprint background check.

Additionally, as an employer in the state of Arizona, NAU is required to participate in the federal E-Verify program that assists employers with verifying new employees' right to work in the United States.

Finally, each year the Northern Arizona University Police Department releases an annual security report. The report is a result of the federal law known as the Clery Act and contains policy statements that address the school's policies, procedures and programs concerning safety and security including policies for responding to emergency situations and sexual offenses. The report contains three years of data for Clery reportable crime statistics for the campus along with the most current year's Fire Safety Report, which includes policy statements and fire statistics for Flagstaff on-campus student housing.

The report may be viewed at nau.edu/clery or by visiting the NAUPD website. A printed copy of the report is available upon request by contacting the NAU Police Department, Records Department at (928)523-8884 or by visiting the department at Building 98A on the NAU Mountain Campus.

Salary:

This position's pay grade is 41. The salary range for this paygrade can be found on the CLS Grade Schedule.

**The starting salary will be determined by the qualifications of the selected applicant balanced with departmental budget availability, internal salary equity considerations, and available market information.

FLSA Status:

This position is exempt from the overtime provisions of the Fair Labor Standards Act (FLSA) and therefore will not earn any overtime or compensatory time for additional time worked.

Benefits:

This is a Classified Staff (CLS) position. NAU offers an excellent benefit package including generous health, dental and vision insurance;

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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

Norwich UK Manager EarthbiogenomeProject

The Earlham Institute is looking for three motivated people to join the new Darwin Tree of Life Programme that aims to sequence the genomes of 66,000 known species of animals, plants, protozoa and fungi in the UK. This is part of a global effort to sequence the genomes of 1.5 million species on Earth.

Work at the Earlham Institute will focus on analysing genomes to further our understanding of evolutionary processes that drive biodiversity in populations and ecosystems. We are also involved in applying genomics to the conservation and management of valuable ecosystems and to the sustainable use of biodiversity for public good.

All three roles will be based at the Earlham Institute on the Norwich Research Park where they will join a diverse community of scientists with expertise in ge-

nomics, biology, evolution, bioinformatics, computing and biotechnology.'

One of these roles is for a highly skilled Programme Manager to support the Institute's involvement in the Earth Biogenome Project a global, collaborative initiative which aims to sequence the genomes of all species of life on Earth in the next 10-20 years.

Initial responsibilities will include managing our delivery to the Darwin Tree of Life Project, an ambitious plan to sequence all eukaryotic species in the UK and the Institute's 'fruits of the tree' projects.

The role:

The role will be key in the application for further funding to expand our engagement in these UK and global projects. This is a diverse, vital role and an excellent opportunity for someone seeking to move away from the bench into full time project management or seeking to move to project management in this exciting area of research.

This varied and dynamic role will involve providing high quality project management for activities in the Research Faculty Office in all aspects of implementing the Institute research strategy, taking responsibility for spearheading new activities.

The ideal candidate:

To be considered for this post, applicants must possess a PhD in a relevant scientific field. Candidates should have excellent experience of managing complex research programmes/projects and a working knowledge of project management productivity tools. Financial management experience is desirable.

Candidates should have prior experience of working in an academic environment and have a good track record of scientific writing. Excellent interpersonal skills and the ability to draft scientific documents is essential for this post. Candidates should be resilient, adaptable, organised and able to work well as part of a team.

Additional information:

Salary on appointment will be within the range $B!r(B39,150 to $B!r(B47,850 per annum depending on qualifications and experience. This is a full time post for a contract of 2 years.

For further information and details of how to apply, please visit our web site http://-jobs.earlham.ac.uk/Details.asp?vacancyID=360 or contact the Human Resources team on 01603 450462 or nbi.recruitment@nbi.ac.uk quoting reference 1003698.

We welcome applications from candidates seeking job share, part time or alternative working patterns.

As a Disability Confident employer, we guarantee to offer an interview to all disabled applicants who meet the essential criteria for this vacancy.

Closing date: July 1st 2019

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

NTNU Norway VertebrateBiodiversity

The Department of Natural History, NTNU University Museum, Norwegian University of Science and Technology, invites applications for the following permanent position:

Associate Professor of Vertebrate Biodiversity.

To fill this position, we are seeking excellent scientists within the field of molecular biodiversity of vertebrates, with main emphasis on birds and/or mammals.

The NTNU University Museum is aiming to be a leading international institution within the field of molecular biodiversity.

The city of Trondheim is a modern European city with a rich cultural scene, and easy access to breath-taking natural landscapes. The Norwegian welfare state, including healthcare, schools, kindergartens and overall equality, is probably the best of its kind in the world.

We invite both senior and more junior candidates to apply. This means that candidates at all stages in their career post PhD will be considered in light of their achievements, given their level of seniority and time since PhD dissertation.

The gross salary for the position of Associate professor is normally from NOK 524 200 - 658 300 $(\hat{a}\hat{A}\hat{A}\neg 54,249'68,167) before tax per year, \hat{A} depending on qualifications$

Questions about the position can be directed to Head of Department Prof. Hans K. StenÃÂien, telephoneÂ+ 47 91897592, email stenoien@ntnu.no.

Please find advertisement here: https://-www.nature.com/naturecareers/job/associate-professor-of-vertebrate-biodiversity-norwegian-university-of-science-and-technology-ntnu-693083 See also: https://www.jobbnorge.no/en/available-jobs/job/-170408/associate-professor-of-vertebrate-biodiversity

The application deadline will be August 15th, 2019 (not August 4th, as written in the advertisement).

Prof. Hans K. Stenoien Head of Department, Dept. Natural History, NTNU University Museum http://www.ntnu.edu/employees/hans.stenoien "Hans K. StenÃÂien" <hans.stenoien@ntnu.no>

OccidentalCollege LabTech BirdDNA

The Moore Laboratory of Zoology at Occidental College, is seeking a full-time LABORATORY TECHNICIAN to join our team ASAP and carry out DNA-based projects in ornithology using modern and historical DNA specimens from the Moore Lab's collection of 65,000 birds (see instagram.com/mlzbirds). Major projects include an NSF-funded project comparing DNA of modern and historical specimens to look for genomic change over the last 100 years and hybridization genomics of introduced Los Angeles parrots.

The successful applicant will have at least one year's experience working in a molecular lab. Some experience with genomic techniques is preferred, but not required. Duties include ancient and modern DNA extraction, library preparation for next-generation sequencing, sequencing using an Illumina MiSeq, and training and coordinating the activities of undergraduates. The applicant should have good leadership, organizational, and interpersonal skills.

The position is renewable each year and includes a competitive benefits package with health, dental, and life insurance and eligibility for retirement benefits after 1 year. The position is paid at an hourly rate of $20/hour. The full job ad can be accessed here: https://www.oxy.edu/sites/default/files/assets/HR/Hourly/lab_technician_mlz_2019_0.pdf Applications must include a one-page CV, a cover letter describing experience and interest in the job, and contact information for three references. Please send applications to Dr. John McCormack (mccormack@oxy.edu) with subject line indicating "Laboratory Technician". Applications should arrive by July 1. The ideal start date for this position is August 1 or ASAP after that.

The Moore Laboratory of Zoology is a world-renowned natural history collection featuring the largest Mexican bird collection in the world and over 65,000 bird and mammal specimens. The MLZ has close ties to nearby institutions such as the Jet Propulsion Lab, UCLA, Huntington Library, and the L.A. County Natural History Museum. Occidental is a small liberal arts college located in the culturally-rich Los Angeles neighborhood of Eagle Rock near Pasadena. Occidental is well-situated close to many outdoor recreational activities: the ocean, mountains, and desert can all be reached in 45 minutes or less. The neighborhood surrounding Occidental College is family friendly, walkable, and home to a wealth of urban amenities.

– John McCormack Director/Curator Moore Laboratory of Zoology -and- Associate Professor Biology Department Occidental College

John McCormack <mccormack@oxy.edu>

SanDiegoZoo BiodiversityBankingDirector

San Diego Zoo, Institute for Conservation Research, is looking for a Director of Biodiversity Banking (until June 30):

https://usr56.dayforcehcm.com/CandidatePortal/en-US/sdzg/Posting/View/422 –>

The San Diego Zoo's Institute for Conservation Research has an immediate opening for a full-time conservation innovator to develop and lead the research and technical team devoted to our unique Frozen Zoo Â cryobank (http://institute.sandiegozoo.org/resources/-frozen-zoo Â). This position will also interface with our Native Plant Seed Bank, Pathology Archives and other biomaterials collections.

We are specifically seeking candidates with experience managing cryopreservation systems who possess the scientific training preparing them to conduct collection management research and to curate preserved biological collections of plants and animals, as well as skills to develop and manage the Biodiversity Banking team as an enterprising, service-oriented unit. A background that includes a strong understanding of cryobiology, cell biology, tissue culture, gamete preservation, and/or seed banking as well as curation and collection management is desirable.

This position marks Biodiversity Banking's establishment as an independent unit within the San Diego Zoo's Institute for Conservation Research and presents opportunities to collaborate with a dynamic research team that includes Community Engagement, Conservation Genetics, Disease Investigations, Plant Conservation,

Population Sustainability, Reproductive Sciences, and Recovery Ecology. We are the largest zoo-based, multidisciplinary research and wildlife conservation team in the world and are currently engaged in projects in more than 40 countries benefitting over 100 species.

The successful candidate will oversee the current five-person team and the Frozen Zoo Â facilities at the Beckman Center for Conservation Research in Escondido, California, and at the San Diego Zoo. The initial expectation is to adapt the existing group into an independent unit supporting scientific research of other Institute teams while developing a productive new program dedicated to improving the science of cryopreservation and biobank collection management.

We are looking for candidates with Â An advanced degree in the biological or curatorial sciences Â Relevant science and professional management experience Â Proficiency and interest in working as a member of an applied, multidisciplinary scientific research team dedicated to saving species Â Collections management experience with curator-level responsibility Â Systems management skills, including the capacity to organize diverse biomaterials collections into an integrated whole Â Proven ability to collect reliable data, formulate accurate analysis and lead others to take effective action in novel circumstances Â Organizational and planning skills applicable to maximizing both return on conservation mission as well as return on investment in staff and capital Â Experience with preparation and management of budgets at the departmental level The Director of Biodiversity Banking will expand and balance Frozen Zoo Â operations to meet San Diego Zoo Global's strategic objectives, promote the value it adds to the organization, and generate appropriate revenue for services and materials it provides externally.

For more job information and to apply: www.sandiegozoo.org/jobs. Deadline: Sunday, June 30, 2019. San Diego Zoo Global is an EEO/AA/Disability/Protected Veteran Employer.

Jonas Astrin <J.Astrin.ZFMK@uni-bonn.de>

TunghaiU Taiwan EvolutionaryBiology

FACULTY POSITION IN ECOLOGY AND EVOLUTIONARY BIOLOGY (TAIWAN). The Department of Life Science, Tunghai University in Taiwan (website: http://biology.thu.edu.tw/main.php) seeks for applicants for a tenure-track assistant professor position or higher. We invite applicants with Ph.D. in any area of ecology and evolutionary biology. We are especially interested in applicants in the area of Animal Ecology or Evolutionary Biology and Environmental Accessment. Applicants with strong record of research, postdoctoral experience, and fluent Mandarin as the first or second language will be highly favored. We welcome applicants who employ theory, modeling, experiments, or some combinations. Tunghai University is a private university with high standard on undergraduate and graduate education (website: http://www.thu.edu.tw/). The start date for the position will be on Feb. 1st, 2020.

Applicants must submit the following documents via either regular mail to the Office of Human Resource (Subject: Faculty Application Materials; Address: Human Resource, Tunghai University, No. 1727, Sec. 4, Taiwan Boulevard, Xitun District, Taichung 40704, Taiwan; website: http://upto.thu.edu.tw/main.php) or e-mail to Mrs. Shu-Wen Hsiao (Subject: Faculty Application Materials; e-mail: sw2842@thu.edu.tw; Phone: +886-423590121 ext. 32402). All application materials should be sent before Aug. 31, 2019.

*A cover letter. *Curriculum Vitae. *Transcript for the highest education degree. *Diploma certificate for the highest education degree. *A copy of publications in the last five years. *A statement of future research direction. *A statement of teaching interests (list at least three putative courses). *Three reference letters (confidential arrangement).

Sincerely yours, Shao-Lun (Allen) Liu Associate Professor Department of Life Science, Tunghai University Taichung 40704, Taiwan (Nation Island) Web: http://-algae.thu.edu.tw/lab/ Tel: +886 4-23590121 ext. 32414

Shao-Lun Liu <shaolunliu@gmail.com>

UAlabama Programmer NetworkEvolution Education

The Department of Biological Sciences is seeking a full-time web developer to work on a National Institutes of Health-funded project to enhance genomics and bioinformatics training of undergraduates nationwide as part of the Genomics Education Partnership (GEP, http://-gep.wustl.edu). The GEP provides Course-based Undergraduate Research Experiences (CUREs) in genomics to thousands of students at over 100 colleges and universities across the US. CUREs have been demonstrated

to be one of the most effective teaching methods to engage students in STEM disciplines. The person in this position would work closely with members of the Department of Biology at Washington University in St. Louis. This person would help maintain and improve the bioinformatics software and web framework that have previously been developed by the GEP, and create a new web-based framework to manage the submission, reconciliation, and publication of peer-reviewed 'micropublications' by GEP faculty and students. This person would also develop new web services to integrate the different communication tools (e.g. Trello, Google Drive, CampusWire) used by GEP members to run their nation-wide partnership. Further responsibilities include developing tool documentation and training materials and providing technical support for GEP faculty and undergraduates. This person would also serve as the lead developer of bioinformatics tools for the analysis of genomic patterns of biological network evolution. This person would be involved in the data analyses and preparation of publications of the scientific findings generated by the partnership. Responsibilities will also include occasional travel to scientific and professional meetings to present and discuss results and/or to meet with participating faculty or collaborators. Responsibilities will also include semi-regular travel to assist in training faculty and students at regional workshops.

Minimum Qualifications: Bachelor's degree and two (2) years of IT, software development, computational biology, or bioinformatics experience; OR Master's degree and some IT, software development, computational biology, or bioinformatics experience. Summer 2019 graduates will be considered for this position.

Skills and Knowledge: Strong programming skills, particularly in the programming languages commonly used in bioinformatics and computational biology (e.g., Python, R, Java, C, C++) and web development languages (e.g., JavaScript or TypeScript, CSS (Sass/SCSS), HTML). Candidates should provide a code sample to demonstrate these programming skills, preferably using a collaborative platform such as GitHub, GitLab, or Bitbucket. Ability to work collaboratively with researchers and research groups as well as the ability work independently. Ability to learn new research domains and systems. Ability to communicate effectively with persons from diverse backgrounds, including researchers, software engineers, and biologists.

Preferred Qualifications: Knowledge of and strong programing skills in JavaScript or TypeScript, CSS (Sass/SCSS), HTML, as well as a scripting language (e.g., Python, PHP, R, Ruby, Perl), and one compiled language (e.g., Java, C#, C/C++). Familiar with at least one web framework: Server-side framework (e.g., Django, Laravel, Ruby on Rails) or Client-side framework (e.g., AngularJS, React, Vue.js). Familiar with at least one version control system (e.g., Git, Mercurial). Familiar with software testing (e.g. unit, functional, acceptance, user experience testing). Familiar with software development life cycle (SDLC), and Development and Operations (DevOps). Familiar with virtual machines and containers (e.g., Docker, Singularity). Experience in biological sciences, genomics, or a related discipline. Experience in a research environment.

Apply here: http://staffjobs.ua.edu/cw/en-us/job/-509017/it-technical-specialist-iii-509017 Applications close: 14 Jun 2019

Background Investigation Statement: Prior to hiring, the final candidate(s) must successfully pass a pre-employment background investigation and information obtained from social media and other internet sources. A prior conviction reported as a result of the background investigation DOES NOT automatically disqualify a candidate from consideration for this position. A candidate with a prior conviction or negative behavioral red flags will receive an individualized review of the prior conviction or negative behavioral red flags before a hiring decision is made.

Equal Employment Opportunity: The University of Alabama is an Equal Employment/Equal Educational Opportunity Institution. All qualified applicants will receive consideration for employment or volunteer status without regard to race, color, religion, national origin, sex, sexual orientation, gender identity, gender expression,

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UBourgogne 6mnth TeachingEvolution

Six-month demonstratorship in Behavioural Ecology and Wildlife Management at the University of Bourgogne-Franche Comté, Dijon, France

Applications are invited for a six-month teaching-research demonstratorship in the master program in Behavioural Ecology and Wildlife Management (more in-

formation at www.nature-conservationubfc.com/bewm/-en/) at the Université de Bourgogne-Franche Comté in Dijon (eastern France), starting in October or November 2019. This position involves about 100 hours of teaching but also allows some time for research activities. Depending on his/her qualifications, the demonstrator will be in charge of lectures, tutorials and practicals in one or several of the following areas: - Behavioural Ecology: habitat selection, territories and home ranges, dispersion and migration, interspecific behavioural interactions, social behaviour and wildlife management (including field course). - Biostatistics: analysis of variance (two-way and nested ANOVA), analysis of covariance, multiple regression, stepwise regression, non-linear regression, multifactorial analysis, general linear model (practicals using the R software) - Quantitative Ecology: population abundance, individual distribution in space and time, methods of estimation of diversity, association between species, similarity between communities.

Research activities will take place in relation with ongoing research programs in behavioural ecology and conservation biology at the University of Bourgogne-Franche Comté. Depending on his/her skills and experience, the demonstator will be involved in the analysis of data sets on tropical faunal assemblages or in a research program on the effect of climate change on competition between native and invasive amphipod species. The successful applicant should have completed a PhD and gained research and teaching experience in behavioural ecology and/or conservation biology. Additional experience in biostatistics and quantitative ecology is desirable. The net salary will be on the salary scheme for technical staff (at the level “ingénieur de recherche”) at French universities, i.e. about 1800€per month, depending on the appointee’s qualifications and experience. An additional bonus associated with lecturing will be available up to 4000 €for the whole duration of the position.

Applications should be sent by e-mail to Professor Frank Cézilly (frank.cezilly@u-bourgogne.fr), not later than 15th August. They should consist of a single PDF-file containing a letter with a personal statement outlining your research/teaching interests, how this position fits into your career plan, as well as relevant work experience, a detailed CV including a publication list with journal impact factors, and contact information for two references.

Thank you very much. Pauline Marceau

Pauline Marceau <pauline.marceau@u-bourgogne.fr>

UCologne PopulationGenetics

Am Institut fÃÂ¼r Zoologie der Mathematisch-Naturwissenschaftlichen Fakultät der Universität zu Koln ist zum 01.04.2020 eine

W1-Professur fÃÂ¼r Zoologie insbesondere Populationsgenetik

mit Tenure Track (W2) zu besetzen.

Diese Ausschreibung erfolgt im Rahmen des Bund-Länder-Programms zur Forderung des wissenschaftlichen Nachwuchses (WISNA). Sie richtet sich an Wissenschaftlerinnen und Wissenschaftler in einer frÃÂ¼hen Karrierephase. Gesucht werden Personen mit auÃÂerordentlichem Potenzial fÃÂ¼r die Weiterentwicklung des Fachs Ã kologie am Institut fÃÂ¼r Zoologie.

Von der zukÃÂ¼nftigen Stelleninhaberin/dem zukÃÂ¼nftigen Stelleninhaber wird erwartet, dass sie/er das Fach Populationsgenetik der Tiere in der Forschung vertritt. Insbesondere werden Kandidaten gesucht mit einem Schwerpunkt und nachgewiesener Expertise in der Analyse natÃÂ¼rlicher Populationen unter Einsatz aktuellster methodischer Ansätze. Es wird erwartet, dass sich der/die Stelleninhaber/in in bestehende Initiativen (Sonderforschungsbereiche, z.B. SFB 1211, und die Exzellenzcluster) einbringt und selbst neue Forschungsprojekte etabliert.

In der Lehre soll der/die Stelleninhaber/in die Zoologie und Ã kologie in ihrer gesamten Breite in den Bachelor- und Masterstudiengängen der Biologie vertreten. Ein wesentlicher Beitrag in der grundständigen Lehre wird erwartet.

Es gelten die Einstellungsvoraussetzungen nach ç 36 des Hochschulgesetzes NRW.

Im dritten Jahr nach Dienstantritt ist eine Zwischenevaluation vorgesehen, auf deren Grundlage ÃÂ¼ber eine Verlängerung um weitere drei Jahre entschieden wird. Spätestens im sechsten Jahr nach Dienstantritt ist eine Endevaluation vorgesehen, auf deren Grundlage ÃÂ¼ber die Verstetigung auf einer W2-Professur entschieden wird. Beide Evaluationen werden gemäÃÂ der Ordnung zur Qualitätssicherung in Tenure Track-Verfahren der Universität zu Koln durchgefÃÂ¼hrt. Bei der W1-Professur umfasst das Lehrdeputat vier Semesterwochenstunden in der ersten Qualifizierungsphase sowie

fÃÂ¼nf Semesterwochenstunden in der zweiten Qualifizierungsphase. Bei der W2-Professur ist ein Lehrdeputat von neun Semesterwochenstunden vorgesehen.

Die Universität zu Koln fordert Chancengerechtigkeit und Vielfalt. Wissenschaftlerinnen sind besonders zur Bewerbung eingeladen und werden nach MaÃÂgabe des LGG NRW bevorzugt berÃÂ¼cksichtigt. Bewerbungen von Wissenschaftler/innen mit Schwerbehinderung und ihnen Gleichgestellten sind ebenfalls ausdrÃÂ¼cklich erwÃÂ¼nscht.

Bitte richten Sie Ihre Bewerbung mit den ÃÂ¼blichen Unterlagen (Lebenslauf, Schriften- und Lehrveranstaltungsverzeichnis, Lehrevaluationsergebnisse (falls vorhanden), eingeworbene Drittmittel, Urkunden ÃÂ¼ber akademische PrÃÂ¼fungen und Ernennungen 'sowie Konzepten zu Forschung und Lehre) ÃÂ¼ber das Berufungsportal der Universität zu Koln (https://-berufungen.uni-koeln.de) bis 30.06.2019 an den Dekan der Mathematisch Naturwissenschaftlichen -Fakultät der Universität zu Koln, Albertus-Magnus-Platz, 50923 Koln, E-Mail: mnf-berufungen@uni-koeln.de

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The Institute of Zoology of the Faculty of Mathematics and Natural Sciences, University of Cologne, invites applications for the position of a W1 professorship in zoology esp. population genetics with tenure track (W2) to be filled by April 1st 2020.

This call is part of the Federal Tenure Track Programme. It addresses researchers at an early career stage. We seek young researchers with an exceptional track record and the potential for establishing and advancing ecological research at the Institute of Zoology.

The successful candidate will be expected to contribute to research in animal population genetics at the Institute of Zoology. Special interest will be given to applications who have specialized in animal population genetics in natural populations using the most up-to-date methodological approaches in the field with emphasis on both evolutionary and ecological aspects. Active contributions to the Department Âs research initiatives (e.g. Collaborative Research Centres, e.g. CRC 1211, and Clusters of Excellence) will be expected.

With respect to teaching, the successful candidate will represent the field of zoology and ecology in its entirety in the Bachelor and Master programs at the Institute of Zoology. Contributions to basic undergraduate teaching are obligatory.

Qualification requirements are in accordance with the North Rhine-Westphalia University Law and include an excellent track record in research and teaching.

In the third year after entering into office, an interim evaluation

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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

UGroningen MicrobialEcologyAndEvolution

The Groningen Institute for Evolutionary Life Sciences (GELIFES) at the University of Groningen, the Netherlands, is hiring a:

Tenure track assistant / associate professor in Microbial Ecology and Evolution, 0.8 - 1.0 fte

Organization

The University of Groningen is a research university with a global outlook, deeply rooted in Groningen, City of Talent. Quality has been our top priority for over four hundred years, and with success: the University is currently in or around the top 100 on several influential ranking lists.

The Faculty of Science and Engineering (FSE) is the largest faculty within the University. We offer first-rate education and research in a wide range of science and engineering disciplines, from classical disciplines such as mathematics, astronomy and mechanical engineering, to interdisciplinary fields such as artificial intelligence, pharmacy and evolutionary life sciences. Our community has an open and informal character with students and staff from around the world.

The position we offer will be embedded in the Groningen Institute for Evolutionary Life Sciences (GELIFES). GELIFES fills a special niche in the field of life sciences as its research not only covers mechanistic, evolutionary and ecological approaches, but also specifically aims at the integration of these fields that are traditionally studied in isolation. Thus our research provides a better understanding of fundamental biological processes. The institute is coordinating one of the four Faculty strategic themes called Adaptive Life. This programme specifically addresses the growing realization that proximate and ultimate approaches need each other in order to make firm progress in understanding and predicting adaptation in a wide array of systems, requiring an

integration of neurological, physiological, behavioural, ecological and evolutionary perspectives.

Job description

We are looking for an Assistant Professor (or Associate Professor; depending on track record of the candidate), who can strengthen our position in the field of microbial ecology and evolution. The new staff member is expected to set up an independent research line within this field, complementary to ongoing microbial ecology research in the institute, preferably on the function and evolution of the microbiome of animals. Her/his work should provide linkage to other ongoing research in the institute (such as microbial ecology, neurobiology of behaviour and metabolism, animal ecophysiology), including the sister institute GBB and the Medical Faculty. In addition, the new staff member is expected to have expertise in bio-informatics and is willing to facilitate other researchers of the institute with this knowledge.

As Assistant Professor you will:

set up and develop your own research line and research group

supervise PhD students

acquire external funding

promote the societal relevance of your research

teach in and contribute to the development of the degree programmes [e.g. in Biology, Ecology & Evolution, Evolutionary Medicine]

contribute to the organization of the faculty, for example by participating in working groups and committees, in the domains of teaching, research and management

At the stage of Assistant Professor 60% of your time is for research, 30% for teaching activities and 10% for organizational tasks. At the stage of Associate professor 40% of your time is for research, 40% for teaching activities and 20% for organizational tasks.

Qualifications

We encourage you to apply if you have:

a PhD degree in Microbial Ecology or a related field

at least three years of postdoctoral experience outside of the Netherlands, preferably in a different country than where you received your PhD, and a relevant international network

excellent research qualities, as shown by a publication record in international peer-reviewed journals and proceedings of renowned conferences

a good track record in teaching, appropriate to your career stage

a good track record in acquisition of external funding, appropriate to your career stage

* demonstrable organizational competences

cross-cultural sensitivity

good command of spoken and written English

And you are:

* a team player with good communication skills

* able to acquire substantial research grants from external sources

* willing to obtain a University Teaching Qualification (Dutch: BKO) within three years * able to speak the Dutch language or motivated to speak it within five years.

Conditions of employment

We offer you a full-time position as Assistant Professor in our facultys tenure track system Career Paths in Science and:

* a salary, depending on qualifications and work experience, from 3.637 up to a maximum of 5.656 gross per month (scale 11 or 12 CAO Dutch Universities, depending on your career stage) for a full-time Assistant Professor position. A salary,

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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

UMaryland ConservationGenomics

The < http://www.umces.edu/al >Appalachian Laboratory (AL) of the University of Maryland Center for Environmental Science (UMCES) seeks applicants for a tenure-track assistant professor position in Conservation Genomics, Landscape Genomics, or related areas. We invite applications from individuals who integrate molecular and spatiotemporal analysis techniques to study terrestrial and/or aquatic ecosystems at broad scales, consistent with UMCES hallmark of conducting research from “genes-to-ecosystems” and “mountains-to-the-sea” < https://www.umces.edu/core-research-areas >. Improved understanding of spatial patterns of genomic variation and how they are changing is expected to contribute to UMCES strate-

gic initiatives < https://www.umces.edu/sites/default/-files/UMCES%20Strategic%20Initiatives.pdf >to maintain and promote biodiversity within sustainable landscapes and seascapes. Preference will be given to candidates who demonstrate vision for carrying out an innovative and externally funded research program that integrates across disciplinary boundaries, from molecules to the landscape, with the objective of informing assessment and conservation of biodiversity under current and emerging global change processes. The ideal candidate will also welcome collaborations with diverse faculty < https://www.umces.edu/-directory?type=9&campus=All > working across taxonomic groups, including plants, terrestrial and aquatic vertebrates, and soil and sediment organisms.

As Marylands graduate university for the environment, UMCES mission includes advancing world-class fundamental and applied research, promoting graduate-level education, < https://www.umces.edu/graduate-program > engaging the public and diverse stakeholders, and providing scientific expertise for environmental policies on topics such as air, land, water, and wildlife management in the Chesapeake Bay watershed and beyond. UMCES scientists are developing new ideas to help guide our state, nation, and world toward a more environmentally sustainable future through six research centersXAL, Chesapeake Biological Laboratory, Horn Point Laboratory, Institute of Marine and Environmental Technology, Integration and Application Network, and Maryland Sea Grant College.

Faculty positions at AL provide a unique opportunity to focus on scholarship and integration, while also mentoring graduate students, pursuing science applications, and participating in public engagement with science. The successful candidate should have a commitment to mentoring graduate students and graduate-level teaching, including seeking opportunities to work with students and groups from underrepresented backgrounds. The AL provides strong administrative support, outstanding research, computing, and teaching facilities, and is committed to increasing the diversity of our campus and community. Frostburg is a small college town (home to Frostburg State University) in the heart of the central Appalachian Mountains, which offers recreational and cultural activities within a landscape of forests, agriculture, and rural communities.

Applicants should submit the following electronically at https://umces.peopleadmin.com/postings/1293 : (1) a curriculum vitae; (2) a statement of research interests and a brief discussion of how their scientific contributions align with the job description and complement ongoing research and activities at AL; (3) a statement on experience with, and approach to, graduate-level teaching and mentoring of graduate students; (4) up to three selected reprints and preprints; and (5) names of four references (including title, mailing address, telephone, and e-mail address). Review of applications will begin on August 26, 2019, and will continue until the position is filled. Inquiries may be addressed to the Associate Director, Heather Johnson: hjohnson@umces.edu. UMCES is an equal opportunity employer. Diversity, equity, and inclusion are core values at UMCES. We strongly encourage applications from underrepresented groups, including individuals with disabilities, veterans and women.

“Johnson, Heather A.” <hjohnson@umces.edu>

UMemphis ArthropodBiodiversity

Position announcement:

Research Assistant Professor in Arthropod Biodiversity, beginning in September 2019.

Position Summary: A Research Assistant Professor position (non-tenure track) in Arthropod Biodiversity is available in the laboratory of Dr. Duane McKenna (http://www.duanemckenna.com) in association with the newly established University of Memphis Center for Biodiversity Research. Researchers working in all areas of arthropod biodiversity science will be considered, including biodiversity surveys and inventories, conservation, ecology, evolution, genetics, genomics, and systematics. The primary responsibilities of this position are McKenna lab and CBio research development; however, the successful applicant will also be encouraged to design and lead research projects of their own. The initial appointment is for one year, renewable for at least two additional years, contingent upon satisfactory annual performance evaluations and availability of funding.

The McKenna Lab: We study insect systematics, genomics, evolution and diversity. Focal areas of study include the phylogeny and evolution of beetles (order Coleoptera) and other insects, the evolution and genomic basis of plant-feeding in beetles, and interactions between insects and plants on ecological and evolutionary time scales.

Salary: Commensurate with experience. Start date: On or after Sept. 3, 2019. Application deadline: The position is open until filled, but the committee will begin reviewing applications on Monday, July 15, 2019. For more info. and to apply, visit: https://-

workforum.memphis.edu/postings/22378 Contact for questions: Duane McKenna (dmckenna@memphis.edu)

The University of Memphis is an Equal Opportunity/Affirmative Action Employer. We urge all qualified applicants to apply for this position. Appointment will be based on qualifications as they relate to position requirements without regard to race, color, national origin, religion, age, sex, disability or veteran status.

Duane McKenna PhD William Hill Professor of Biology Director, Center for Biodiversity Research Co-Director, Agriculture & Food Technologies Research Cluster, FedEx Institute of Technology University of Memphis Memphis, TN 38152 email: dmckenna@memphis.edu website: http://duanemckenna.com "Duane McKenna (dmckenna)" <dmckenna@memphis.edu>

UMontpellier ResTech Plankton

Plankton Research Technician (France)

3 year contract- Based in Université de Montpellier (France) but with numerous trips to the University of Wisconsin, Madison (USA)

Start date : between October and January 2019.

Salary: 1410 euros/month - net salary (1750 euros/month gross salary)

This job entails maintaining cultures of planktonic zooplankton (copepods) and phytoplankton for evolutionary and physiological experiments. The position also involves assisting graduate students and researchers with experiments. Responsibilities include maintaining algal cultures, rearing genetically-distinct populations of copepods (small crustaceans), cleaning glassware, making chemical solutions, ordering supplies and chemicals, and assisting with genetics experiments.

This project focuses on the evolutionary genetics and physiology of invasive species and rapid evolutionary responses to environmental change. Much of the research centers on identifying genes involved in physiological adaptation during biological invasions and other types of environmental change. Please refer to publications for additional information: https://mywebspace.wisc.edu/-carollee/web/Lee/pubs.html . Requirements: Interest in evolution/genetics and physiology, responsible, ability to perform tedious tasks carefully, good capacity to assess gaps/limitations in one's own knowledge and abilities, intellectual curiosity, analytical approach to problems, quantitative skills, and the ability to work with a team of ~5 other people and cooperate. Patience and attention to detail are of utmost importance. Previous experience with rearing fish or aquatic invertebrates is useful. English fluency and willingness to travel are mandatory. French language skills would be useful. Any citizenship allowed.

Instructions for application: Please email (1) a list of all courses taken + grades, (2) resume outlining work experience, and (3) brief description of career goals to Professor Delphine Bonnet (delphine.bonnet@umontpellier.fr) and Professor Carol Lee (carollee@wisc.edu).

Carol Eunmi Lee, Ph.D. Professor Center of Rapid Evolution (CORE) and Department of Integrative Biology

430 Lincoln Drive, Birge Hall University of Wisconsin Madison, WI 53706 carollee@wisc.edu

http://carollee.labs.wisc.edu Carol Eunmi Lee <carollee@wisc.edu>

UNorthCarolina Greensboro VisitingProf TeachingEvolution

Position Number 1011

Functional Title *Visiting Assistant Professor Biology < https://tinyurl.com/yxalfkep >*

Position Type Non-Tenure Stream

Position EclassFC - Faculty 9 month Non Leave earn

*Position Summary *

The Biology Department seeks an individual with expertise in genetics and conservation biology to teach at the undergraduate level. The successful candidate will be expected to be an effective and dedicated teacher and will teach a 3:2 load per year with some service. The applicant is expected to maintain an active research program. Collaborative opportunities for research with our faculty are available. The teaching load will include laboratory sections, as appropriate. In one semester we anticipate this individual teaching Genetics, Conservation Biology, and a laboratory course in genetics or general biology. In the second semester the individual will teach Genetics and a seminar course that may include graduate students. Undergraduate student advising or similar service will also be expected. The Department of Biology is sincerely committed to excellence in undergraduate education and has a Masters

and Ph.D. program. A Ph.D. in biology or a related field is required at the time the appointment begins for the Visiting Assistant Professor rank. ABD candidates are encouraged to apply and will be considered at the rank of Lecturer with a 4:4 teaching load.

*University Information *

UNC Greensboro, located in the Piedmont Triad region of North Carolina, is a higher-research activity university as classified by the Carnegie Foundation. Founded in 1891 and one of the original three UNC system institutions, UNCG is one of the most diverse universities in the state with nearly 20,000 students and over 2,700 faculty and staff members representing more than 90 nationalities. With 17 Division I athletic teams, 85 undergraduate degrees in over 100 areas of study, as well as 74 master's and 32 doctoral programs, UNCG is consistently recognized nationally among the top universities for academic excellence and value, with noted strengths in health and wellness, visual and performing arts, nursing, education, and more. For additional information, please visit uncg.edu and follow UNCG on Facebook, Twitter and Instagram.

Primary Purpose of the Organizational Unit

The Department of Biology at UNCG is committed to providing excellent and comprehensive instruction at both the undergraduate and graduate levels. We offer a full range of courses to students pursuing a degree in Biology or Medical Technology, as well as to non-biology majors interested in the biological sciences. Biology majors have many options available to them, including the option to pursue degree concentrations in Biotechnology, Environmental Biology, or Human Biology. Biology students are encouraged to gain research experience through independent study with a faculty member, and to develop strong communication skills with writing- and speaking- intensive lecture and laboratory courses. Graduates of the Biology program at UNCG find employment in a wide range of fields and are well prepared for further study in graduate school or in health related professions such as medicine, dentistry, and veterinary medicine.

The Department's excellence in education is complemented by highly active research programs in environmental and behavioral ecology, evolution, population biology, and cell and developmental biology. Biology faculty members publish regularly in leading scientific journals and have earned national and international prominence with their research activities. Moreover, faculty in the Department have been very successful in obtaining external funding to support their research and have been awarded research grants from various agencies including the EPA, NIH, NSF, and USDA

*Minimum Qualifications *

A Ph.D. in biology or a related field is required at the time the appointment begins. ABD candidates are encouraged to apply and will be considered at the rank of Lecturer with a 4:4 teaching load.

*Special Instructions to Applicants * Applicants must apply online at https://spartantalent.uncg.edu and click on 'Faculty' (position #1011). Please submit a curriculum vitae, a cover letter that includes a statement of teaching interests and philosophy, description of current research interests. You will be prompted to submit online the names and email addresses of three references who will be contacted by the system with instructions on how to submit a letter of reference. Inquiries should be made to Dr. Malcolm Schug, mdschug@uncg.edu.

Malcolm Schug <mdschug@uncg.edu>

USalzburg Bioinformatics

The Department of Biosciences at the University of Salzburg invites applications for the position of an

Assistant Professor (tenure track) ("Assistenzprofessor/in mit Qualifizierungsvereinbarung")

in the field of Bioinformatics.

* Expected starting date: 1st March 2020

* Duration of employment: 6 years (tenure as Assoc. Prof. if agreed milestones are met in time)

* Working time: 40 hours /week

* Responsibilities: Candidates will be expected to 'habilitate', and/or complete additional milestones within max. 4 years, to establish and perform independent research and teaching, to develop research and teaching collaborations in the area of "Biosciences" and to participate in administrative duties, and acquisition of third party funding. Teaching includes offering courses and lectures (average 4 hours per week, 8 hrs/week after reaching the qualification goal) in German and English. Candidates are expected to develop and apply bioinformatics methods for the integration, analysis and interpretation of *omics data (genome, epigenome, exome, transcriptome and proteome) in the context of biological and biomedical research. Supervision of Bachelor-, Master- and PhD projects.

* Employment requirements/qualifications: Candidates must have a PhD and excellent background in compu-

tational biology, bioinformatics, data science, biostatistics or a related subject, as proven by peer- reviewed publications in the area of bioinformatics, as well as a proven track record in analysis and interpretation of large datasets such as high-throughput sequencing data. Relevant experience in university teaching and acquisition of third party funding, as well as at least one year of research experience outside Salzburg University, ideally abroad, are also required.

* Additional qualifications: We are looking for a highly motivated candidate with proficiency in programming languages (such as C++, Python), R, Unix/Linux, database systems and code management; fluency in German and English, as well as excellent communication and interpersonal skills, the ability to work as part of a team and strong commitment to student supervision.

The successful candidate will contribute to ongoing research efforts, as well as the doctorate school PLUS.

For more information please refer to our website: https://www.uni-salzburg.at/index.php?id 8727 and feel free to contact Prof. Angela Risch (angela.risch@sbg.ac.at), phone: + 43 (0) 662 8044 7220.

Interested applicants are encouraged to electronically submit their applications (refer to GZ A 0085/1-2019) by June 12th, 2019 to bewerbung@sbg.ac.at (motivation letter, cv and a copy of degree certificates) together with the following documents:

a. Description of the applicant's expertise and previous academic performance in research b. Description of the applicant's previous experience in teaching and student/theses supervision c. Concept paper outlining the applicant's current + future research activities and teaching as well as her/his envisaged contribution to the academic profile of the Division and the Department d. Agenda for knowledge transfer and academic management e. Description of the candidates social and other competences

The hiring and employment are governed by the Austrian University Act (UG 2002) and the Austrian Employee Act (Angestelltengesetz). The advertised position corresponds to that of an Assistant Professor, according to §27 of the Collective Agreement (Kollektivvertrag, KV) for Austrian Universities with the salary scale A2 (currently at euro 4498,40 per month) while an annual salary consists of a fourteen-month payment (§§48 and 49 (2, 11), KV). The salary level may be subject to an increase through a change in the KV. For more detailed conditions of employment, please refer to (section a): https://www.uni-salzburg.at/fileadmin/multimedia/Serviceeinrichtung%20Personal/documents/AssProf_2018.pdf Dr. Anja Horger University of Salzburg Department of Biosciences Hellbrunnerstr. 34 5020 Salzburg Austria

email: anja.hoerger@sbg.ac.at Tel: +43 662 8044-5501

anja.hoerger@sbg.ac.at

UTexas Austin FieldTech PlantEcologyGenomics

We seek an energetic, motivated research technician to participate in experiments on the ecology, physiology, and genomics of switchgrass. This is an opportunity to participate in integrative research studying the genetic basis of ecological processes in an important native grass species. The position will be administered through the University of Texas at Austin and stationed with Philip Fays group at the USDA Grassland, Soil, and Water Lab in Temple, TX (https://www.ars.usda.gov/plains-area/temple-tx/grassland-soil-and-water-research-laboratory/people/philip-fay/). This position will initially be for 6 months with possible extensions based on job performance, progress towards research goals, and new funding acquisition.

To apply, please submit a cover letter, CV, and contact information for three references to https://utaustin.wd1.myworkdayjobs.com/UTstaff/job/Texas/Research-Engineering–Scientist-Assistant_R_00003853 .Direct any questions about the position to Robert Heckman (robert.heckman@utexas.edu). Review of applications will begin immediately and the position will remain open until filled. Start date is negotiable, but preference will be given to applicants who are available earlier.

Robert Heckman <robert.heckman@utexas.edu>

Other

Australia FieldAssist EvolutionZebraFinch

Vocal communication in wild zebra finches

We are looking for a field research assistant for our next field season on wild zebra finches at Fowlers Gap Arid Zone Research Station, New South Wales, Australia (for some pictures and information on this beautiful outback location visit https://www.fowlersgap.unsw.edu.au/). The work is part of a PhD project by Hugo Loning from Wageningen University, supervised by Marc Naguib (Wageningen University) and Simon Griffith (Macquarie University). In this project, we are looking at the ecology and evolutionary functions of their vocal communication in the context of breeding decisions.

The fieldwork involves observing birds, setting up nestboxes on steel beams (that have to be driven into the ground), performing breeding checks, conducting playback experiments and audio recording of birds. Fieldwork will be physically demanding and takes place in hot conditions, so applicants should be in good physical condition. Although we try to avoid the heat as much as possible by going out early in the day and in season, we would like to stress that it is important that you are somewhat heat-resistant. Experience in bird handling and general ornithological skills, such as bird observing and identifying is greatly valued. Experience with acoustic equipment is an advantage, but not essential. We will access the different field locations by car on unpaved roads and that is why a drivers license is required. Work will take place in a small team (2-3 people) in a remote environment, so it is important that applicants can work together and communicate with others well, preferably also outside of the work environment because you will be part of a small social group of international researchers at the research station.

We will cover accommodation at the research station, where we will share facilities (big communal kitchen and living room, showers, washing machine etc.) with other researchers. We will be staying in a dormitory, and depending on the amount of researchers on site, you will have a private room or have to share a room with 1-2 other people. Phone and internet access at the station is limited and variable. Once every 2-3 weeks we will visit the nearest town, Broken Hill, to stock up on groceries and communicate with the outside world.

This project offers an unique opportunity to work on wild zebra finches, the worlds most studied songbird in the lab. Additionally, applicants can gain a lot of field research experience on various ways of data collection and managing. It is also definitely possible to pursue a small individual research project (topic to be discussed) within the scope of the fieldwork that needs to be conducted. This field assistant position will be ideal for somebody who wants to get some more field experience before finding a job in behavioural ecology or similar evolutionary biology fields.

Fieldwork will take place from mid August to mid December 2019, although the end date is somewhat flexible (could be earlier), depending on the zebra finches breeding attempt. Since fieldwork starts already in 1.5 months, we want to fill this position as soon as possible. Therefore, we will review applications as they are received and we will stop considering applicants after we have found a suitable candidate. Please send your application to the email address below and include 1) a small cover letter on why you are a suitable candidate and 2) your CV. We are looking forward to hearing from

you!

Hugo Loning PhD candidate Behavioural Ecology, Wageningen University, the Netherlands hugo.loning@wur.nl

"Loning, Hugo" <hugo.loning@wur.nl>

FRM France HumanDiseaseEvolutionProposals

Call for research proposals on Genomics of human infectious diseases

The increased availability and decreased cost of sequence data is transforming research in epidemiology and public health. For instance, the ebola outbreak in West Africa in 2014-2016 has led to a rapid and massive production, and sharing, of throusands of virus full genomes sequences. What is true for microbial genomics is also becoming true for human genomics. Recently, the UK biobank has released a database including more than 100,000 human genomes. The availability of these genomes has implications from epidemiology (understanding how microbes spread) to immunology (identifying candidate genes for vaccines or treatments).

MIVEGEC (Montpellier, France) is a leading research unit in Europe working on the ecology and evolution of infectious diseases. It has strong expertise in vector-borne diseases, mathematical modeling and virus evolution. The department is looking for a young research to set up a team on human and/or microbial genomics with implications on public health.

The department calls for applications (see details below) to elaborate a proposal to be submitted to the Fondation pour la Recherche Médicale (FRM). If selected by the FRM, the applicant will be awarded a 200k€grant in the first year to set-up his/her group and will have an option for a 100k€grant the second year. This funding can be used for the PIs salary (if necessary), to hire a post-doctoral research fellow or engineer, and for consumables. In return, the department will provide access to its facilities, including the platforms (e.g. the IRD bioinformatics cluster). Applicants are also expected to apply for other types of funding by the end of the first year (ANR, ERC). Further details about the FRM application (in French) can be found here: https://www.frm.org/chercheurs/appel-a-projets-frm/espoirs-de-la-recherche Elligibility criteria

- Demonstrate early career achievement in genomics of human infectious diseases. - At the deadline, hold a PhD for less than 7 years (career breaks will be taken into account). - Not being currently supported by a significant independent grant (e.g. ERC, ATIP-Avenir, ANR Jeune Chercheur / Jeune Chercheuse). - Demonstrate mobility throughout the scientific career. - Demonstrate integration in international reserch networks.

Applications

Applicants should submit a 1-page CV, an exhaustive list of publications, a research achivement statement (less than 5 pages) and a research project (less than 5 pages). They can also add up to two recommendation letters.

3 to 5 applicants will be selected to be interviewed by an international panel in Montpellier

Importantly, success to this call does not guarantee success to the FRM call. The applicant selected by MIVEGEC will only be allowed to apply to the FRM.

Timing

- Deadline for the call: July 10, 2019 - Results for the pre-interview step: mid-Aug 2019 - Interviews in Montpellier: between 10 and 20 Sept, 2019

Contact

https://www.mivegec.ird.fr/en/ mivegec@ird.fr

FullScholarships TransmittingScienceCourses

Dear colleagues,

Thanks to the donations from former participants, instructors, and other scientists, Transmitting Science is offering 3 scholarships (free attendance) for the following courses:

Anatomical Network Analysis (AnNA) September 23rd-27th, 2019, Barcelona (Spain). More info: https://www.transmittingscience.org/courses/-systems-biology/anatomical-network-analysis-anna/

Introduction to Agent Based-Models Using NetLogo October 21st-25th, 2019, Barcelona (Spain). More info: https://www.transmittingscience.org/-courses/ecology/introduction-agent-based-models-using-netlogo/ Scholarship application: https://-www.transmittingscience.org/funding/scholarships-application/ Deadline for application: June 30th.

Please feel free to distribute it between your colleagues.

Thank you

Sole

Soledad De Esteban-Trivigno, PhD Scientific Director Transmitting Science (http://-www.transmittingscience.org)

Soledad De Esteban Trivigno <soledad.esteban@transmittingscience.org>

Ithaca Paleontology PublicCommunication

Please join us for the 13th Annual Summer Symposium at the Paleontological Research Institution in Ithaca, NY on August 10th and 11th 2019! Registration OPEN.

https://priweb.org/index.php/events/summer-symposium NEW: AAAS-led #SciComm workshop for graduate (or soon to be graduate) students and early career scientists, August 9th! Registration OPEN.

https://priweb.org/index.php/events/at-the-museum/-events-socialmediaforscience The Symposium is a small, fun, and relatively informal event held at the end of the summer each year. We aim to attract academics, professionals, and educators from all varieties of natural science disciplines including paleontology, biology, and earth sciences, and geology. We also hope to increase ties among paleontology students in the region (and beyond) and we welcome all levels of students to share their research this summer. It is an excellent opportunity for students to gain more experience speaking about their work in a professional format, but in a friendly, less formal atmosphere. If you are doing research, please sign up to share it with us in a talk or a poster presentation! Talks will be 15-minute slots (12 minute talks with 3 minutes for questions). Posters should be no wider than 48 inches and we recommend the height not exceed 36-40 inches. Online registration is now open, no abstract required!

https://priweb.org/index.php/events/summer-symposium Friday, August 9th

This year we are pleased to offer an AAAS-led #SciComm workshop. 'How to Engage the Public Through Social Media' is a two-part workshop designed to help graduate students and early career scientists learn how to build an online presence and engage the public on social media platforms. Following the workshop, participants can use their new skills to create original content in practice utilizing the Museum of the Earth's exhibits and PRI collections. With the support of an Engaged Cornell grant, registration and participation are FREE! Space is limited, so sign up early.

https://priweb.org/index.php/events/at-the-museum/-events-socialmediaforscience Saturday, August 10th will feature posters and oral presentations by professionals, students, academics, and expert amateurs whose research covers paleontology, biology, earth science or earth science education, including a keynote talk by Dr. Andy Bush, University of Connecticut: Judgment Day: Mass Extinctions and Predictability in the History of Life. Breakfast, lunch, and dinner are included with registration, and the day will run from 9:00am through dinner.

Sunday, August 11th, experts in Devonian geology and paleontology, Dr. Carl Brett and Dr. Gordon Baird, lead field trips from PRI to several localities in the Finger Lakes region. Field trip registration will include lunch but guests are encouraged to bring their own snacks and water.

Choose either day or both days. For more information please contact symposium@priweb.org. We hope to see you this summer at PRI!

Sincerely, PRI Symposium Planning Committee

"Shin, Caren Pearl" <h1180279@connect.hku.hk>

MPIO Seewiesen VolResAssist EvolutionCognition

PARROT COGNITION (TENERIFE)

MASTER PROJECTS / VOLUNTEER RESEARCH ASSISTANTS

Comparative Cognition Research Group, Max-Planck Institute for Ornithology, Tenerife, Spain

The Max-Planck Comparative Cognition Research Group (CCRG) https://www.orn.mpg.de/Comparative-Cognition-Research-Group-von-Bayern invites applications of Masters students and volunteer research assistants. The CCRG forms part of the collaboration between the Max-Planck Institute for Ornithology, Seewiesen, Germany, and the Loro Parque Fundación (LPF), Tenerife, Spain. We are currently running various comparative research projects on social and physical cognition in parrots. Interested candi-

dates are encouraged to contact us to enquire about the ongoing projects. Successful applicants can expect to gain a solid insight in the field of Animal Cognition/Experimental Psychology and gain experience in working with psittacids in a dynamic, international research environment. The research is carried out on captive parrots of the LPF, which holds the largest parrot collection and gene reserve in the world (ca. 350 subspecies) for conservation and research purposes.

Logistics:

Voluntary research assistant position /Master Project starts between late-July and early August 2019. The position requires a minimum of 4 months, but ideally 6 months, continuous commitment at the research station in Tenerife, Spain. Free accommodation in a shared student apartment can be provided. Successful applicants will be responsible for their own transportation expenses to and from the research station (Puerto de la Cruz, Tenerife, Spain).

Important skills/qualifications:

Successful candidates will have:

- Completed a degree in Biology, Psychology or any related field - A strong interest in comparative cognition - High motivation and commitment to the project - Reliability, efficiency and an ability to work both independently and in the team - Confidence to interact with animals - Previous research experience - Good verbal and written English skills - Initiative to develop the project - Good team work attitude and social skills (shared accommodation between 3 students)

To apply:

Please send your CV and a cover letter stating your relevant experience, availability as well as motivation to Dr. Pizza Chow (pizza.chow@orn.mpg.de) and Dr. Anastasia Krasheninnikova (akrashe@orn.mpg.de). Contact details of 2 referees may be requested. Closing date for the application is 30.06.2019.

PARROT COGNITION (TENERIFE)

MASTER PROJECTS / VOLUNTEER RESEARCH ASSISTANTS

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— / —

OmennPrize WinnerAnnounced

The $5,000 Omenn Prize for the best article published in the previous calendar year in any scientific journal on a topic related to evolution in the context of medicine and public health goes to Roderich Romhild for his paper: Roemhild, R., Gokhale, C. S., Dirksen, P., Blake, C., Rosenstiel, P., Traulsen, A., Schulenburg, H. (2018). Cellular hysteresis as a principle to maximize the efficacy of antibiotic therapy. Proceedings of the National Academy of Sciences, 115(39), 9767-9772. doi:10.1073/pnas.1810004115 < https://www.pnas.org/-content/115/39/9767 >

The prize, provided by the generosity of Gilbert S. Omenn, is awarded to the first author of the winning article. It includes $5000 and an invitation to present a talk at the International Society for Evolution, Medicine, and Public Health annual meeting, August 13-16 in Zurich, with travel and lodging expenses covered. The prize committee including Isabel Gordo, Mel Greaves, Thom McDade, Steve Simpson, and Nina Wale was unanimous in its decision.

Dr. Romhild will present a talk based on the paper at the 5th annual meeting of the International Society for Evolution, Medicine, and Public Health in Zurich, August 13-18. Registration is open now. http:/-/isemph.org . The full meeting schedule is posted at http://evmedconference.com rmnesse@gmail.com

RoyalSociety PhotographyCompetition

Enter the Royal Society Publishing Photography Competition!

The Royal Society Publishing 2019 Photography Competition celebrates the power of photography in capturing scientific phenomena happening all around us, and the role great images play in making science accessible to a wide audience. https://royalsociety.org/-journals/publishing-activities/photo-competition/
The competition is only open to scientists, and is open for entries until 30 August 2019. The winners will be announced in December 2019. Find out how to enter < https://royalsociety.org/journals/-publishing-activities/photo-competition/how-to-enter > and please read our Terms and Conditions < http://royalsociety.org/journals/publishing-activities/-photo-competition/terms-conditions/ > before entering.

To celebrate the fifth anniversary of the competition, the overall winner will receive £1,000 and the category winners will each win £500. Scientists can enter an image in any of our five categories: Astronomy, Behaviour, Earth science and climatology, Ecology and environmental science, and Micro-imaging.

Felicity Davie Royal Society Publishing

T +44 20 7451 2647

The Royal Society 6-9 Carlton House Terrace London SW1Y 5AG http://royalsocietypublishing.org Registered Charity No 207043

"Davie, Felicity" <Felicity.Davie@royalsociety.org>

Smithsonian NHM ScienceWritingInternship

Hi Folks, We have a new internship opportunity available at the Smithsonian National Museum of Natural History, Department of Invertebrate Zoology - see description below and link for more information. Please help us spread the word about this exciting opportunity by sharing it with your students and colleagues.

The internship is open to US citizens and permanent residents who have completed their BA/BS within the last 2 years. Individuals of diverse backgrounds are strongly encouraged to apply.

https://www.smithsonianofi.com/blog/2019/05/26/-i2f-application-materials-now-available/ Internship to Fellowship program: Science Communication Internship Project Description: One of our primary missions at the Smithsonian is the diffusion of knowledge. At the Smithsonian's National Museum of Natural History, basic, exploratory science is a foundation of what we do, however dissemination of that exciting work is hindered by a large disconnect between that research and what is presented to the public. Our in-person and online visitors easily relate to well-known subjects like mammals and birds, things they see every day and which we know well based on a couple centuries of

study. The public is far less likely to know much about invertebrates or animals in the ocean because they are much further removed from our everyday life, yet, these are the organisms that drive most of the natural processes that impact our quality of life on earth (e.g. the carbon cycle, the water cycle, and climate). We want to correct this familiarity disconnect, we want to capture the public's interest and disseminate the amazing stories our researchers are pursuing. By doing this, we not only inform the public, but we inspire the next generation of scientists and citizens that will shape our future. We will embed a budding science writer within the Department of Invertebrate Zoology and teach them to translate our stories into compelling public outreach channeled through SIs established outlets including social media, websites, and direct contact with visitors.

Learning Objectives: This is a great opportunity for a student interested in both science and communications to develop their skills and to work with a diverse set of researchers. The intern will become familiar with a broad suite of research programs, projects and personnel within the NMNH's Department of Invertebrate Zoology; learn to craft a scientific story in 280 characters to 2 pages, in order to engage and inspire the public, and work with images to accompany stories.

Please contact me with any questions, Karen

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

Courier Address: Smithsonian Institution, MR 0163, Natural History, West Loading Dock, 10th and Constitution Ave NW, Washington, D.C. 20560

"Osborn, Karen" <OsbornK@si.edu>

Smithsonian NHM ScienceWritingInternship 2

Hi Folks, The deadline is quickly approaching for the Smithsonian I2F program (Internship to Fellowship - June 23). Please help us spread the word about this exciting opportunity by sharing it with your students and colleagues.

This paid 15-30 week internship is open to all students who have completed their BA/BS within the last 2 years and are US citizens or permanent residents of the US. Individuals of diverse backgrounds are strongly encouraged to apply.

See the description and links below for more information.

Main information pages: https://-www.smithsonianofi.com/latino-initiatives-i2f-program/ https://www.smithsonianofi.com/apa-initiatives-i2f-program/ The program is funded by these two Smithsonian diversity initiatives but being of Latin American or Asian Pacific decent is not a requirement for acceptance by any means.

Here is the direct link to the application site. https://-solaa.si.edu/solaa/#/public Including two writing samples would be very helpful in the selection process - one a fun, creative piece and one a more serious research related piece. They can be anything, done for a class or whatever - they don't have to be new pieces or long.

Please contact me with any questions (osbornk@si.edu).

Thank you, Karen

Internship to Fellowship program: Science Communication Internship Project Description: One of our primary missions at the Smithsonian is the diffusion of knowledge. At the Smithsonian's National Museum of Natural History, basic, exploratory science is a foundation of what we do, however dissemination of that exciting work is hindered by a large disconnect between that research and what is presented to the public. Our in-person and online visitors easily relate to well-known subjects like mammals and birds, things they see every day and which we know well based on a couple centuries of study. The public is far less likely to know much about invertebrates or animals in the ocean because they are much further removed from our everyday life, yet, these are the organisms that drive most of the natural processes

that impact our quality of life on earth (e.g. the carbon cycle, the water cycle, and climate). We want to correct this familiarity disconnect, we want to capture the public's interest and disseminate the amazing stories our researchers are pursuing. By doing this, we not only inform the public, but we inspire the next generation of scientists and citizens that will shape our future. We will embed a budding science writer within the Department of Invertebrate Zoology and teach them to translate our stories into compelling public outreach channeled through SI's established outlets including social media, websites, and direct contact with visitors.

Learning Objectives: This is a great opportunity for a student interested in both science and communications to develop their skills and to work with a diverse set of researchers. The intern will become familiar with a broad suite of research programs, projects and personnel within the NMNH's Department of Invertebrate Zoology; learn to craft a scientific story in 280 characters to 2 pages, in order to engage and inspire the public, and work with images to accompany stories.

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/ >

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"Osborn, Karen" <OsbornK@si.edu>

Smithsonian NMNH BiodiversityEducation

Please see the recruitment below for an ocean educator and help us spread the word about this opportunity.

The Smithsonians National Museum of Natural History (NMNH) seeks a contractor to support the Education and Outreach activities of the Ocean Education Team. The Ocean Education Team is responsible for developing activities and programs for family, adult, and teen audiences and training museum volunteers in ocean content and public engagement strategies. The goal of contract is to support and develop the efforts that connect visitors to the exciting objects, content, and scientists related to marine exhibits in addition to working with educators and scientists that connect visitors to ocean science, climate science and research. The Ocean Education Specialist contractor will assist education staff in developing strategies for communicating climate change and ocean science; and developing, implementing, and evaluating live feed, Science on a Sphere, and other public engagement strategies. The contractor will also assist in onboarding, supporting, and training volunteers for the Sant Ocean Hall and relevant temporary exhibits.

Refer to the Statement of Work and the Request for Quote at: https://naturalhistory.si.edu/education/-work-opportunities To apply, please email required materials to CollinsJE@SI.edu using the subject "Education Contract Submission" by 5:00 p.m. EDT on Thursday, July 18, 2019.

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

Courier Address: Smithsonian Institution, MR 0163, Natural History, West Loading Dock, 10th and Constitution Ave NW, Washington, D.C. 20560

"Osborn, Karen" <OsbornK@si.edu>

StoryCollider Evolution2019 Jun23

The Diversity Committees of ASN (American Society of Naturalists), SSE (Society for the Study of Evolution) and SSB (Society of Systematic Biologists) invite you to join us for a night with Story Collider at Evolution 2019.

Five outstanding evolutionary biologists will share per-

sonal stories of trials and triumphs on the topic of our theme "Outside the Distribution". Our story tellers this evening are:

- Aparna Agarwal (graduate student at the National Centre for Biological Sciences, Bangalore, India) - Patty Brennan (assistant professor, Mount Holyoke College, Massachusetts, USA) - Ambika Kamath (postdoctoral fellow, University of California Berkeley, California, USA) - C. Brandon Ogbunu (assistant professor, Brown University, Rhode Island, USA) - Scott Taylor (assistant professor, University of Colorado Boulder, Colorado USA)

Tickets are still available and will be available for purchase via cash during the June 22 evening poster session.

We hope you'll join us!

Best, Cathy Rushworth Co-Chair, SSE Diversity Committee Postdoctoral Associate Brandvain Lab, University of Minnesota and Ross-Ibarra Lab, UC Davis

Catherine Rushworth <catherine.rushworth@gmail.com>

SymbiosisInAquaticSystems FundingOpportunities

Symbiosis Model Systems The Gordon and Betty Moore Foundation's Symbiosis in Aquatic Systems Initiative < https://www.moore.org/initiative-strategy-detail?initiativeId=symbiosis-in-aquatic-systems-initiative > is solicitating pre-applications to advance development of experimentally tractable model systems in aquatic symbiosis. Additionally, we are seeking information about needs in model systems development through a related survey < https://-www.surveymonkey.com/r/symbiosismodelsystems >. The deadline for submitting a pre-application for the Symbiosis Model Systems funding call is August 8, 2019 at 23:59 PDT. In addition to seeking researchers who currently work in these areas, we hope to identify scientists and engineers who have not previously worked on these topics and who would bring novel perspectives, methods and technologies to these important areas of science. Learn more about this funding opportunity, including FAQs and eligibility requirements: https://symbiosis.smapply.io . Moore'-Simons Project on the Origin of the Eukaryotic Cell The Gordon and Betty Moore Foundation's Symbiosis in Aquatic Systems Initiative < https://-www.moore.org/initiative-strategy-detail?initiativeId=-symbiosis-in-aquatic-systems-initiative > and the Simons Foundation Life Sciences Division < https://-www.simonsfoundation.org/life-sciences/ > are jointly soliciting proposals for research on the origin of the eukaryotic cell. The application portal will open on July 9, 2019 at 10:00 PDT. The deadline for submitting a proposal is September 30, 2019 at 23:59 PDT. In addition to seeking researchers who currently work in these areas, we hope to identify scientists and engineers who have not previously worked on these topics and who would bring novel perspectives, methods and technologies to these important areas of science. Learn more about this funding opportunity, including FAQs and eligibility requirements: https://symbiosis.smapply.io . Adam Jones, Ph.D. | Program Officer, Science | Gordon and Betty Moore Foundation | 650-213-3120

Adam Jones <adam.jones@moore.org>

Trinidad ResInterns GuppyEvolution

Research Internships ' Evolutionary Biology/Ecology

— — — Research interns are needed to assist in a multi-disciplinary, multi-investigator, experimental study of the interactions between ecology and evolution in Trinidad, West Indies. The research is led by Professor David Reznick at the University of California, Riverside in collaboration with Joseph Travis (Florida State), Tim Coulson (Oxford), Paul Bentzen (Dalhousie U.) and Ron Bassar (Williams). — We seek to integrate multiple biological fields for the study of these interactions in experimental populations of guppies in Trinidad. Duties include assisting in monthly censuses of guppy populations in montane streams. The monthly censuses include long hours in the field and laboratory. — There will also be 12 days off between each census when interns can pursue an independent project. — Interns will be required to spend a minimum of 3-months in Trinidad, with possibility of extension. There are potential start dates in August 2019 and every month thereafter until early 2020. We will cover all travel and living expenses and provide housing. — Qualifications: We seek interns who are entertaining the possibility of pursuing graduate studies in some area of ecology and evolution and who wish to gain some additional field research experience before doing so. — Research will take place in semi-remote areas of Trinidad sometimes under bad weather conditions. Applicants must be able

to live and work well with others. Research will involve carrying heavy packs over slippery and steep terrain. Applicants must be in good physical condition and be able to meet the demands of field research under these conditions. Ability to drive a standard transmission vehicle is desirable but not required. Applicants with first-aid/first responder training, skills in automobile maintenance, and construction skills are highly desirable. Please address these skills when applying. Please see our website < www.theguppyproject.weebly.com > for more information on the project and access to reprints. — Be sure to check out our video menu, which includes a "guppy censuses" as submenu VII. — It details the main tasks associated with the internship. Applicants should send cover letter, CV and the names and e-mail addresses of three or more professional references to David Reznick (gupy@ucr.edu). At least two of the references should be academics.

Ron Bassar <rdbassar@gmail.com>

UPretoria ResTech MoleRats

A PhD student at the University of Pretoria is seeking 1 field research assistant to help capture wild mole-rats in Lusaka, Zambia. Ansells mole-rats live in the vicinity of Lusaka, Zambia and this project takes place on a farm outside of the city limits. I am interested in learning more about how their group composition changes over time as well as quantifying the frequency of dispersal and other inter-group movements and gene flow. This project combines a capture-mark recapture aspect with a molecular analysis component. Another aspect of this project is to determine connectivity between patches in an urban-agricultural environment.

Applicants should be available in early July until the end of September (3 months total). Applicants must be willing to work potentially long hours (including night work) in the field, which can involve hot or cold conditions, bugs, snakes, scorpions, etc. This job is physically demanding; digging with a spade, kneeling, and bending over is required to set traps and catch mole-rats. Accommodation and a stipend to cover food will be provided.

Assistant Responsibilities/ Skills Learned: - Capture mole-rats - GPS device use and mapping - Data entry and database use - Animal handling and morphological measurement collection - Assistance with biological sample collection

Qualifications: - Physically fit (involves kneeling, bending over, digging, occasional heavy lifting) - Previous field work experience (in Africa or remote environments) preferred - BS degree in biology, ecology, or related field preferred, but will consider qualified students who have not completed their studies

How to apply: Please send a cover letter and CV to Kyle Finn (kyletfinn@gmail.com). Applicants should be available for a Skype interview. Application dead line is 24 June 2019.

Kyle Finn <kyletfinn@gmail.com>

Vignettes on EvolutionaryApplications

Dear EvolDir,

We have extended the deadline for 2-3 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 have a distinguished Program Committee to review vignettes from around the world. 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 extended July 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

AuburnU BiologyEducationResearch

Postdoctoral Associate - Auburn University

Position: Postdoctoral Associate in Discipline-Based Education Research, Department of Biological Sciences, Ballen Lab

Start Date: September 2019

The Ballen lab of biology education research seeks one postdoctoral scholar for a 2-year appointment with the possibility of extension. This position is full-time with a flexible start date as early as summer 2019. The scholar would spend half of their time conducting research on undergraduate biology education, and the other half leading a large-scale, externally funded project on Equity and Diversity in Undergraduate STEM (EDU-STEM), with an emphasis on undergraduate biology. Postdocs would be co-advised by Jordan Harshman in the Department of Chemistry and Biochemistry. The postdoc will also work closely with the other leaders of the EDU-STEM network (Sehoya Cotner, University of Minnesota; Sheritta Fagbodun, Tuskegee University; Carrie Hall, University of New Hampshire).

What is EDU-STEM? Equity and Diversity in Undergraduate STEM (EDU-STEM) is a network that integrates research and teaching in evidence-based classroom experiences across Biology curricula. The four objectives are: (1) reveal differences, if they exist, in the cultural

climate for women and minorities in STEM disciplines (initially focusing on biology) as a function of geography, institution type, and cultural profile of the participating departments; (2) increase the number of faculty in the United States that are familiar with barriers to inclusion in STEM, and can apply evidence-based techniques for countering known barriers; (3) develop a community of faculty that can serve as leaders–at their home institutions and nationally–in inclusive teaching and assessment; and (4) identify cultural factors associated with a shift towards evidence-based teaching, especially pertaining to inclusive teaching. These activities will be integrated throughout thousands of students? first and second years of higher education, and all of them involve evidence- based techniques and experiences.

Postdoc responsibilities. This individual will complete the following related to EDU-STEM: (1) conduct research that aligns with the applicant?s interests on data collected from participating EDU-STEM institutions, (2) spearhead assessment efforts of EDU-STEM, (3) help organize and facilitate EDU-STEM meetings, (4) take a primary role in data analysis, and collaborate with network members, (5) disseminate results in the form of peer-reviewed publications.

Candidates must have: (a) a Ph.D. in a STEM discipline, STEM education, data science, or a closely related field; (b) a strong record of publication; (c) demonstrated interest in discipline-based education research; (d) demonstrated ability to work collaboratively, preferably managing and organizing large projects; (e) a strong quantitative background, and preferably a proficiency in R.

Preferred qualifications: Preference will be given to applicants with a background in the life sciences, and strong written and oral communication skills.

To apply: please send me (mjb0100(at)auburn.edu) a cover letter, CV, and the names and contact information of three references. We will continue to accept applications until the position is filled.

Cissy Ballen <mjb0100@auburn.edu>

Barcelona GeneNetworkEvolution

Barcelona_Postdoc: Evolution of gene networks and the origins of organismal complexity.

1.Basic job and project description:

2,5 years postdoc in evolutionary biology in Barcelona.

The job is the Autonomous University of Barcelona (UAB) and in the Centre de Recerca MatemÃ—tica (CRM). The CRM is in the UAB campus.

-The main project questions are:

How should gene networks and cell interactions be organized to lead to biological complexity?

How is such organization achieved in evolution?

How does gene network organization affect variational properties of the phenotype (e.g. evolvability)?

Any other question of the applicant's interest that is related to the previous questions.

We will use computational models of the genotype-phenotype map and computational models of evolution by natural selection to study such questions for the case of organismic complexity (e.g. anatomy). The genotype-phenotype maps models we develop are based on realistic gene network models of pattern formation and morphogenesis that lead to realistic 3D multicellular phenotypes.

The position is in Salazar-Ciudad's group.

2. Background of the project:

There is no consensus definition of complexity, yet it is evident that organisms are complex and explaining such complexity is one of the most fundamental questions of biology. Morphological complexity has not increased in the evolution of all lineages and, in general, it is unclear whether there is a general trend of increasing complexity in evolution. Yet, one may ask about the mechanisms by which such complexity has increased in the lineages where it has increased. How complexity increases during evolution is necessarily related to development: any evolutionary change in morphology is first a change in the development that produces such morphology.

It has been argued that, in spite of the remarkable morphological complexity of organisms, their development is achieved through a limited number of cell behaviors and types of cell interactions. These cell behaviors would be

cell division, cell adhesion, cell death, cell growth, cell contraction, extracellular signal and matrix secretion, extracellular signal reception and cell differentiation. In addition to cell behaviors, development involves interactions between cells, either mechanical or through extracellular signalling.

The questions we want to approach in this study are: how should these interactions and cell behaviors be coordinated to produce complex and robust morphologies? The question is, then, whether there are some logical requirements that developmental mechanisms should fulfill in order to lead to complex robust morphologies. Are there, for example, some requirements at the level of gene network topology or at the level of cell behaviors and their coordination during development?

If, as suggested above, pattern transformations in development involve a limited set of cell behaviors and cell interactions, then any mathematical model implementing those and intracellular gene networks should be able to reproduce, to a large extent, the range of pattern transformations possible in animal development. In this project we will use one such model, EmbryoMaker (Marin-Riera et al, 2015)â —, to simulate a large number of possible developmental mechanisms and try to discover what, if anything, do the mechanisms leading to robust complex morphologies have in common.

3. Job description

The main tasks of the post-doc include using and modifying existing models of embryonic development (e.g. EmbryoMaker) in order to simulate the development of complex phenotypes. These models will be combined with models of evolution, in a population context with mutation, genetic drift and natural selection on morphology (see for example Salazar-Ciudad and Marin-Riera, 2013). The gene networks found to lead to the development of complex and robust phenotypes in evolution would be analyzed to extract general regularities, if any, these gene networks need to fulfill. The main tasks, thus, consist in simulation, theorizing, data analysis, scientific programming, literature searching, writing and presenting results in conferences. The post-doc is expected to lead part of the project and develop his/her own research questions within the general framework of the project. We, thus, seek candidates highly motivated for theoretical work and data analysis with a broad understanding of the evolutionary theory and/or developmental biology and/or modeling.

4. Requirements:

-The applicant should hold a PhD in either evolutionary biology, developmental biology, systems biology, biophysics, mathematical or theoretical biology.

-Scientific 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.

5. Salary and conditions:

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CarnegieStanford QuantEvolutionaryGenetics

Postdoc in Quantitative Evolutionary Genetics and Ecoinformatics Carnegie Institution for Science at Stanford Moi Exposito-Alonso Lab - www.moisesexpositoalonso.org Starting September 2019 on

We aim to recruit a highly motivated and creative person with strong training in quantitative or population genetics / evolutionary biology / bioinformatics / computer science.

We seek to understand the impacts of climate change on the genetic diversity and evolutionary potential of plant species. Specifically, we strive to experimentally understand the mode and tempo of genetic adaptation to climate, find genetic loci involved in past adaptations and model evolving populations using population genetic theory and computational approaches. Possible projects include the analysis of next generation sequencing data to track evolution of experimental populations subject to different climates (GrENE-net.org), the development of new predictive evolutionary rescue models in population genetics, or modeling satellite imagery and public biodiversity databases using deep neural networks (see www.moisesexpositoalonso.org/research). This position involves conducting research independently, working with large genomic and biodiversity datasets, being involved in collaborative projects, preparing publications, and presenting research in scientific meetings. We prefer candidates interested in strengthening connections between molecular ecological genetics and computational biology, who will be active members of the research community at the Carnegie Plant Biology and Global

Ecology departments, and the Stanford Biology, Genetics and Earth Systems departments.

This is a full-time position with competitive salary and benefits. The lab is located at the Carnegie Institution on Stanford campus. Carnegie Postdocs have access to Stanford facilities. Stanford campus is a vibrant community embedded in the San Francisco Bay area, with opportunities for extensive social and scientific interactions. The initial position will be for one year with potential renewal of up to three years depending on performance.

Required qualifications for this position are a doctoral degree in population genetics, evolutionary biology, ecology, bioinformatics, computer sciences, or statistics, fluency in a major programming language, a track record of research productivity and independence, and willingness to work closely with collaborators and lab members.

Informal inquiries about this position can be made by emailing Moises (Moi) Exposito-Alonso at moisesexpositoalonso@gmail.com. To be formally considered, please include a cover letter and CV, and indicate 3 referees that I can ask for letters of recommendation.

Additional information:

The Department of Plant Biology of the Carnegie Institution is located on the campus of Stanford University. Formerly known as the Carnegie Institution of Washington, the Carnegie Institution for Science is a U.S.-based non-profit, private endowment. Andrew Carnegie founded the Carnegie Institution of Washington in 1902 as an organization for scientific discovery to serve as a home to exceptional individuals - men and women - with imagination and extraordinary dedication capable of working at the cutting edge of their fields. Today, Carnegie scientists work in six scientific departments on the west and east Coasts and at the Las Camapanas Observatory in Chile. Carnegie investigators are leaders in the fields of plant biology, developmental biology, Earth and planetary sciences, astronomy, and global ecology. The Department of Plant Biology and Department of Global Ecology have state-of-the-art facilities for molecular genetic studies of plants and computer resources. To learn more about the Department of Plant Biology and Global Ecology, visit https://dpb.carnegiescience.edu https://dge.carnegiescience.edu.

Carnegie is an equal opportunity employer. All qualified applicants will receive consideration for employment without regard to race, religion, color, national origin, sex, sexual orientation, gender identity, age, veteran status, disability or any other protected status in accordance with applicable laws.

moisesexpositoalonso@gmail.com

CornellU SugarKelpGenomics

The College of Agriculture and Life Sciences is a pioneer of purpose-driven science and home to Cornell Universitys second largest population of students, faculty and staff. We work across disciplines to tackle the challenges of our time through world-renowned research, education and outreach. The questions we probe and the answers we seek focus on three overlapping concerns: natural and human systems; food, energy and environmental resources; and social, physical and economic well-being.

The position is in the lab of Jean-Luc Jannink, Section of Plant Breeding and Genetics at Cornell, and is part of a large ARPA-E grant to develop open-ocean grown sugar kelp (Saccharina latissima). Saccharina latissima is a brown algae or kelp. It is phylogenetically distant from both plants and animals, having diverged from green algae early in the evolution of eukaryotes. The project will explore its genome, the population history of New England sugar kelp, and take advantage of its biphasic lifecycle to rapidly domesticate it using cutting edge genomic selection methods.

The Section of Plant Breeding & Genetics, within the School of Integrative Plant Sciences, trains interdisciplinary scientists in the elaboration of new breeding methods, the discovery of genetic mechanisms important for economically important traits, and the development of genetic stocks, germplasm, and varieties. Cornell University plant breeders are world leaders in innovative plant breeding research, teaching, and extension, and we collaborate globally.

The Jannink lab works with several crop species (wheat, oat, barley, cassava, and kelp) to develop new genomic prediction methods and integrate them optimally within breeding schemes. Many researchers are active in this area. We work together to discover, build on, and share new ideas and tools from across computational disciplines that lead to successful applied breeding outcomes.

The postdoc will collaborate with scientists at the Woods Hole Oceanographic Institute, the University of Connecticut, and the HudsonAlpha Institute for Biotechnology. We are a team discovering together how to address a range of challenges from evaluating many unique genotypes in common gardens, to isolating high molecular weight DNA in kelp, to designing breeding schemes around the kelp life cycle. Primary tasks for the postdoc include the bioinformatic analysis of a large

panel of resequenced haploid kelp gametophytes to identify variants, use the panel as an imputation reference population, and estimate important population genetic parameters of New England sugar kelp. Individuals from this panel have been mated and their sporophyte progeny are being evaluated off the Massachusetts and New Hampshire coasts by collaborators. The postdoc will be the team's expert resource on bioinformatics and quantitative genetic questions. The postdoc will analyze data from experiments for genome wide association between variants and multiple phenotypes, for the training of genomic prediction models, and for estimating parameters of kelp population and quantitative genetics. Based on these analyses, the postdoc will select among newly-generated gametophytes genotyped by low-depth skim sequencing. Finally, the postdoc will design and analyze validation field experiments measuring the performance of progeny sporophytes. Further possibilities for the data include research on linear models to predict heterosis and the identification of evolutionary conservation and signatures of selection in the sugar kelp genome.

Term is one year renewable for an additional year contingent on performance. To apply, please see: https://-academicjobsonline.org/ajo/jobs/13834 –

Jean-Luc Jannink USDA-ARS, Robert W. Holley Center for Agriculture and Health Phone: +1 607 255 5266 Fax: +1 607 255 6683

Cornell University Dept. of Plant Breeding and Genetics 258 Emerson Hall Ithaca, NY 14853 USA

Jean-Luc Jannink <jeanluc.work@gmail.com>

CRG Barcelona CancerEvolution

The "Evolutionary Processes Modeling" group at the Centre for Genomic Regulation (CRG), Barcelona, Spain, invites applications for a postdoc position to help elucidate cancer evolutionary dynamics using population genetics predictions together with computational analysis of recently published and unpublished cancer sequencing data.

Read more and apply here:

https://recruitment.crg.eu/content/jobs/-position/postdoctoral-researcher-position-group-%E2%80%9Cevolutionary-processes-modeling Deadline: 30 June 2019

About the institute

The Centre for Genomic Regulation (CRG) is an international research institute of excellence, based in Barcelona, Spain, with more than 400 scientists from 44 countries. The CRG shares principles of an interdisciplinary, motivated and creative scientific team that is supported by high-end and innovative technologies and a flexible and efficient administration.

In 2013, the CRG received the 'HR Excellence in Research' logo from the European Commission. This is a recognition of the institute's commitment to developing an HR Strategy for Researchers designed to bring the practices and procedures in line with the principles of the European Charter for Researchers and the Code of Conduct for the Recruitment of Researchers.

For further information, see https://www.crg.eu/ .
About the group

Cancer is a genetic disease, subject to population genetics forces like mutation, selection and stochasticity. We have recently demonstrated that coding sequences of cancer tumors not only exhibit positively selected mutations that drive cancer (www.biorxiv.org/content/-10.1101/485292v1), but that there exist genes that the tumor cannot afford to lose to the mutational pressure (www.nature.com/articles/ng.3987). In addition to genes, we have also identified cancer driver loci in the non-coding part of the genome (www.nature.com/-articles/s41467-017-00100-x). Both coding and non-coding selection can act to promote cancer defense mechanisms against therapy, which can be unveiled through the analysis of time-sequence data of cell-free DNA and of patient survival data.

The group is particularly interested in how the evolution and survival of cancer cell populations relies on mutation influx and in the selection inference from allele frequency information. To this end, we develop mathematical and computational approaches to estimate mutation rates and selection. We use whole-exome sequencing and whole-genome data repositories to analyze selection on coding and non-coding sequences. In addition, we analyze cell-free DNA from tumors and their temporal evolution in response to therapy. Estimates of the strength of selection in cancer allow for a prioritization of genes and non-coding regions by their disease relevance, with the ultimate goal of promoting therapeutic advances.

The Evolutionary Processes Modeling lab was established in October 2018 and is part of the "Bioinformatics and Genomics" program at the CRG in Barcelona, Spain. Further information can be found at www.crg.eu/en/-programmes-groups/weghorn-lab . Your profile

You have a PhD degree in population genetics, physics, statistics, genetics, bioinformatics, computer science or a related discipline. You are familiar with the principles of population genetics and statistical analysis and have experience with computational analysis of sequencing and other biological datasets. You are highly motivated and eager to work on evolutionary and biological problems through the use and development of theoretical and computational approaches.

The offer

Contract duration: 1 year (with possibility of extension). Estimated annual gross salary: Salary is commensurate with qualifications and consistent with our pay scales. Target start date: Immediately.

We provide a highly stimulating environment with state-of-the-art infrastructure and unique professional career development opportunities. We offer and promote a diverse and inclusive environment and welcome applicants regardless of age, disability, gender, nationality, race, religion or sexual orientation. The CRG is committed to reconcile a work and family life of its employees and offers extended vacation period and the possibility to benefit from flexible working hours.

Application procedure

Applications should be addressed to Dr. Donate Weghorn and include:

1. A letter of motivation. 2. A complete CV, including a list of publications. 3. A brief statement of research interests. 4. Contact details (or reference letters) of at least two referees.

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CSIRO AustralianNatl InsectCollection WaspVenomEvolution

CSIRO's National Collections and Marine Infrastructure (NCMI) is seeking to appoint a CERC Postdoctoral Fellow in spider wasp venom evolution.

As the successful candidate you will work with a multidisciplinary team of researchers from CSIRO and the University of Queensland to develop and apply novel molecular and analytical methods for the study of the spider wasp (Hymenoptera: Pompilidae) venom. This will include its genomic and chemical basis, effect on human receptors and evolution.

Open to all candidates

Location: CSIRO Black Mountain, Canberra, ACT, Australia Salary: AU$83,687-AU$94,679 plus up to 15.4% superannuation Tenure: Specified term of 3 years

CSIRO Early Research Career (CERC) Postdoctoral Fellowships provide opportunities to scientists and engineers who have completed their doctorate and have less than three years relevant postdoctoral work experience. These fellowships aim to develop the next generation of future leaders of the innovation system.

For more information and to apply go to: https:/-/jobs.csiro.au/job/Canberra%2C-ACT-CSIRO-Postdoctoral-Fellowship-in-Spider-Wasp-Venoms/-557966800/ "Rodriguez Arrieta, Juanita (NCMI, Black Mountain)" <Juanita.Rodriguez@csiro.au>

DukeU PDFs PhDs PopulationGenetics

The Goldberg lab at Duke University in Durham, NC is recruiting postdocs and PhD students.

Students and postdocs may work on a range of projects in theoretical and empirical population genetics, com-

putational archaeology, and human-environment interactions. Much of our work is in humans and other primates, but study system is flexible.

Individuals with a background in genome assembly or primate disease ecology are particularly encouraged to apply. We are starting new work in zoonotic disease transmission and disease models that incorporate genetics.

The Goldberg lab combines theory and computational data analysis; interest in biological applications of programming, statistics, and/or mathematics is required. Postdoc candidates should contact Amy Goldberg with a CV and brief statement of research interests. Candidates should be specific about their interests in our work.

We strive to be an inclusive environment for all.

www.goldberglab.org amy.goldberg@duke.edu

Amy Goldberg <amy.goldberg@duke.edu>

EarlhamInst UK 2 Genomics

The Earlham Institute is looking for three motivated people to join the new Darwin Tree of Life Programme that aims to sequence the genomes of 66,000 known species of animals, plants, protozoa and fungi in the UK. This is part of a global effort to sequence the genomes of 1.5 million species on Earth.

Work at the Earlham Institute will focus on analysing genomes to further our understanding of evolutionary processes that drive biodiversity in populations and ecosystems. We are also involved in applying genomics to the conservation and management of valuable ecosystems and to the sustainable use of biodiversity for public good.

All three roles will be based at the Earlham Institute on the Norwich Research Park where they will join a diverse community of scientists with expertise in genomics, biology, evolution, bioinformatics, computing and biotechnology.'

One of these roles is for a Postdoctoral Research Scientist (Plant Metabolic Diversity) to join the laboratory of Dr Nicola Patron.

Background: Work on a new project that will investigate the metabolic diversity of UK flora. In this project, we will identify candidate genes responsible for the biosynthesis of target metabolites in UK plant species and explore the regulation and evolution of specialised metabolism in related species. Based in the Patron Lab at the Earlham Institute and in collaboration with the Osbourn Lab at the John Innes centre, this BBSRC-funded project will be linked to a major new initiative to sequence the genomes of all known UK eukaryotes.

The role: This project will generate and compare genomic, transcriptomic and metabolomic datasets for a group of related plant species. The scientist will be responsible for conducting comparative analyses with the aim of exploring the genetic basis of metabolic diversity and identifying genes responsible for the presence of target metabolites. They will work in collaboration with other scientists at the Earlham Institute and John Innes Centre to characterise candidate genes, with the eventual aim of enabling biological production of novel, high-value metabolites.

The ideal candidate: The candidate must have a PhD in Plant Biology, Biochemistry, Bioengineering, Synthetic Biology, Evolutionary Biology, Bioinformatics or a related subject. The project would suit a molecular biologist or biochemist experienced in the analysis of RNA-seq/metabolomic datasets, or a bioinformatician interested in applying their expertise to understanding metabolic diversification in plants. The candidate must be motivated and interested in the applying innovative approaches to natural product biology.

Additional information: Salary on appointment will be within the range 31,250 - 38,100 per annum depending on qualifications and experience. This is a full time post for a contract of 18 months.

For further information and details of how to apply, please visit our web site http://-jobs.earlham.ac.uk/Details.asp?vacancyID=500 or contact the Human Resources team on 01603 450462 or nbi.recruitment@nbi.ac.uk quoting reference 1003678.

As a Disability Confident employer, we guarantee to offer an interview to all disabled applicants who meet the essential criteria for this vacancy.

Closing date: July 1st 2019

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processes that drive biodiversity in populations and ecosystems. We are also involved in applying genomics to the conservation and management of valuable ecosystems and to the sustainable use of biodiversity for public good.

All three roles will be based at the Earlham Institute on the Norwich Research Park where they will join a diverse community of scientists with expertise in genomics, biology, evolution, bioinformatics, computing and biotechnology.

One of these roles is for a Postdoctoral Research Scientist (Tree of Life Pollinators) to join the join the Laboratory of Dr Wilfried Haerty.

Background: The Darwin Tree of Life consortium aims to generate the genome sequence of every living species of the British Isles.

As part of this highly collaborative project, we will sequence, assemble and investigate the genomes of key Hymenoptera pollinator species. We aim to characterise the current genomic diversity of these species, identify key demographic parameters and through the sequencing of historical samples establish past genomic diversity and infer the evolutionary trajectories of these emblematic yet declining species.

This BBSRC funded project will be based in the Haerty lab at the Earlham

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Edinburgh EvolutionaryGenomics

An 18-month position is available to join a new group led by Simon Martin at the University of Edinburghs Institute of Evolutionary Biology, to start on or before 1st October 2019.

Our research involves genomic analyses of natural populations to study evolutionary processes such as adaptation and speciation. We are seeking a researcher to work on a collaborative project that investigates the evolution of supergenes and their role in speciation by combining genome structural analysis and population genomics in butterflies. The specific role will be tailored to you and will focus either on genome assembly, linkage mapping and analysis of structural variation or on population genomic analyses of selection, recombination and migration.

You will be joining a small group based in the stimulating and supportive environment of the Institute of Evolutionary Biology, a world-renowned centre for evolution and population genetics. The project will involve collaboration with partners in Europe and Africa. Your research activities will be largely computational and will involve application of cutting edge techniques to analyse high-throughput sequencing data, with opportunities for methods development. A component of the job will be to coordinate sample collection/breeding, with an option to work for up to two months on site at Mpala Research Centre in Kenya.

Applicants should hold (or will shortly be awarded) a PhD, and have a proven track record of producing high quality data suitable for publication. Expertise in analysis of high-throughput sequencing data are essential, and a strong background in evolutionary or population genomics, adaptation and speciation would be advantageous.

For more details: https://www.vacancies.ed.ac.uk/pls/corehrrecruit/erq_jobspec_version_4.jobspec?p_id8169
Deadline: 5 July 2019

Informal enquiries to Simon.Martin@ed.ac.uk Homepage: https://simonmartinlab.org/ The University of Edinburgh is a charitable body, registered in Scotland, with the registration number SC005336.

Simon.Martin@ed.ac.uk

EmoryU ancientDNA

The Lindo Lab in the Department of Anthropology at Emory University (Atlanta, GA) is seeking an Ancient DNA Postdoctoral Researcher for a one-year appointment. The position will entail working with ancient human populations from North and South America, ranging in time from 10,000 years ago to European contact. The work will predominantly be done in the ancient DNA lab, so proficient lab skills and knowledge of ancient DNA protocols are required. The position will also provide for the opportunity to mentor graduate and undergraduate students.

The start date is flexible but with a September 1st start date preferred. Salary is $45,000, including benefits.

Please submit your application via Interfolio:

https://facultysearch.interfolio.com/11312/positions/-48173 Review of applications will begin immediately and will continue until the position is filled. For additional information regarding the position, please contact John Lindo (jlindo@emory.edu).

john.lindo@emory.edu

GothenburgU SpeciesIdentificationUsingAI

Postdoctor in Species identifications using AI, citizen science and mobile apps

Diary id: PAR 2019/851 Employment level: Fixed term Location: Department of Biological and Environmental Science Apply by: 2019-08-15

At the Department of Biological and Environmental Sciences (BioEnv) we have teaching and research activities that stretch from the alpine ecosystem, through forests, cultivated land and streams, all the way into the marine environment. In these environments we study different levels of biological organisation from genes, individuals and populations, to communities and ecosystems. We work within ecology, evolution, physiology, systematics and combinations of these fields in order to understand the impact of natural and anthropogenic changes of the environment.

The department is placed at three different localities: in Gothenburg Botanical garden, at Medicinarberget in Gothenburg, and at the marine research station that is run by the Sven Lovn Centre for Marine Infrastructure-Kristineberg. The current position is placed at Department of Biological and Environmental Sciences, Gothenburg

The Department of Biological and Environmental Science (http://bioenv.gu.se) is the host of the Gothenburg Global Biodiversity Centre (http://ggbc.gu.se). The Centre has two main goals: to further develop biodiversity research, and to bridge the gap between scientists, the public and industry. The research group of Alexandre Antonelli (Antonelli Lab, http://antonelli-lab.net) comprises ca fifteen persons including students, researchers and laboratory personnel, as well as ca twenty associated members in Gothenburg and at the Royal Botanic Gardens, Kew in London (http://-www.kew.org/science). The group works with several biodiversity-related questions with focus on evolution and biogeography. The working language is English. The group's research has had large international impact and received several prestigious grants, from the European Research Council ERC, the Swedish Research Council VR, the Knut and Alice Wallenberg Foundation, and the Swedish Foundation for Strategic Research, among others.

Project description

The goal of this project is to advance solutions for the identification and logging of the world's species using integrative bioinformatic solutions. The work may consist of several tasks, depending on the candidate's strengths and own research interests:

- Implement dynamic identification keys to enable identification of morphologically similar species - Use image recognition algorithms based on convolutional neural networks to identify plant species - Integrate georeferencing tools to further improve the accuracy of automatic identifications - Coordinate a comprehensive image bank for plant species by citizens and volunteers - Assess the accuracy of classification using neural networks built from citizen-generated images as compared to an expert-vetted image bank - Estimate how biodiversity changes locally based on images taken on the same spot over different years

Job assignments This employment includes the implementation of different bioinformatic solutions including, but not limited to, the points above. The solutions developed will be primarily implemented in the mobile app https://knowme.earth/, funded by the European Research Council, the Swedish Research Council and the Swedish Foundation for Strategic Research. The researcher should either implement these solutions in the app directly, or (if required) work closely with, and supervise, a mobile app developer.

Eligibility For this employment you must have:

- A PhD Degree, or equivalent, within biodiversity or biology, artificial intelligence/machine learning, bioinformatics, or related disciplines. - Experience with software development, or leading the development of software. - Excellent ability to communicate in spoken and written English. - Documented good strategic and administrative capacity. - Excellent collaborative skills but also be capable of working independently and focused. - Experience of speaking in front of others and giving presentations. - Excellent inter-personal skills.

Qualifications We are seeking someone who is demonstrably highly efficient, engaged and updated in questions related to the objectives of this project. You should be self-motivated and have the capacity to plan and execute projects according to strategies and goals. You

should have the ability to think strategically and be able to create a holistic view of situations. Ability to communicate in Swedish is not a requirement.

It would also be advantageous, but not a requirement, if you have experience in mobile development. Priority is given to native mobile development using React Native, iOS development in Swift and Android

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HowardU ApeConservation

Postdoc Position: Visible Ape & Dissemination

Hiring Institution: Howard Univ.; Posted: 06-11-2019; Duration PostDoc: Sept2019-Aug2022

A postdoctoral researcher is sought to join the Rui Diogo lab (www.ruidiogolab.com), at the Howard University College of Medicine, Department of Anatomy (Washington DC).

Within the field, this is one of the labs with a higher impact, number of publications in top journals, books, awards, and press coverage (TV, newspapers, press releases, etc.). Therefore we are looking for someone that is not only a relatively independent, top researcher, but also highly motivated, ambitious, willing to learn, and to help in dissemination - a crucial component of the philosophy of the laboratory-, including travels to rural communities in Africa and several scientific meetings. On the other hand, this means the researcher will gain a huge experience and be part of several top publications, therefore becoming highly prepared for a more senior position, after those 3 years, as has been the case with the vast majority of our previous postdocs. See also: Researchgate: https://www.researchgate.net/profile/Rui_Diogo Diogo Lab's books: http://www.amazon.com/Rui-Diogo/e/B001JS2K96 We are therefore interested in a candidate that will have the ability to:

1) Help to coordinate a major, NSF-funded project to produce a Visible Ape Website and mobile app that is similar to, and will be directly compared with, the Visible Human Project.

2) Help write review papers and books on broader evolutionary topics, therefore getting a substantial experience in publishing in top journals and monographs.

3) Have the willingness to disseminate science and bring awareness to ape conservation, including in rural communities in Africa, DC public schools, scientific meetings, and numerous other places. Therefore, the researcher should have a good, and ideally a very good, English level, as well as writing skills.

4) Have a high independence, and the drive to be highly productive, taking advantage of the broader scope and numerous collaborations of the lab, while also enjoying a vast liberty, concerning both a daily- basis schedule and at an intellectual level.

Interested candidates should send a 1-page letter addressing this announcement, as well as a detailed CV to Rui Diogo, at rui.diogo@howard.edu. Please write "post-doc in Diogo's lab" followed by your last name in the email subject.

Howard University is a historical University situated in the center of Washington DC, which is a beautiful, green and enjoyable city with numerous cultural and outdoor activities. The Department of Anatomy provides a prosperous, resourceful and multidisciplinary environment for research, includes faculty with a broad experience in developmental biology, paleontology, neurobiology, comparative anatomy and medicine. We have strong ties with surrounding institutions, particularly with George Washington University and Smithsonian Institution, and the candidate will probably have the opportunity to do part of his/her research at those institutions and thus to further expand his/her knowledge and academic connections.

rui_diogo@hotmail.com

IndianaU FunctionalGeneticsOfReproductiveEvolution

My lab at IU Bloomington has an open postdoc position on molecular mechanisms of postmating sexual signalling in plants, including their role in species barriers (official advertisement below).

Please feel free to contact me with any questions about the position.

I'll also be at the upcoming Evolution 2019 meeting in Providence, and I'd be happy to chat there about this (or any other) work in the lab!

Postdoc: Functional Genetics of Reproductive Evolu-

tion, Moyle Lab, Indiana University

An NSF-funded postdoctoral position is available in the lab of Leonie Moyle in the Department of Biology at Indiana University, Bloomington. The work will examine the molecular genetics and evolution of plant gamete (pollen-ovule) signal divergence, through the study of functional variation among Solanum species (wild tomatoes). Our lab examines mechanisms underlying the emergence of species reproductive barriers, and we are looking for a motivated individual to extend these analyses to studies of the functional role of specific reproductive proteins in sexual signal divergence. The postdoctoral candidate will also have the opportunity to develop and carry out independent lines of research in the lab.

There is a wide variety of research going on in the lab in addition to the current project. For a summary our work, please see: http://www.indiana.edu/~moylelab/ Ph.D. required, preferably in molecular genetics, evolutionary genetics, or plant science. The position requires skills and a strong record of research in molecular analysis. An ideal candidate would have previous experience with molecular techniques to examine gene functional roles, including CRISPR-Cas9 editing in angiosperm systems. The starting salary is $47,000, plus benefits.

To apply, please submit (i) a letter of application, (ii) a full CV, (iii) a brief statement of research interests, and (iv) contact information for three references electronically to http://indiana.peopleadmin.com/postings/7546. Review of applications will start immediately and will continue until the position is filled. The exact start date is flexible, but best consideration to those applying before June 20, 2019. Inquiries about the position can be directed to Leonie Moyle (lmoyle@indiana.edu).

Indiana University has a broad and active group in evolutionary genetics, and considerable molecular and computational resources. Bloomington is situated in scenic, hilly southern Indiana, near several parks and wilderness areas. The cultural environment provided by the University is exceptionally rich in art, music, and theater.

IUB College of Arts and Sciences is committed to building and supporting a diverse, inclusive, and equitable community of students and scholars.

Indiana University is an equal employment and affirmative action employer and a provider of ADA services. All qualified applicants will receive consideration for employment without regard to age, color, disability, ethnicity, sex, gender identity, gender expression, genetic information, marital status, national origin, race, religion, sexual orientation, or veteran status.

"Moyle, Leonie C" <lmoyle@indiana.edu>

LaRochelle France AdaptationToMercuryToxicity

1 year postdoctoral research position in ecotoxicology ' La Rochelle (France)

Context Mercury (Hg) still raises high environmental concerns in the Arctic. This toxicant is indeed found in high concentrations in Arctic marine food webs and these concentrations might keep on increasing in some Arctic regions under the effect of global change. In that context, understanding impacts of Hg on the Arctic wildlife, and especially on top-predators which are among the most vulnerable organisms to environmental pollution, is a major objective. Toxic effects of Hg have been widely investigated, including on Arctic species. However, in polar seabirds, a very few studies have assessed long-term population effects of Hg and almost nothing is known about effects of the parental mercury contamination on offspring phenotype and survival prospects. This is unfortunate as chick body condition, growth and ultimately survival will play a role in the dynamics of these vulnerable populations and their future distribution around the Arctic. Telomeres are long repetitive noncoding sequences of DNA located at the end of linear eukaryotic chromosomes. These telomeres inexorably shorten through life and this rate of shortening can be modulated by environmental conditions and exposure to environmental stressors such as pollutants. A couple of studies recently demonstrated in Arctic seabirds how telomere dynamics is linked to bird contamination by some persistent organic pollutants (OCPs and PFASs). Exposure to stressors is also well known to have transgenerational effects, with stress levels in the parental line having long-term negative consequences on offspring health. Recent studies have shown that these transgenerational effects might be mediated, at least in part, by telomere attrition. For instance, birds experimentally stressed during egg production produced chicks with shorter telomeres than controls. Hg, as a major environmental stressor, could therefore impact stress and telomere length of both parents and their chick, with potential subsequent consequences on chick phenotype and survival.

Position We are seeking for an enthusiastic postdoctoral researcher to work on a project aiming at understanding the long-term effects of Hg accumulated by

adult Arctic seabirds on the next generation. More specifically, by focusing on a little auk (Alle alle) population from Greenland, the postdoctoral researcher will in a first step study how adult Hg contamination impact their chick's Hg contamination and ecophysiological condition (telomere length, oxidative stress, growth, body condition) and ultimately survival capacity. In a second step, the role played by adult movements and distribution during the non-breeding period on Hg concentrations accumulated by females prior the laying period and subsequently on chicks will be investigated. The position will involve some lab work as the postdoctoral researcher will be in charge of analyzing telomere length from little auk blood samples at the CEBC institute. Oxidative stress data will be provided as well as ecological data.

Qualifications - PhD in ecotoxicology or ecophysiology - Experience with lab work - Knowledge of Arctic marine ecosystems and/or seabird ecophysiology will be an asset - Applicants who show an interest in applying to further funding to work in our lab and pursue the project past this one-year contract will be given particular attention

We offer a 1-year contract starting at the latest on 1 November 2019. Gross monthly salary is 2500 euros. The postdoctoral researcher will be based at the LIENSs institute (http://lienss.univ-larochelle.fr/?lang=en), La Rochelle, France within the research group AMARE (Responses of marine animals to environmental variability). Main supervisor: Jérôme Fort (jerome.fort@univ-lr.fr). Co-supervisors: Mathieu Giraudeau (CREEC, MIVEGEC, Montpellier, France, giraudeau.mathieu@gmail.com) and Frédéric Angelier and Olivier Chastel (CEBC, France, frederic.angelier@cebc.cnrs.fr and olivier.chastel@cebc.cnrs.fr).

Application Please send your CV, cover letter, contact information for three references and any inquiries to Jerome Fort (jerome.fort@univ-lr.fr) by 1 August 2019.

GIRAUDEAU Mathieu Centre de Recherches Ecologiques et Evolutives sur le Cancer (CREEC) CNRS, MIVEGEC, UMR5290 911 avenue Agropolis, 34394 Montpellier cedex 5 - FRANCE https://-www.researchgate.net/profile/Mathieu_Giraudeau
Mathieu Giraudeau <giraudeau.mathieu@gmail.com>

Lausanne EvolutionaryGenomics

Two 3-year Postdoc positions in comparative evolutionary genomics, Lausanne, Switzerland.

The Groups of Profs Christophe Dessimoz and Robert Waterhouse are seeking candidates for two Postdoctoral positions at the Departments of Computational Biology and Ecology & Evolution, University of Lausanne, Switzerland, funded by the Swiss National Science Foundation (SNSF).

Working at the interface between biology and computer science, the Dessimoz Lab (https://lab.dessimoz.org/) seeks to better understand evolutionary and functional relationships between genes, genomes, and species. The Waterhouse Group (https://rmwaterhouse.org/lab) is focused on elucidating interactions between gene evolution and gene function through computational interrogation of arthropod genomics data. Both Groups are members of the SIB Swiss Institute of Bioinformatics.

The two Postdocs will lead the evolutionary genomics contributions to a groundbreaking interdisciplinary project in collaboration with the Group of Prof. Bruno Lemaitre (https://lemaitrelab.epfl.ch/) at the neighbouring ÃÂcole Polytechnique Fédérale de Lausanne.

The overall project aims to develop the computational tools required to fully exploit new genomics data in a framework that also takes advantage of the latest molecular biology tools to achieve combined evolutionary and functional characterisation of the Drosophila immune secretome. The two Postdocs will work closely together on the project developing and applying comparative genomics and evolutionary modelling approaches to fully exploit new genomics data, with a biological focus on the insect innate immune system. The evolutionary genomics part of the project will focus on (1) extending our current knowledge of immune effectors beyond the canonical repertoires of genes encoding for known antimicrobial peptides, and (2) exploiting the rich genomics datasets across Drosophila species to trace the evolutionary histories of immune genes.

We seek candidates with demonstrated programming skills in the areas of bioinformatics, computational biology, and comparative genomics. Further desirable attributes include knowledge of and interest in orthology delineation, gene family evolution, phylogenetics, gene birth/death, genome-wide synteny, selection and

constraint, gene prediction, genome annotation, immunity, infection, and insects.

Applications can only be made through the University of Lausanne online recruitment platform: https://career5.successfactors.eu/career?career_ns=-job_listing&company=universitdP&career_job_req_id=-667 Please note that the SNSF defines the position of ÂPostdoc' as no more than five years since obtaining a doctorate (i.e. since the date of the doctoral thesis defence). Informal enquiries can in the meantime be made by writing to Prof. Christophe Dessimoz, Christophe.Dessimoz@unil.ch and Prof. Robert Waterhouse, Robert.Waterhouse@unil.ch.

Robert Waterhouse <robert.waterhouse@gmail.com>

Madrid BiodiversityEcolEvolution

The Evolution and Conservation Biology research group at Complutense University of Madrid (Spain, www.ucm.es/bcveng) welcomes proposals of postdoctoral researchers who wish to join the Department of Biodiversity, Ecology and Evolution taking advantage of various programmes for attracting talent released by the Regional Government of Madrid and UCM.

The successful candidate will demonstrate independence and outstanding research performance in any field that fits to our department (not necesarily our own lines). Mobility (various years of research activity outside Spain) are required in some calls. In our research group, we offer an opportunity for developing independent research lines and gaining teaching experience.

There are two parallel schemes funded by CAM directed to experienced researchers and young posdocs. Information available at the following sites:

Trained researchers (4-year position, 55k€per year gross salary with up to 200k€additional research funding): https://www.ucm.es/ct53-19 Young postdocs (4-year position, 40k€per year gross salary, needs a research tutor): https://www.ucm.es/ct54-19 Another program from UCM funds 1-year postdoc positions (plus 1-year extension contingent on positive evaluation). Gross salary near 23,5k€, needs a research tutor. Parallel application to this and the CAM postdocs is possible (and frequent). All the relevant information about this call: https://www.ucm.es/ct48-19 The deadline to submit applications to the UCM is July 10, 2019. Applicants are to submit their proposals directly to UCM, but please be aware that they have to be accepted by our Department in advance. Prospective applicants interested in joining the Evolution and Conservation Biology UCM research group should submit a summary of their proposals to Javier Pérez-Tris (jperez@ucm.es) asap and not later than July 5, 2019.

Javier Pérez-Tris Departamento de Biodiversidad, Ecología y Evolucion Universidad Complutense de Madrid Tel.: (+34) 91 394 4949 E-mail: jperez@bio.ucm.es Web: http://www.ucm.es/perez-tris JAVIER PEREZ TRIS <jperez@bio.ucm.es>

MIZ PAS Poland 2 EvolutionaryGenomics

Postdoctoral Researcher position in evolutionary genomics

A postdoctoral research assistant position is now open in a newly established research group led by Dr MaÃÂgorzata Pilot at the Museum and Institute of Zoology of the Polish Academy of Sciences, starting in autumn 2019. The research group is focused on mammalian evolutionary genomics, and this position will be focused on canid genomics. Specific topics to be studied include the evolutionary history of Eurasian Canis species, causes and consequences of admixture among Canis species and subspecies, and the evolution of behavioural traits in the genus Canis. The position is available for three years and 9 months, and includes a three month probation period. The expected start date is the 1st of November 2019. The position may be extended for a longer period, depending on research funding availability. The research group will be based at the Research Station of the Museum and Institute of Zoology (MIZ), Polish Academy of Sciences in GdaÃ“sk ' Gorki Wschodnie, and maintains strong links with the main research facilities of the MIZ in Warsaw. Therefore, research visits at the main MIZ facilities in Warsaw may be required as part of the job duties. The Research Station also hosts groups working on marine mammal genomics and avian immunogenetics.

Work description This position will involve carrying out research work as agreed with the group leader. This may involve all the stages of research, including sample collection, laboratory work and data analysis, and preparation of manuscripts for publication, as well as participation in the supervision of PhD students as a second supervisor and contribution to administrative tasks

associated with research projects. The work will require learning and development of new laboratory procedures and new methods of data analysis, and therefore strong motivation and willingness to learn is essential. The successful applicant will be expected to contribute to grant applications submitted by the group, and will be encouraged to apply for independent funding available for early career researchers. The postdoctoral researcher will thus have the opportunity to propose and explore new research questions within the general remit of the research group.

Requirements The position requires expertise in Population and Evolutionary Genomics, and the candidate must hold a PhD degree in a relevant area and have at least 3 years of postdoctoral experience (this requirement may be relaxed if the candidate is able to demonstrate research independence). The ideal candidate should have the following skills: 1. good understanding of theoretical population genetics; 2. experience with laboratory methods used in experimental population genetics and genomics; 3. experience with sample processing for NGS; 4. experience with the analysis of NGS data, including whole-genome sequence data; 5. experience with population genetic data analysis and phylogenetic reconstruction; 6. excellent scientific writing skills, evidenced by a first authorship of at least one research paper (which will be evaluated in the selection process); 7. excellent spoken and written English. Desirable skills include: 1. experience with analysing signatures of selection and functional genomics; 2. experience with landscape genetics and Geographic Information Systems; 3. experience of working with mammalian genomes; 4. experience of working in international research teams.

Research environment The research at the MIZ is focused on a broad range of themes in animal biology, including systematics, biogeography, evolutionary biology, ecology and population genetics. MaÃÂgorzata Pilot's research group is part of the Laboratory of the Molecular and Biometric Techniques led by Prof. WiesÃÂaw Bogdanowicz, grouping researchers focused on population genetics, phylogeography and evolutionary genomics of a broad range of animal taxa. MIZ laboratories contain modern equipment for genomic analyses, including Pacific Biosciences RSII long-read sequencer and Illumina MiSeq System. The state-of-the-art ancient DNA laboratory carries out work on mammalian palaeogenetics. The Museum's zoological collection is among the largest and most valuable in Europe.

Employment conditions Employment period: 45 months, subject to a 3-month probation period. Start date: 1 November 2019. The salary is funded by the Polish National Agency for Academic Exchange (NAWA). Documents required in the application 1. Copy of a PhD certificate 2. Curriculum vitae including the publication list, with the following statement provided at the end and signed: "I give my consent to the processing of personal data provided in this document by the Museum and Institute of Zoology PAS for the purpose of the recruitment process pursuant to the Personal Data Protection Act of 10 May 2018 (Journal of Laws 2018, item 1000) and in agreement with

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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

Moffitt Florida 2 CancerEvolution

Candidates are invited for two postdoctoral fellowship opportunities in the Department of Integrated Mathematical Oncology < https://moffitt.org/research-science/divisions-and-departments/quantitative-science/integrated-mathematical-oncology/ > (IMO), at the Moffitt Cancer Center. Both positions are minimum two-year appointments and will involve modeling the evolution of genomic instability in response to DNA damaging therapy. Both positions will involve work with data from single cell sequencing and imaging technologies, which make it possible to link genotypes to complex cell phenotypes. More info at cloneredesign.com/jobs.

Clonal Redesign Lab: https://www.cloneredesign.com IMO Department: https://moffitt.org/research-science/divisions-and-departments/quantitative-science/integrated-mathematical-oncology Moffitt Cancer Center: https://moffitt.org Noemi Andor <noemi.andor@googlemail.com>

Montpellier PlantBreedingSystemEvolution

An angiosperm-wide analysis of breeding system evolution and associated traits http://www.fondationbiodiversite.fr/la-fondation/recrutement/ Postdoctoral position

Location: FRB ' CESAB, 5, rue de l'Ãcole de Médecine, 34000 Montpellier, France

Salary: 2250€per month

Contract: 2 years fixed term, full time

Closing date: 31 August 2019

Starting date: 1 November 2019

Job information

The project

The CESAB project "DiveRS" is looking for a motivated candidate for a two-year postdoctoral position on angiosperm breeding system evolution. The project is a collaborative effort of 15 researchers* from different parts of the world to understand how breeding system evolution in plants is linked to the evolution of other traits, as well as speciation and extinction. So far, several patterns have been observed and described, such as the "selfing syndrome" or the correlations of sexual systems with life-history traits, and these have been used to try to understand the effect of breeding systems on evolutionary success. However, many traits that are associated with breeding systems are also thought to influence diversification through other ways. To better distinguish causes and effects, this project seeks to define integrated evolutionary strategies among these traits and then to investigate how these strategies evolve and shape the diversification process in flowering plants. This will be done by gathering and analyzing complementary databases on breeding systems and other plant traits with large-scale phylogenetic information.

* DiveRS members are : Bruce Anderson (Stellenbosch University, South Africa), Sylvain Billiard (University of Lille 1, France), Concetta Burgarella (CIRAD Montpellier, France), Hugo de Boer (University of Oslo, Norway), Mathilde DufaÃ¿ (University of Montpellier, France), Sylvain Glémin (PI, CNRS Rennes, France), Emma Goldberg (University of Minnesota, USA), Jos Käfer (co-PI, CNRS Lyon, France), Sarah Otto (University of British Columbia, Canada), Marcos Méndez (Universidad Rey Juan Carlos, Spain), John Pannell (University of Lausanne, Switzerland), Denis Roze (CNRS Roscoff, France), Daniel Schoen (McGill University, Canada), Jürg Schonenberger (University of Vienna, Austria), Mario Vallejo-Marin (University of Stirling, UK).

Postdoctoral position

The role of the postdoctoral researcher will be central in this project, as he/she will work directly on a database of angiosperm breeding systems and possibly associated traits. He/she will combine information from several published databases and currently private data collections of the project participants. He/she will conduct multivariate analyses on these data, and put these in a phylogenetic context. Further questions studied will depend on the researcher's interests and skills, but could include diversification analyses, study of genome architecture, and developing or adapting mathematical models.

The postdoctoral researcher will be based at CESAB in the Montpellier city center. He/she will be assisted by CESAB's data-analyst, and will have frequent interactions with the project coordinators Sylvain Glémin (PI, Rennes) and Jos Käfer (co-PI, Lyon). The researchers participating in the project will meet twice a year in Montpellier, and the postdoctoral researcher can perform short-term visits to some of their labs.

Requirements

The candidate should have a background in evolution and ecology. As the researcher will directly deal with large datasets of plants and their traits, at least some knowledge of botany and plant systematics is essential. Furthermore, the candidate should have experience with the informatic and statistical treatment of large datasets. Previous experience with database management is a plus. Finally, the candidate is expected to have an interest and experience in at least one of the following fields: phylogenetic comparative methods, ancestral state reconstructions, diversification analyses, evolutionary genetics, mathematical modeling. Good communication skills in English are required, and at least some knowledge of french (or the motivation to learn some) would be beneficial.

Host structure

About FRB

The Foundation for research on biodiversity (FRB) was created in 2008. It gathers public research institutions, environmental NGOs, land and genetic resources managers and the private sector. It provides a forum where science meets society in order to address the current challenges related to biodiversity research.

Launched in 2008 after the "Grenelle de l'Environnement" by the Ministries for research and for ecology, it was created by eight public research institutions (BRGM, CIRAD, CNRS, IFREMER, INRA, IRD, IRSTEA and MNHN), joined in 2014 by LVMH and in 2017 by the University of Montpellier.

About CESAB

The Centre for Synthesis and Analysis of Biodiversity (CESAB)

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

NanayangTechnologicalU BioinformaticGenomics

Research Fellow - Bioinformatics

Talented and highly motivated postdoctoral fellows are wanted to join GenomeAsia 100K CLG. The company operates the Genome Asia 100K project (genomeasia100k.com). The project aims to generate high coverage whole genome sequencing data of 100,000 individuals to disclose the genetic diversity of Asian populations and contribute precision medicine by sequencing clinical cohorts. Our group at Nanyang Technological University, as a founding member of the project, focus on generating human whole genome sequencing data from Asian populations and analyzing the data.

We are particularly interested in candidates with research interests and experiences in: - Human genome assembly - Variant calling - De Novo assembly - Bioinformatics

Educational Requirements - Doctoral degree in human genetics, bioinformatics, population genetics, computational biology, biostatistics, or other fields with strong quantitative skills are required.

Required Experience - Highly analytical, critical thinker and highly meticulous in work - Experience in working with next generation sequencing data and related analysis tools and workflows - Strong knowledge of Unix/Linux operating system - Considerable programming/scripting skills in R, Perl, Java, Python, C/C++ - Familiarity with parallel computing environments (Linux clusters, SunGridEngine, etc) - Experience in development of algorithms/machine learning/statistical models for bioinformatics - Excellent verbal and written communication skills in English

Desired experience and skills - Demonstrated skills in effective data visualization - Familiarity with genome informatics concepts (e.g. software tools, file formats, and workflows involved in next generation sequencing)

To apply: Interested applicants should submit curriculum vitae, a detailed letter of interest, and the names of three potential referees to HLKIM@ntu.edu.sg. Please indicate 'Research Fellow (GenomeAsia 100K - Bioinformatics)' in the subject line.

HLKIM@ntu.edu.sg

NatlUSingapore GenomicsAndBioinformatics

Postdoctoral position in Genomics and Bioinformatics, Dept. Biological Sciences, National University of Singapore.

One postdoctoral position is available in the lab of Antónia Monteiro to study the genetic basis of wing pattern evolution and development in butterflies. Ideal candidates will have an interest in the connection of genotype to phenotype and in cis-regulatory evolution. Also, ideal candidates would have prior experience in one or more of the following: 1) de novo genome assembly; 2) de novo transcriptomics; 3) single-cell transcriptomics.

The project is about detecting mutations in DNA that might have led to the origin of butterfly eyespot color patterns. This project will involve the sequencing of butterfly genomes, ATAC-seq, and RNA-seq of species and tissues with and without eyespots.

The position is up to five years and can start immediately. The original appointment will be for 2-years. Salary will be competitive and commensurate with experience.

The Department of Biological Sciences offers world-class research labs and infrastructure and a convivial and collaborative environment. Singapore is a lush, green city offering tropical weather year around, a diversity of food, and nearby exotic locations.

Interested applicants should contact Antónia Monteiro (antonia.monteiro@nus.edu.sg) with a CV, a brief statement of research interests, and the names of three references.

Antonia Monteiro <antonia8monteiro@gmail.com>

NorthDakotaStateU GenomicsPoplarHybridization

The Hamilton Lab (Department of Biological Sciences, North Dakota State University) is seeking a highly motivated, collaborative post-doctoral fellow to join us as

part of a new NSF Plant Genome-funded collaboration with Jason Holliday (Virginia Tech), Stephen Keller (Vermont) and Matt Fitzpatrick (U of Maryland).

The project includes a large collaboration with ArbNet (Morton Arboretum), and will combine full-genome resequencing of Poplar clones of mixed ancestry (P. trichocarpa x P. balsamifera) with phenotypic and climatic data from Poplar 'mini common gardens' established in arboreta across the United States. The post-doctoral position is highly interdisciplinary, combining phenotypic data across a broad range of environments and genome resequencing to identify regions of the genome that contribute disproportionately to phenotypic differences across varying ancestral backgrounds and environments. A major goal will be to develop new methods combining spatial modeling of adaptive genetic variation with genomewide genome-phenotypic associations to identify genetic variation that may indicate pre-adaptation to novel climate conditions. In addition, this position has an extensive outreach component. Working alongside ArbNet, the post-doctoral fellow will lead and coordinate establishment of Poplar 'mini gardens' in arboreta across the United States and design curricula appropriate for middle school programs that illustrate the principles of climate adaptation and phenological variation. The goal will be to engage students in discussions of biological responses to climate change, experimental design, and hypothesis testing while providing hands-on data collection opportunities from the 'mini gardens'.

The position will be based at North Dakota State University in the Department of Biological Sciences. Applicants must be willing to travel to arboreta across the United States and collaborator institutions. Travel costs will be covered by the grant.

The ideal candidate will be able to contribute to leadership within this new project, coordinate with a number of different collaborative researchers, and support ongoing research in the lab. The successful candidate will have background in population genomics, evolutionary biology, quantitative genetics, hybridization/speciation or related fields. The postdoctoral fellow will be expected to analyze genomic, phenotypic and climatic datasets, lead preparation and publication of peer-reviewed manuscripts, and present findings from the research project. In addition, there will be ample opportunity to pursue research questions besides those of the particular study. In particular, the goal of establishing the 'mini gardens' across North American arboreta will be to provide a long-term foundation for collaborative research.

The start date is flexible. Salary will be dependent on experience, and include benefits. The initial appointment is for one year with the possibility of renewal for up to three years. For more information on the Hamilton Lab please visit the lab website at: http://-www.jillahamilton.com. More information on the Department of Biological Sciences at NDSU can be found at https://www.ndsu.edu/biology/. Fargo is the largest city in the northern Midwest and as Gateway to the West is a vibrant, growing community that has access to numerous outdoor opportunities for all seasons.

For consideration, please send a cover letter summarizing your research interests and experience, a current CV, and contact information for three references to Jill Hamilton (jill.hamilton@ndsu.edu) with the email subject line "Postdoc application: [your full name]". Informal inquiries are welcome.

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Jill Hamilton, Ph.D.

Assistant Professor

Department of Biological Sciences

North Dakota State University

http://jillahamilton.com/index.html
jill.hamilton@ndsu.edu

Jill Hamilton <jillahamilton@gmail.com>

Norwich UK PollinatorEvolution

Applications are invited for a Postdoctoral Research Scientist (Tree of Life Pollinators) to join the Haerty group at the Earlham Institute, based in Norwich, UK. In collaboration with Ian Barnes at the Natural History Museum London, the post holder will assemble and analyse the genome sequences of major Hymenoptera pollinators.

Background: The Earlham Institute is looking for a Postdoctoral Research Scientist (Tree of Life Pollinators) to join the new Darwin Tree of Life Programme that aims to sequence the genomes of 66,000 known species of animals, plants, protozoa and fungi in the UK.

A major objective of the project is to characterise the current genomic diversity of the UK populations and through the sequencing of museum samples reconstruct the demographic history of these emblematic species and investigate the genomic impact of their population decline. The post holder will be required to work with

relevant EI staff and with outside collaborators to carry out necessary research to meet key deliverables for the project. The post holder may also serve as a key technical resource to clarify issues, participate in analysis, and apply comprehensive knowledge to contribute to the completion of assignments as part of several research projects.

The role: This project will generate and compare genomic data from key Hymenoptera pollinator species sampled from current populations and museum collections. The post holder will be responsible for the assembling the genomes from long and short read sequencing technologies, calling genetic variation from low coverage sequencing of wild and museum specimen. The post holder will investigate the genomic diversity of current populations, infer demographic parameters and compare these observations of past genetic diversity inferred from collection samples enabling the development of demographic models, and the study of the genomic impact of the populations decline on genomic diversity.

The ideal candidate: The candidate must have a PhD in bioinformatics, evolutionary biology, population genetics or a related subject. They should have experience with population genetics, and genomics data. The candidate should have working knowledge of programming languages such as Python, Perl, or R. They must be motivated and interested in applying innovative approaches to population genetics and comparative genomics.

Additional information: Deadline: July 1st

For further information please contact Wilfried Haerty: wilfried.haerty@earlham.ac.uk

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 2 years.

As a Disability Confident employer, we guarantee to offer an interview to all disabled applicants who meet the essential criteria for this vacancy.

"Wilfried Haerty (EI)" <Wilfried.Haerty@earlham.ac.uk>

OsnabrckU PlantConvergentEvolution

In the Department of Biology / Chemistry of the University of Osnabrueck in the Botany Research Division a vacancy exists from 01. 11. 2019 until 30.04.2022 for a Postdoctoral Researcher (postdoc) (Salary grade 13 TV-L / 100%)

Project Aims and Assignments:

Participation in a DFG-funded research project: "Reaching for the sky: exploring massive convergent evolution towards woodiness in Brassicaceae".

The project involves the following tasks:

* Building molecular phylogenies based on hybridization sequencing

* Trait-based diversification analyses

Academic requirements:

* Completed studies in Biology, Ecology or related fields

* PhD in Natural Sciences (Botany, Evolutionary Biology) or related studies

Additional Specifications:

* Experience in next-generation (NG) sequencing (hybridization sequencing) of herbarium material

* Sound knowledge of bio-informatic tools dealing with phylogeny reconstruction of NG-sequencing data sets

* Proficiency in trait evolution reconstruction and diversification analysis

* Structured, independent and team oriented working methods

* Good English writing and speaking skills

We offer:

* An international working environment in a research group offering diverse research activities concerning evolution of the Brassicaceae

* Close cooperation with international project partners, e.g., lab-work at Naturalis (lab of Frederic Lens, Leiden, Netherlands)

The position is available on a full-time or part-time basis.

Osnabruck University has been certified as a family-friendly university committed to helping working/studying parents balance their family and work life.

The university aspires to ensure equal opportunities for men and women and strives to work towards a gender balance in schools or departments where new appointments are made.

If equally qualified candidates apply, preference will be given to those with special needs.

Applications including CV, certificates of qualification

and the names and contact information of 2 professional referees should be submitted in electronic form to the dean of the faculty of Biology/ Chemistry, Osnabrueck University (code EVB, email: bewerbung@biologie.uni-osnabrueck.de) until 05.07.2019.

For further information please contact apl. Prof. Dr. Klaus Mummenhoff at mummenhoff@biologie.uni-osnabrueck.de or phone: +49 541 969 2856

"Mummenhoff, Klaus" <Klaus.Mummenhoff@Biologie.Uni-Osnabrueck.DE>

PennsylvaniaStateU EvolutionaryGeneticsPlants

I am looking for a postdoc to work on evolutionary genetics & ecology of plants. Some topics of interest include local adaptation, climate change, & invasion. I will be at Evolution in Providence if interested. Lab publications are listed here: http://www.personal.psu.edu/jrl35/-psu/pub.html Full ad here: https://psu.jobs/job/88532 Department of Biology Pennsylvania State University

laskylab.org < http://www.laskylab.org >

"Jesse R. Lasky" <jrl35@psu.edu>

Philadelphia EvoDevoGenomics

Postdoctoral position: Developmental/Evolutionary genomics - Philadelphia

Description: A funded postdoctoral position is immediately available in in the new laboratory of Dr. Marco Trizzino, in the Department of Biochemistry and Molecular Biology at Thomas Jefferson University to study developmental/evolutionary genomics and transcriptional regulation. The laboratory uses a combination of experimental and computational biology to 1) investigate the function of chromatin remodelers and transcription factors in neurodevelopment, and 2) to unveil how transposable elements rewire gene regulatory networks in mammals. The new postdoc will be free to design their own project as long as it falls under the umbrella of the research interests of the lab. More info about the lab can be found here: https://marcotrizzino.wordpress.com/

Our lab is part of the Sydney Kimmel Medical College, offering access to state-of-the-art core resources. Philadelphia is a great place to live, affordable and with a vibrant community. Great music/sport/food/art scene, and excellent location. Thomas Jefferson University is located in the heart of Center City.

Our young and dynamic team seeks to hire a highly motivated scientist with demonstrated experience in molecular and cellular biology techniques and possibly a background in either developmental or evolutionary biology.

Qualifications: Candidates should hold a recent Ph.D. in Molecular/Cellular Biology, Genomics, Biochemistry, Developmental Biology or equivalent. Experience with cell-culture and basic molecular biology techniques is required. Experience with iPSC culture and/or computational analysis of genomics data is preferred but not required, as long as the candidate is interested and willing to learn both during their permanence in the lab. Excellent communication and written skills are a must. Funding is available for three years. Starting date is negotiable between September 2019 and January 2020.

Interested candidates should send a cv, a brief cover letter and contacts of 3 professional references to marco.trizzino83@gmail.com Review of applications will begin immediately and continue until the position is filled.

Marco Trizzino <marco.trizzino83@gmail.com>

SanFranciscoStateU ViralEvolution

Dear evoldir,

I am looking to hire a postdoc in my group to work on an exciting collaborative project

Position Type: NIH funded postdoc position at San Francisco State University to work with Dr Pleuni Pennings in the CoDE lab on viral evolution in macaques. The project is in collaboration with Dr Zandrea Ambrose and Dr Philana Lin from the University of Pittsburgh. http://grantome.com/grant/NIH/R01-AI134195-02 Philana Lin (Ling), Zandrea Ambrose, Pleuni Pennings are the PIs on the R01 grant "Influence of SIV replication on TB progression and immunity." Lab website: https://pleunipennings.wordpress.com/ Position Description: I am looking for a postdoc to work on a project funded by NIH, in collaboration with Dr Zandrea Ambrose and Dr Philana Lin from the Uni-

versity of Pittsburgh. We study how SIV, TB and the immune system affect each other within the host. The work in SF will mostly be focused on analyzing the viral sequences. I am looking for someone who is interested in doing the programming, the statistics and the writing.

I have worked with Zandrea Ambrose previously which has let to this paper in Plos Pathogens by Alison Feder et al. https://journals.plos.org/-plospathogens/article?id=.1371/journal.ppat.1006358 Philana Lin has done extremely interesting work on TB evolution within macaques using barcoded TB. https://www.sciencedirect.com/science/article/pii/-S2352621118300391 Requirements: PhD in Biology or related field. Other preferred qualifications: I am looking for someone with experience and interest in several of the following domains: evolution, virology, bioinformatics (next gen sequencing data) and statistics.

The preferred candidate will also have an interest in / experience with one or more of the following: teaching, working with students from groups who are traditionally underrepresented in research, outreach (e.g., writing, social media, video).

The preferred candidate will have experience with writing clear / understandable scientific prose as evidenced by a writing sample.

Why this is a great opportunity: You will be part of an extremely diverse department of biology.

You will be working on an exciting project that bridges virology and evolutionary genetics and that could help us understand why TB and HIV are such a dangerous combination.

You will be able to contribute to training of students of diverse backgrounds.

You will get the opportunity to work with people at the University of Pittsburgh.

If you are interested to collaborate with people at Stanford, UCSF or UC Berkeley, I will encourage that and help set up contacts.

In the CoDE lab, you will work in a supportive environment where research is important, but papers are never more important than people.

Appointment: Funding is available for three years. Appointment will be for one year initially, but will be extended for up to three years if expectations are met. The starting salary is $54,000 per year.

How to apply: Send a 1-2 page cover letter, your CV, a recent paper (or draft) written by you, and names and email addresses for three references to pennings@sfsu.edu. Only pdfs please!

Deadline: I will start looking at applications from July 10th, 2019 and hope to hire as soon as possible after that.

Pleuni Pennings (she/her)

Assistant Professor

Department of Biology, San Francisco State University

Website: http://pleunipennings.wordpress.com/ Paper with Kadie-Ann Williams on the BioRxiv on HIV drug resistance in the late 1990s: https://www.biorxiv.org/-content/10.1101/548198v1.abstract Pleuni Pennings <pspennings@gmail.com>

SangerInst 2 TreeOfLife

Subject: Postdoctoral Fellowship in Tree of Life at Sanger

The Wellcome Sanger Institute has kicked off a new research program focused on biodiversity genomics. This research program will also be leading together with other UK institutions the Darwin Tree of Life Project, aiming to sequence reference genomes for thousands of eukaryotic species over the coming years.

Every year, the Sanger Institute award a postdoctoral fellowship to someone who has been out of research for at least 12 months (for example due to lack of funding, caring responsibilities, etc). This is a unique opportunity for someone to come back into high quality science from a career break.

We are looking for applicants interested in developing a research proposal in the general area of ecological genomics to join one of the Tree of Life labs. These labs include those of Mara Lawniczak, Matt Berriman, Mark Blaxter and Richard Durbin. More information here: https://jobs.sanger.ac.uk/vacancy/janet-thornton-postdoctoral-fellowship-389317.html Please pass this on to your colleagues who may be on a break from science but interested in returning. Thank you. Best, Mara

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Subject: Postdoc opportunity: single cell RNAseq to investigate malaria transmission biology

We are looking for a postdoc who would like to investigate human malaria transmission dynamics using single cell approaches. This position will involve spending 1-3 months at a time in Mali for each of the three

years, as well as considerable wet lab R&D. It will also require someone interested in learning computational approaches for interrogating the data to answer questions about sexual committment and mating decisions of parasites from natural infections. This project is funded by the MRC and the advertisement closes on July 10th. Please get in touch if you have any specific questions about the project or the role.

More information here: https://jobs.sanger.ac.uk/-vacancy/postdoctoral-fellow-lawniczak-group-390154.html Thank you. Best, Mara

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– The Wellcome Sanger Institute is operated by Genome Research Limited, a charity registered in England with number 1021457 and a company registered in England with number 2742969, whose registered office is 215 Euston Road, London, NW1 2BE.

Mara Lawniczak <mara@sanger.ac.uk>

Sheffield SpeciationGenomics

The Post-doctoral Research Associate will work with Professor Roger Butlin to advance an ERC-funded project on the genetic basis of adaptation and speciation in the coastal gastropod, Littorina saxatilis. The project considers the evolution of reproductive barriers, starting with divergent adaptation in the face of gene flow and progressing towards completion of speciation. We focus on analysis of contrasting contact zones in Sweden and Spain, which we are analyzing with intensive phenomics and genomics approaches. The PDRA will be expected to have a strong commitment to research in evolutionary genetics and a special interest in processes of speciation. Analysis of large sequencing and SNP data sets will be a key component of the role but the PDRA will also participate in sampling and experimental work as part of a large collaborative team.

The position is available now, for 18 months in the first instance.

To apply, please visit https://www.sheffield.ac.uk/jobs, position reference UOS022942, deadline 14 July 2019

For further details, contact Roger on r.k.butlin@shef.ac.uk

Roger Butlin <r.k.butlin@sheffield.ac.uk>

StAndrews EvolutionHawaiianCrowToolUse

StAndrews.HawaiianCrowToolUse

A postdoctoral position is available for 3.5 years (starting 1 August 2019) in Professor Christian Rutzs research group at the University of St Andrews, to investigate the tool behaviour of captive Hawaiian crows. The post is part of a BBSRC-funded project, involving close collaboration between Professor Rutz (PI; School of Biology), Professor Josep Call (Co-I; School of Psychology and Neuroscience), Dr Ron Swaisgood and Bryce Masuda (overseas project partners; San Diego Zoo Global), Dr William Hoppitt (statistical consultant), and several other team members.

It was recently discovered that the critically-endangered Hawaiian crow is a highly dexterous tool user (Rutz et al. 2016, Nature 537, 403-407). The present project will chart the species tool-related skills, and other behavioural competencies, by running the worlds entire captive adult population of crows (>100 birds) on a newly-developed behavioural test battery.

The post-holder will be in charge of organising and running behavioural experiments, involving annual visits to Hawaii (USA) of ~6 months. In-between field trips, they will be based in the Centre for Biological Diversity at the University of St Andrews, to analyse and write-up data, to liaise with collaborators, and to contribute to outreach activities. The post-holder will work as part of a larger team, and share some project-management and supervision responsibilities.

Candidates must hold a doctorate in a relevant subject area (e.g., Biology, Zoology, Psychology), and have proven skills in conducting behavioural experiments, processing and analysing data, and publishing papers in leading journals in the field. The post requires a high degree of self-motivation and independence, effective communication and team work, meticulous data collection and record keeping, and excellent organisational, time-management and practical problem-solving skills.

Informal enquiries (with CV) can be addressed to Professor Rutz (christian.rutz@st-andrews.ac.uk), but all applications must be submitted via the Universitys vacancies site.

The University is committed to equality for all, demonstrated through our working on diversity awards (ECU

Athena SWAN/Race Charters; Carer Positive; LGBT Charter; and Stonewall). More details can be found at: http://www.st-andrews.ac.uk/hr/edi/diversityawards/ . Further particulars, and an application link, can be found here: https://www.jobs.ac.uk/job/BSY075/-post-doctoral-research-assistant-ar2232as Reference: AR2232AS Closing Date: 12 July 2019 Location: St Andrews Salary: £33,199 to £36,261 Hours: Full Time Contract Type: Fixed-Term/Contract

Christian Rutz <cr68@st-andrews.ac.uk>

SwedishU FishGenomicAdaptation

Postdoc position on genomic adaptation in fish (Ref SLu.ua.2019.2.5.1-2045)

Background: This postdoctoral position focuses on the genomics of parasitic disease in salmonid fish and/or molecular mechanisms of humic substance-driven (dark-water) adaptation in perch. We will combine whole genome and transcriptome sequencing, measurements of ecologically relevant phenotypic variation and whole organism performance within the common-garden framework. The post-doctoral fellow will help analyze already available whole genome data and support ongoing work on common garden experiments. The work will be done in Prof. Anti Vasemägi research group at the Institute of Freshwater Research, Department of Aquatic Resources, Swedish University of Agricultural Sciences. The research with Vasemägi group focuses on understanding the relationships between genotype and phenotype, the genetic basis of adaptation and how contemporary natural- and human-induced selection works on ecological time-scales.

Duties: You will be part of our team working with molecular ecology and population genomics of aquatic organisms. You will carry out bioinformatic analysis of next-generation sequencing data (RADseq, WGS, CNV), population genetic analyses and laboratory work. The principal responsibilities include phenotyping, sample collection, DNA extraction, library preparation, bioinformatics analyses of next-generation sequencing data, writing manuscripts and keeping detailed notes and logs of the analyses. Participate in small projects that may or may not be directly related research, but aid in other's projects in the group and help generate pilot data for future grant submissions. This may also include mentoring of undergraduate and graduate students, as well as assisting other lab/community members.

Qualifications: We are looking for a highly motivated candidate having a PhD degree in bioinformatics, evolutionary biology, genomics, or similar field. It is highly preferable that applicants have strong background in next-generation sequencing data analysis, transcriptomics, population genomics and/or host-parasite interactions as demonstrated by publications in relevant fields. Also, it is desirable that candidates are familiar with one or more programming languages (such as Python, Perl, or R). Excellent communication skills in both oral and written English are expected. Candidates are also expected to be able to work both independently and as part of a collaborative team. After the qualification requirements, emphasis will be placed on personal qualities and personal suitability.

- Specific documents attached: Applications must contain (1) CV and copy of PhD diploma, (2) statement of scientific interests and motivation for applying to this position, (3) description of research experience and other activities of relevance for the position, as well as (4) contact information of at least two references. - Place of work: Drottningholm, Sweden - Form of employment: Fixed-term employment of 20 months with the possibility to the extension (12 months). - Starting date: By agreement; the position is immediately available. Application: We welcome your application no later than 2018-06-27, for submitting the application go to https://www.slu.se/en/about-slu/jobs- vacancies/

The Swedish University of Agricultural Sciences (SLU) develops the understanding and sustainable use and management of biological natural resources. The university ranks well internationally within its subject areas. SLU is a research-intensive university that also offers unique degree programs in for example rural development and natural resource management, environmental economics, animal science and landscape architecture. SLU has just over 3,000 employees, 5,000 students and a turnover of SEK 3 billion. The university has invested heavily in a modern, attractive environment on its campuses in Alnarp, UmeÃÂ¥ and Uppsala. The Department of Aquatic resources produces key knowledge in limnic, brackish-water and marine ecology, with a focus on fish and shellfish. We conduct research, education, environmental monitoring and assessment, and provide biological advice to promote sustainable use of aquatic resources. The department has more than 180 employees at three divisions located outside Gothenburg (Lysekil), Uppsala (Ã regrund) and Stockholm (Drottningholm) and at four field stations. Our combination of science and management advice, from local to the international scale, provides a vibrant environment for applied research and education. Welcome to visit us at www.slu.se/aquaticresources! Relevant articles: - Oze-

rov M, Ahmad F, Gross R, Pukk L, Kahar S, Kisand V, Vasemägi A (2018) Highly continuous genome assembly of Eurasian perch (Perca fluviatilis) using linked-read sequencing G3: Genes, Genomes, Genetics 8(12):3737-3743.

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UCalifornia Davis QuantConservationGenetics

Postdoctoral Research Associate Position in Quantitative Genetics and Conservation Genetics Location: University of California Davis.

Background Info: A research team led by Andrew Whitehead and Nann Fangue seeks applicants for a postdoctoral research associate. A recently funded series of projects seeks to characterize the potential of an endangered fish (Delta smelt) to acclimate or adapt to a changing climate. Experiments will leverage the outstanding rearing and experimental facilities available through the UC Davis Fish Conservation and Culture Laboratory (FCCL), which harbors a refuge population of Delta smelt. The successful candidate will use quantitative genetic breeding designs and statistical approaches to estimate additive genetic variation for thermal resilience and for thermal resilience plasticity. The candidate will have the opportunity to interact extensively as part of a larger interdisciplinary and collaborative team of evolutionary geneticists and ecophysiologists. More on the Whitehead lab, Fangue lab, and FCCL can be found at:

https://whiteheadresearch.wordpress.com/ http://fanguelab.ucdavis.edu/people/nann-fangue/ https://fccl.ucdavis.edu/ The ideal candidate has experience in quantitative genetics, statistical genetics, and computational biology. Also preferred is experience in animal physiology. We are especially interested in candidates with a passion for open science and for connecting their work to decision makers, the public, and the broader conservation biology and evolutionary biology communities.

Responsibilities: Design of breeding strategy, data collection, code development, data analysis and interpretation, review of relevant literature, preparation of project reports and manuscripts for publication in peer-reviewed journals, presentation at professional conferences and State Agency meetings.

Minimum qualifications: PhD in genetics, population biology, genome science, conservation genetics, data science, or another relevant field.

Preferred qualifications: Preference will be given to applicants with 1) expertise in quantitative genetics, statistical genetics, population genetics, or conservation genetics, and physiology; 2) strong communication and organizational skills; 3) can code in C++, and in R and/or python and have an interest in transparent and reproducible science; and 4) strong publication records, or the potential for developing one. Our team believes in and values the power of diversity, thus applicants from historically underrepresented groups are strongly encouraged to apply.

Salary: Commensurate with qualifications and experience.

Application: Interested candidates should submit:

a one-page cover letter, your CV, and names and contact information of at least three references familiar with your work. Please submit materials to Andrew Whitehead (awhitehead@ucdavis.edu) with 'QuantGen Postdoc' in the subject. Applications will be reviewed as they arrive, and the position will remain open until filled.

Email any questions to Andrew Whitehead (awhitehead@ucdavis.edu)

The positions will remain open until filled with preferred start dates between September 2019 and January 2020.

Andrew Whitehead, Ph.D. Department of Environmental Toxicology 4121 Meyer Hall University of California, Davis, CA 95616 530-754-8982 <tel:530-754-8982> http://whiteheadresearch.wordpress.com/ Andrew Whitehead <awhitehead@ucdavis.edu>

UCBerkeley Genomics

Postdoctoral position(s) on the genomics and evolution of cellular and organismal diversity, aging, and genome structure

The Sudmant Lab at UC Berkeley uses computational, statistical, and experimental methods to interrogate genetic and molecular phenotypic diversity at both the

organismal and cellular level. Our research objectives are to understand genomic diversity in the context of evolution and adaptation. We also study the evolution of cellular diversity using comparative genomics approaches. Our lab philosophy is firmly based on the premise that science should be fun, inclusive, collaborative, and open.

A multi-year postdoctoral position is available (initial 12-month appointment renewable up to four more years). Start date is flexible.

We are seeking both computational and experimental postdoctoral applicants with a wide range of interests and expertise. Some ongoing projects include:

1) The evolution of cellular diversity in mammals, particularly in rapidly evolving tissues 2) Interrogating somatic mutational processes in different cell types and genotypes throughout both healthy aging and disease 3) Structural variation, genome complexity, and diversity in vertebrates (using PacBio and other long-read technologies) 4) Quantifying the impact of aging on molecular fidelity at the transcriptional and post-transcriptional level

Required qualifications: Ph.D. or equivalent in genetics, genomics, biology, computer science or related fields and demonstrated record of productivity and publications. Experience with either generating or analyzing large-scale genomic data.

Please contact Peter with your CV and a brief overview of research questions you are interested in pursuing. Please be prepared to provide scientific references (e.g. advisor / thesis committee members). The position is open until filled with an anticipated start date in 2019/2020.

Peter Sudmant Assistant Professor Department of Integrative Biology University of California, Berkeley https://www.sudmantlab.org Peter Sudmant <psudmant@berkeley.edu>

UChicago PopulationAndQuantitativeGenetics

I am looking to hire a postdoctoral researcher to join my group in the Department of Human Genetics < https://-genes.uchicago.edu/ > at the University of Chicago. Our work is computational and theoretical, largely focused on the development of mathematical and statistical models of quantitative trait evolution, with an eye toward models that can either inform empirical work in quantitative trait/complex disease genetics, or help us make inferences about the evolution/biology of quantitative traits and complex diseases from available genetic and population genetic data. In particular, current projects that I am excited about relate to understanding the role of of mutational bias, natural selection and pleiotropy on the distribution of genetic variation both within and between populations. However, I am open to pursuing other directions if an applicant has a project idea or area of interest where my contributions may be useful, and the precise projects pursued will be developed collaboratively based on mutual interest.

Post-docs in my group will have the opportunity to be part of a fantastic community of human geneticists and evolutionary biologists at the University of Chicago. Other labs on the same floor include those of Maanasa Raghavan < https://neubauerassistantprofessors.uchicago.edu/-faculty/maanasa-raghavan/ >, Anna Di Rienzo < http://genapps.uchicago.edu/newlabweb/ >, John Novembre < http://jnpopgen.org/ >, Matthew Stephens < http://stephenslab.uchicago.edu/ >, and Xin He < http://xinhelab.org/ >, and faculty in the Ecology and Evolution department < https://-pondside.uchicago.edu/ee/ > are located in nearby buildings.

Applicants could have a background in statistical, population, quantitative or evolutionary genetics, physics, 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 (jjberg[at]uchicago[dot]edu) 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 is flexible. The position is for one year, renewable up to a maximum of five years of total career time as a postdoc. Applications should be submitted by June 21st for full consideration, and will be considered on a rolling basis after that until the position is filled.

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 J Berg Assistant Professor Department of Human Genetics University of Chicago

Jeremy Berg <jjberg@uchicago.edu>

UCopenhagen AncientDNA

Postdoc of Ancient DNA and Palaeoecology Applications are invited for two postdoctoral researcher positions of up to two and a half years in the field of ancient DNA and palaeoecology in the ¥Molecular Ecology and Global Climate Change group led by Assoc. Prof. Eline Lorenzen at the Natural History Museum of Denmark, Department of Biology, University of Copenhagen.

The postdoctoral researchers will generate and analyze population-level, genome-wide DNA and stable isotope data from subfossil remains of marine mammals, to investigate the population dynamics, palaeoecology and evolutionary history of the species. Applicants should have completed a PhD in the fields of Ancient DNA, Molecular Ecology, or Evolutionary Genomics and have an established record of research productivity and publications in high-profile scientific journals.

We are seeking a highly motivated and productive scientist who is interested and capable of contributing to a research team consisting of molecular biologists, bioinformaticians, and evolutionary biologists. S/he should have strong research interests in evolutionary biology and large-scale palaeogenomic analyses, as well as a solid training in statistical and population genomics.

The ideal candidate will show great abilities to work in a team environment and strong expertise in the molecular tools and computational procedures used in next-generation sequencing, ancient DNA and population genomics. S/he will have documented experience with NGS methods and data, and strong bioinformatics skills. While not mandatory, high proficiency in R, Perl, Python and/or C++ programming, as supported by a track record of software implementation, will be highly considered.

The successful candidate will also be responsible for the daily management of his/her research project in coordination with other members of the group. S/he will be actively involved in the training and co-supervision of other staff members and students. The posts may also include performance of other duties.

Due to the developmental nature of the position, for consideration, applicants must be able to document the following skills:

- Expertise in the laboratory skills required for Illumina-based genome-wide sequencing - Experience in ancient DNA research - Expertise in the informatics skills required for palaeopopulation genomic analysis - Research dissemination through at least 3 peer-reviewed, first-author publications

Further information on the Natural History Museum of Denmark is linked at http://snm.ku.dk/english/. Inquiries about the position can be made to Associate Professor Eline Lorenzen at elinelorenzen@snm.ku.dk.

The position is open from August 1st 2019 or as soon as possible thereafter.

The University wishes our staff to reflect the diversity of society and thus welcomes applications from all qualified candidates regardless of personal background.

Terms of employment

The position is covered by the Memorandum on Job Structure for Academic Staff.

Terms of appointment and payment accord to the agreement between the Ministry of Finance and The Danish Confederation of Professional Associations on Academics in the State.

The starting salary is currently up to DKK 430.569 including annual supplement (+ pension up to DKK 73.627). Negotiation for salary supplement is possible.

The application, in English, must be submitted electronically by clicking APPLY NOW below.

Please include

- Letter of motivation - Curriculum vitae - Diplomas (Master and PhD degree or equivalent) - Research plan V brief description of current and future research plans (max 1 page) - Complete publication list - Contact details of two references The deadline for applications is June 15th 2019, 23:59 GMT +2.

After the expiry of the deadline for applications, the authorized recruitment manager selects applicants for assessment on the advice of the Interview Committee.

You can read about the recruitment process at http://-employment.ku.dk/faculty/recruitment-process/ . Eline Lorenzen

Eline Lorenzen <elinelorenzen@gmail.com>

UCRiverside EvolutionaryGenomics

A postdoctoral position is available in Dr. Alan Brelsfords lab in the Department of Evolution, Ecology, and Organismal Biology at the University of California, Riverside. The initial appointment will be for one year, with the possibility of reappointment.

The goal of the first year of the project is to identify the genetic basis of courtship display behavior differences between hummingbird species using admixture mapping. The project will make use of a large existing dataset of hybrid phenotypes and whole-genome sequences from a recently identified hybrid zone between Rufous and Allens hummingbirds, which have distinct male courtship displays. Future project goals may include analyses of hybridization and speciation in birds and ants, evolutionary genomics of social organization in Formica ants, or evolution of supergenes and sex chromosomes.

Minimum requirements: This position requires a PhD in Biology or a related discipline, expertise in population and/or statistical genomics, and a demonstrated record of scientific productivity.

Preferred qualifications: Experience with genome-wide association study (GWAS) methods, admixture analysis, sequence analysis of behavior, and behavioral genetics.

To Apply: Interested applicants should send a CV, statement of interest, and contact information for at least two references to Dr. Alan Brelsford at alan.brelsford@ucr.edu. Questions about the position may be directed either to Alan Brelsford at alan.brelsford@ucr.edu or Chris Clark at cclark@ucr.edu.

Start date is flexible, but could be as early as September 2019. Review of applications will begin July 15 and continue until the position is filled. Salary and benefits are commensurate with NSF guidelines and the University of California Postdoctoral Scholars bargaining unit agreement.

The University of California is an Equal Opportunity/Affirmative Action Employer with a strong institutional commitment to the achievement of excellence and diversity among its faculty and staff. All qualified applicants will receive consideration for employment without regard to race, color, religion, sex, sexual orientation, gender identity, national origin, age, disability, protected veteran status, or any other characteristic protected by law.

UCR is a world-class research university with an exceptionally diverse undergraduate student body. Its mission is explicitly linked to providing routes to educational success for underrepresented and first-generation college students. A commitment to this mission is a preferred qualification.

Alan Brelsford <Alan.Brelsford@ucr.edu>

UGeorgia SpeciationGenetics

Post-Doctoral Position in the Sweigart Lab at the University of Georgia

Join us! Our lab works on fundamental questions in evolutionary genetics and speciation. In particular, we aim to understand the evolutionary dynamics and genetic mechanisms of reproductive isolation in natural populations of *Mimulus* (monkeyflower). Funded projects include: 1) Evolutionary/genetic investigation of hybrid seed failure across *Mimulus*, 2) Molecular genetic analysis of interspecific incompatibilities that cause hybrid sterility, and 3) Development of functional genetics to link genotypes with ecologically important phenotypes. The postdoctoral researcher would have opportunities to contribute to any of these ongoing projects, but would also be encouraged to develop new research directions.

This position is ideal for someone with training or interest in quantitative genetics, population genomics, evolutionary ecology, and/or comparative genomics. We use computational and experimental approaches, and our studies often include a combination of genetic analysis, molecular biology, bioinformatics, and field experiments.

The Sweigart lab is located at the University of Georgia, which has an exceptionally strong group of plant geneticists and evolutionary biologists. Greenhouse, laboratory, and computational facilities are also excellent. UGA is located in Athens, a vibrant college town with a low cost-of-living, wonderful community spirit, and lively arts/music scene. There is also easy access to Atlanta and to diverse outdoor recreational opportunities (e.g. Great Smoky Mountains NP, Savannah/GA Coast, Okefenokee Swamp).

The position is available for up to three years, with a $47,000 salary and full benefits. The position is available immediately, but the start date can be flexible for the right candidate. To apply, please email a CV, a brief statement of research accomplishments and future goals,

and contact information for three academic references to: sweigart@uga.edu. You are also welcome to email with inquiries about the position.

For more information about research in our lab, go to: http://www.genetics.uga.edu/sweigartlab . Andrea L. Sweigart Department of Genetics

sweigart@uga.edu

andrea.sweigart@gmail.com

UGeorgia ViralSymbiosisInsects

Postdoctoral position on insect-viral symbiosis

This position is for research on evolution, development, symbiosis and insects. Specifically, the lab has funding for work on parasitoid wasps (wasps that lay eggs in other insects and consume them during development) as a study system: 1) molecular mechanisms that guide insect-microbe interactions or 2) discovery and comparison of independent virus symbiont acquisition events across the parasitoid wasps. Several lineages of wasps have acquired associations with beneficial symbiotic viruses that are specifically produced in wasp reproductive tracts and are injected into host insects. There, they play vital roles in preventing hosts from mounting effective defenses against the developing parasitoid. The production of virus in wasps is very tightly timed and coincides with specific stages of wasp development. The lab is seeking an energetic postdoc with interests in some of these topics and a strong background in one or more of the following: evolutionary biology, genomics, or molecular genetics. The position is in the Entomology department at the University of Georgia and is available immediately but the start date is negotiable.

Gaelen Burke leads a friendly and interactive team of driven, creative, scientifically curious, and smart researchers. We are committed to diversity, to the career success of team members, and to a supportive and productive approach to research and mentoring. Check out our website, (http://blog.caes.uga.edu/burkelab/) for more information on our lab.

If you are interested in joining our group, please send an email to Gaelen Burke (grburke@uga.edu) and include a CV, statement of research interests, and the names, phone numbers, and email addresses of three references. Women and underrepresented minorities are particularly encouraged to apply. Applications will continue to be accepted until the position is filled.

Gaelen R Burke <grburke@uga.edu>

UIllinois EvolutionaryGenomicsSymbiosis

I will be at the Evolution meeting in Providence, so please contact me if you'd like to meet up during the meeting!

I am recruiting postdocs (and grad students) to study the evolutionary genomics of legume-rhizobium symbiosis, with particular focus on using RNAseq and metabolomics techniques. Postdocs will be located in my lab in the School of Integrative Biology and the Institute for Genomic Biology at the University of Illinois at Urbana-Champaign.

Champaign-Urbana is a great college town midway between three major cities (Chicago, St. Louis, Indianapolis), with great food and drink, abundant culture, and affordable cost of living. University of Illinois and our labs are committed to a diverse workplace, and prospective postdocs of all races, genders, and sexual orientations are encouraged to apply.

Katy Heath kheath@illinois.edu kheath@illinois.edu

UInnsbruck AquaticEvolutionaryEcol

University Assistant - Postdoc, (40 hours per week), Code BIO-10561, University of Innsbruck, Research Department for Limnology, Mondsee, Austria, starting on 1st September 2019, duration 3 years.

Position: In this position, you will carry out independent research in the field of aquatic evolutionary ecology by developing a project at the interface of ecology and evolution. The initial idea for the project comes from you, and you develop it in collaboration with Prof. Seppälä and other research groups at the Research Department for Limnology. Collaboration with the research groups at other departments in the Faculty of Biology is encouraged. Possible research fields include, but are not limited to, species interactions, responses to environmental change, evolutionary genetics, and ecosystem

functioning. In an ideal case, your project combines different fields.

Qualifications:

* PhD in Aquatic Ecology/Evolutionary Ecology, Research experience in Evolutionary Ecology * Desired: Earlier Postdoc experience, Experience in supervision of graduate students, Publications in high-ranking journals, Acquisition of third-party funds, and work experience abroad * Social skills and ability to work in a team, as well as flexibility, are essential * For this position we would need a CV, a Motivation letter and a brief (max. 2 pages) description of the research idea (i.e. study question, taken approach, groups that could be involved)

Location: The position is based at the Research Department for Limnology at the University of Innsbruck, Austria. Research groups at the department focus on ecological and evolutionary questions across various study systems (from microbes to fish) in aquatic systems. Department is located at a small town of Mondsee (Upper Austria). It is located on the edge of the Alps and the region has several beautiful lakes. The nearest city is Salzburg, which offers history, culture and entertainment in a convenient distance from Mondsee.

Job profile: The description associated with this job duties and requirements can be found at www.uibk.ac.at/-karriere, Code BIO-10561. We are looking forward to receiving your online application by 14th June 2019.

For questions or more information concerning research, please contact Prof. Seppälä: otto.seppaelae@eawag.ch Travel costs cannot be reimbursed. Salary: The minimum gross salary for this position amounts to €3.804,00 per month (14 times). Furthermore, the university has numerous attractive offers.

Kind regards, [cid:image003.jpg@01D45CBA.C883A490] Universität Innsbruck Forschungsinstitut für Limnologie, Mondsee Sonja Burggraf Institutssekretariat Mondseestraße 9, A-5310 Mondsee Telefon +43 512 507-50201 Fax +43 512 507-50299 E-Mail sonja.burggraf@uibk.ac.at, office-ilim@uibk.ac.at Bürozeiten: Dienstag - Freitag 8:00-16:00

"Burggraf, Sonja" <Sonja.Burggraf@uibk.ac.at>

UInnsbruck EvolutionAlpineSpecies

MOLECULAR ECOLOGY, DEPARTMENT OF ECOLOGY, UNIVERSITY OF INNSBRUCK PostDoc position

We seek to hire a PostDoc for a 4-year position (40 hours per week) at the Molecular Ecology group of the Department of Ecology, University of Innsbruck starting from August 2019. Centering on the Alpine Space, the group's mission is interdisciplinary research, embedded in international collaboration networks. A list of research topics can be found at: < https://www.uibk.ac.at/-ecology/forschung/molecular_ecology.html.en >. The successful candidate will teach 4 hours per week in German, and level B2 in German is therefore required. For details of the responsibilities and selection criteria, please see: < https://lfuonline.uibk.ac.at/public/-karriereportal.details?asg_id_in=619 >

Salary The monthly gross salary is Euro 3804 / (14 times per year). The contract includes health insurance and 5 weeks of holidays annually.

How to apply To apply, please use the career-portal of the university by clicking the link given above and pressing the "online bewerben" button. While the job description is in German only, applications can be either written in German or English. The University of Innsbruck is striving to increase the percentage of female employees and therefore invites qualified women to apply. In the case of equivalent qualifications, women will be given preference. An offer of employment is contingent on a satisfactory pre-employment background check.

The research institution and its environment Detailed information about the Molecular Ecology group can be found at < https://www.uibk.ac.at/ecology/-forschung/molecular_ecology.html.en >. The University of Innsbruck has a long-standing and internationally renowned tradition in life sciences and offers a vibrant research atmosphere. It has close to 30,000 students and 4,500 staff members. Innsbruck is situated in the Alps and very close to Switzerland, Germany, and Italy; scenery and outdoor recreation are fantastic.

More information needed? For more information, please contact: Birgit.Schlick-Steiner@uibk.ac.at

"Schlick-Steiner, Birgit Christiane" <Birgit.Schlick-Steiner@uibk.ac.at>

UInnsbruck PDF PhD AquaticEvolution

PhD Position - University Assistant (20 hours per week), Code BIO-10559, with the submission of the dissertation agreement the working hours will be 30 hours per week), University of Innsbruck, Research Department for Limnology, Mondsee, Austria, starting on 1st September 2019, duration 4 years.

Position: In this position, you will conduct experimental research on the evolutionary ecology of the responses of the freshwater snail Lymnaea stagnalis to changing environmental conditions under climate change. The main goal of the project is to learn to understand the genetic potential of snail populations to respond to selection imposed by heat waves. Details of the project will be planned together with Prof. Seppälä, and the work can focus, for instance, on evaluating the heritability of snails' responses to high temperature in natural populations (i.e. SNP heritability), the relative importance of different genetic and non-genetic factors in determining these responses utilising breeding designs, and examining the responses at phenotypic and/or gene expression level. Available resources include, for example, tens of inbred snail lines and transcriptomic data. The project is linked to other work in the group that focuses on natural selection on snails' responses to heat waves, interactive effects of environmental stressors, and the effects of heat waves on host-parasite interactions.

Qualifications:

* Master in Biology * Experience in laboratory work * Experience in carrying out experimental research * Statistical knowledge in the evaluation of experiments * Communicative personality * Social skills and ability to work in a team, as well as flexibility, are essential * Please attach a written idea to your dissertation project (max. 5 pages)

Location: The position is based at the Research Department for Limnology at the University of Innsbruck, Austria. Several research groups at the department focus on evolutionary ecological questions as well as on the effects of climate change in aquatic systems. Other departments at the Faculty of Biology share similar research interests and collaboration across department borders is encouraged. Research Department for Limnology is located at a small town of Mondsee (Upper Austria). It is located on the edge of the Alps and the region has several beautiful lakes. The nearest city is Salzburg, which offers history, culture and entertainment in a convenient distance from Mondsee.

Job profile: The description associated with this job duties and requirements can be found at www.uibk.ac.at/-karriere, Code BIO-10559. We are looking forward to receiving your online application by 13th June 2019.

For questions or more information concerning research, please contact Prof. Seppälä: otto.seppaelae@eawag.ch

Travel costs cannot be reimbursed.

Salary: The minimum gross salary for this position amounts to €1.432,00 per month (14 times). Furthermore, the university has numerous attractive offers.

Kind regards,

Universität Innsbruck Forschungsinstitut für Limnologie, Mondsee Sonja Burggraf Institutssekretariat Mondseestraße 9, A-5310 Mondsee Telefon +43 512 507-50201 Fax +43 512 507-50299 E-Mail sonja.burggraf@uibk.ac.at, office-ilim@uibk.ac.at Bürozeiten: Dienstag - Freitag 8:00-16:00

"Burggraf, Sonja" <Sonja.Burggraf@uibk.ac.at> "Burggraf, Sonja" <Sonja.Burggraf@uibk.ac.at>

UMichigan WildMammalEvolution

The Dantzer Lab the University of Michigan is searching for a postdoc. We have broad interests and study a diversity of questions at the interface of animal behavior, physiology, ecology, and evolution. Most of this work is empirical and performed in wild mammals. This is a very broad search and the postdoc would have freedom to establish their own research project. Before applying for this position, please read the full advertisement located on our website (https://sites.lsa.umich.edu/-dantzerlab/postdoc-position-available)

This search is broad but we are primarily looking for integrative organismal biologists that have a keen interest in animal behavior and have skills some of the following: performing statistical analyses with pedigreed populations, skills in the lab such as physiological or endocrine assays, transcriptomics, sequencing/annotation of genomes, bio-logging tools to record behavior of wild animals, etc. Applicants should have strong knowledge or interest in animal behavior, evolutionary ecology, and life history theory. Experience with field research is a

plus.

Applicants should have a Ph.D. or nearing completion of their Ph.D. (by 2019) and have relevant research experience in behavior, ecology, evolution, physiology, etc. They should also be proficient in statistical analyses and data management to meet our mandate of doing reproducible science. Applicants should have some field research experience but this is not essential if you would like to do lab work or bioinformatics. The Dantzer Lab is a welcoming, safe, and inclusive group and we are committed to increasing diversity in science and academia. We strongly encourage applications from groups that are underrepresented in science/academia to apply for this position.

The postdoc would be based in Ann Arbor, MI but would also spend some time at the field site in the Yukon, Canada. This is a one-year position with the possibility of renewal pending satisfactory performance. If you are interested in applying for this position, please send Ben Dantzer (dantzer@umich.edu) an application (PDF) that contains the following info. This is an open search. Applications will be considered as they are received. Deadline is Aug 15. 1) Explain what you would like to do in this postdoc & why

2) Briefly describe your research interests, past research experiences, & skills

3) Briefly describe your commitment to diversity, equity, & inclusion in science

4) CV with contact info for at least 3 references

5) Indicate when you are available to start the postdoc

Ben Dantzer, Ph.D. Assistant Professor Dept Psychology Dept Ecology & Evolutionary Biology University of Michigan Ann Arbor, MI 48109

Email: dantzer@umich.edu Phone: 734-615-2352 Follow me < https://twitter.com/ben_dantzer?ref_src=-twsrc%5Egoogle%7Ctwcamp%5Eserp%7Ctwgr%5Eauthor > or the Kluane Red Squirrel Project < https://-twitter.com/KluaneSquirrels > on Twitter Visit my website < https://sites.lsa.umich.edu/dantzerlab/ >

Ben Dantzer <dantzer@umich.edu>

UOregon PopGenomics

The Singh lab at the University of Oregon invites applications for a Postdoctoral Researcher in population genomics. This project focuses on the causes and consequences of variation in recombination frequency in natural and experimental populations is supported by an NSF CAREER award. Applicants must possess a PhD or equivalent in Biological Sciences or a related field. A strong background in population genetics/genomics or evolutionary genetics/genomics is essential. Working knowledge of tools and methods for the analysis of genomic and transcriptomic data, and familiarity with scientific computing languages such as R, MATLAB, Python, or Perl are required.

The successful candidate will interact with a diverse group of faculty, postdocs, and graduate students working in the areas of natural variation at the University of Oregon. More information about the Singh lab can be found at https://nadiasinghlab.org . Please apply online (http://careers.uoregon.edu/cw/en-us/job/521721/-postdoctoral-research-scholar) by providing a brief cover letter explaining your background and research interests, CV including publications, and three professional references with contact information. Review of application materials will begin immediately and continue until the position is filled.

nsingh@uoregon.edu

UPennsylvania MammaryGlandEvolution

Postdoc in mammary gland evolution (University of Pennsylvania Med School, Philadelphia PA) The Kamberov lab is seeking a post-doc to lead a project on the developmental and evolutionary significance of positively selected human variants affecting gene expression in mammary tissues. Experimental approaches to be used include analysis and validation of large-scale transcriptomic data from the skin, and the generation and analysis of genetically modified mice.

Interested applicants should send a CV, contact in-

formation of three references and a letter detailing your interest in the position to Yana Kamberov (yana2@pennmedicine.upenn.edu). Applicants should hold a Ph.D. in biology or related field. Applicants with a background in mouse genetics, developmental and evolutionary genetics are especially encouraged to apply.

"Kamberov, Yana" <yana2@pennmedicine.upenn.edu>

Uppsala PDF PhD ArcticVegetationDynamics

Dear All,

We are seeking a PhD student and a post doctoral researcher to work on our new project on Arctic community ecology.

Project VEGA (Vegetation dynamics of the Arctic) will be initiated in September 2019, and aims to apply recent conceptual frameworks in community ecology to Arctic vegetation dynamics. By partitioning impacts on community structure into the four basic processes of selection, drift, speciation and dispersal, we hope to generate a novel synthesis of Arctic community dynamics. The project combines laboratory and field experiments with recent molecular techniques, and draws on joint species distribution modelling for uniting patterns and processes.

For all the relevant details, see the PDF ads enclosed, and for the online versions, look here:

Doctoral student:

https://www.helsinki.fi/en/open-positions/doctoral-student-in-arctic-community-ecology Postdoc Researcher:

https://www.helsinki.fi/en/open-positions/-postdoctoral-researcher-in-arctic-community-ecology
Best wishes,

Tomas

Tomas Roslin, Professor Department of Ecology P.O. Box 7044 Swedish University of Agricultural Sciences SE-750 07 Uppsala Sweden

and

Spatial Foodweb Ecology Group Department of Agricultural Sciences PO Box 27 (Latokartanonkaari 5) FI-00014 University of Helsinki Finland

Phone (FIN): +358 40 595 8098 Phone (SWE): +46 18 672 383

web pages: http://www.helsinki.fi/foodwebs/- http://www.helsinki.fi/foodwebs/Tomas.htm https://www.slu.se/en/cv/tomas-roslin/ http://-/www.facebook.com/foodwebs Ayco Tack <ayco.tack@gmail.com>

UppsalaU NongeneticEffectsEvolution

Postdoc (15 months): Non-genetic effects in evolution

I am seeking a highly motivated postdoc to join the Lind lab at Dept. of Animal Ecology, Evolutionary Biology Centre (EBC), Uppsala University in a 15-month project funded by Carl Tryggers Foundation and the Swedish Research Council VR.

Project: The belief that the genetic code is the sole basis for biological inheritance has been challenged by phenotypic plasticity, parental effects and more recently by the discovery of trans-generational epigenetic inheritance, where environmentally induced phenotypes are inherited for several generations by factors that determine how DNA is read. However, the adaptive significance of complementary inheritance systems that is induced by the environment is enigmatic.

The project aim is to investigate the evolution and evolutionary consequences of adaptive plastic, epigenetic, trans-generational and genetic inheritance during adaptation to new environments that differ in heterogeneity, using the powerful laboratory model system of the nematodes Caenorhabditis remanei and C. elegans. We will mainly perform trans-generational phenotypic assays of life history traits, including analysis of already existing lines that have evolved for over hundred generations.

You will join the lab of Dr. Martin Lind, and be part of the well-equipped nematode lab, led by two PIs (Dr. Lind and Dr. Bolund). In the Lind lab, we are interested in life history evolution in its broad sense, with special emphasis on local adaptation, the evolution of inheritance systems, life-history trade-offs and the evolution of ageing. We encourage an open and collaborative atmosphere in the lab, and many projects are collaborative by design.

Qualifications: We are seeking a highly motivated and collaborative candidate with a strong background in

experimental evolutionary biology, especially life-history evolution. It is desirable if you have basic R programming knowledge and experience of large-scale laboratory experiments of nematodes or other lab organisms. The candidate will have a Ph.D. in evolutionary biology, genetics, ecology or a related field.

Working place: EBC hosts one of the worlds largest aggregations of evolutionary biologists and Uppsala University was recently ranked 7th in the world in evolutionary biology (CWUR 2017). The Department of Ecology and Genetics is an international environment with staff and students from all over the world. Our research spans from evolutionary ecology and genetics to studies of ecosystems. A number of high-profile projects address natural and sexual selection, local adaptation, speciation, molecular evolution, microbial diversity, and ecosystem processes. For more information, see ieg.uu.se. Uppsala University is the oldest university in Scandinavia and the city of Uppsala is a vibrant college town with beautiful surroundings conveniently situated 40 minutes by train from Stockholm.

Position: The postdoc is funded by a tax-free 15-month scholarship from Carl Tryggers Foundation, amounting to 23,000 SEK per month. It is a requirement from the funding agency that you are an incoming postdoc (in other words that your Ph.D. is not from Uppsala University).

How to apply: Position is open until filled. Application deadline: June 23, 2019.

Submit an e-mail to martin.lind@ebc.uu.se with the subject heading POST-DOC APPLICATION, with the following documents combined into ONE pdf file: - A cover letter describing your research interests and suitability for the position - A detailed CV including a publication list and other achievements - Contact details of two to three references who can be contacted by telephone or e-mail before or after the interview.

Prospective candidates will be invited for interviews in person or over Skype.

Informal inquiries can be directed to martin.lind@ebc.uu.se

Lab home page: http:///www.martinlind.org I am looking forward to your application!

Martin Lind <martin.lind.evolmailinglists@gmail.com>

URochester PopulationGenomics

Postdoctoral fellow in population genetics/genomics Department of Biology, University of Rochester

The Chen lab (https://popgenchenlab.github.io/) in the Biology Department at the University of Rochester is seeking a motivated and creative postdoc to join the team! The lab is broadly interested in genomic basis of contemporary evolution in natural populations. We integrate population genomics and quantitative genetics with extensive pedigree data from long-term demographic studies of vertebrates such as the Florida Scrub-Jay to study the evolutionary processes shaping patterns of genomic variation through space and time. Current projects include tracking the inheritance of haplotypes down the pedigree to link individual fitness with allele frequency dynamics and to quantify the contributions of gene flow to genetic diversity and fitness. Candidates will have the opportunity to expand on current projects or explore new areas through the development of a creative and independent project.

The successful candidate will have a background in population genetic, evolutionary biology, computational biology, or a related field. Strong quantitative and computational skills are desirable.

The Department of Biology has a strong research group in evolutionary genetics and genomics. The Chen lab is a safe space, and we are committed to increasing diversity and inclusion in the scientific community. We strongly encourage applications from scientists from groups traditionally underrepresented in science.

The start date is flexible. Salary will be dependent on experience, and benefits are included. The initial appointment is for one year with the possibility of renewal for up to three years.

To apply, please send a cover letter summarizing your research interests and experience, a current CV, and contact information for three references to Nancy Chen (nancy.chen@rochester.edu) with the email subject line "Postdoc application: [Your full name]". Informal inquiries welcome.

– Nancy Chen, Ph.D. Assistant Professor Department of Biology University of Rochester popgenchenlab.github.io/

Pronouns: she/her/hers

"Chen, Nancy" <nancy.chen@rochester.edu>

USouthFlorida Tampa HumanPopulationGenetics

Postdoctoral Fellow - Inferring demographic history of human populations. A postdoctoral fellow position in computational population genomics is available at Liu Lab (www.liulab.science) at the University of South Florida, Tampa, USA, until filled. The postdoctoral fellow will engage in method development and application related to inferring population demographic history using large-scale DNA sequence data (see references below). A graduate level training in population genetics or molecular evolution is required. Previous experience in methodology development and/or Java programming experience is preferred. Contact: Xiaoming Liu (xiaomingliu@helath.usf.edu). Reference: Liu X and Fu YX. (2015) Exploring population size changes using SNP frequency spectra. Nature Genetics. 47(5):555-559.

To apply for the position: 1. Select the below link to access our careers site. 2. Sign In to access your account or if you are not an existing user select the New User link to create one. 3. Review the job description and select the Apply button to begin your application.

https://gems.fastmail.usf.edu:4440/psp/-gemspro-tam/EMPLOYEE/HRMS/c/-HRS_HRAM.HRS_APP_SCHJOB.GBL?Page=-HRS_APP_JBPST&Action=U&FOCUS=-Applicant&SiteId=1&JobOpeningId 717&PostingSeq=1
https://gems.fastmail.usf.edu:4440/psp/-gemspro-tam/EMPLOYEE/HRMS/c/-HRS_HRAM.HRS_APP_SCHJOB.GBL?Page=-HRS_APP_JBPST&Action=U&FOCUS=-Applicant&SiteId=1&JobOpeningId 717&PostingSeq=1

UUtah PrimateGenomics

The Webster Lab in the Department of Anthropology at the University of Utah invites applications for a postdoctoral research position in primate genomics.

The lab uses genomic data from a variety of taxa to investigate primate behavior, ecology, and evolutionXbroadly definedXwith current emphases on speciation and adaptation, social organization, sex-biased processes, and sex chromosome evolution. There will be opportunities for the successful applicant to choose from a variety of projects, as well as develop new ones.

The target start date for the full-time, benefits-eligible position is September 2019, but this is flexible. Two years of funding is currently available. The initial contract is for 12 months and will be renewable for up to 24 months based on satisfactory performance.

This position requires a Ph.D. in anthropology, evolutionary biology, genomics, or a related field at the time of appointment. The ideal candidate will be motivated to creatively use genomic data and methods to address questions in primatology. Programming skills (e.g., Python or R) and experience analyzing genomic data are a plus, but not required, as there will be opportunities for training in bioinformatics and genomics.

To apply, please email a cover letter describing research interests, career goals, and motivation to join the lab along with a CV and contact information for three references to Tim Webster (timothy.h.webster@utah.edu) and include "Postdoc application" in the subject. Pre-submission inquiries for more information or to discuss research ideas are welcome.

Application review will begin June 24, 2019 and continue until the position is filled.

The University of Utah is an Affirmative Action/Equal Opportunity employer and is committed to diversity in its workforce. In compliance with applicable federal and state laws, University of Utah policy of equal employment opportunity prohibits discrimination on the basis of race or ethnicity, religion, color, national origin, sex, age, sexual orientation, gender identity/expression, veterans status, status as a qualified person with a disability, or genetic information. Individuals from historically underrepresented groups, such as minorities, women, qualified persons with disabilities, and protected veterans are strongly encouraged to apply. Veterans preference is extended to qualified applicants, upon request and consistent with University policy and Utah state law.

Reasonable accommodations in the application process will be provided to qualified individuals with disabilities. To request an accommodation or for further information about University AA/EO policies, please contact the Office of Equal Opportunity and Affirmative Action, 201 S. Presidents Cr., Rm 135, (801) 581-8365 (V/TDD), email: oeo@umail.utah.edu.

TIMOTHY Harding WEBSTER <timothy.h.webster@utah.edu>

UVirginia DiseaseEvolution

The Gibson lab (coevolving.org) at the University of Virginia is seeking a Post-Doctoral Research Associate to study the evolution and ecology of host-parasite interactions.

Potential projects lie in two broad areas of research in the lab. 1) Understanding the evolutionary and ecological causes and consequences of diversity in parasite defenses, including resistance, tolerance, and avoidance, using a natural microsporidia parasite of the nematode Caenorhabditis elegans. 2) Applying coevolutionary theory to development of successful biological control initiatives by testing the role of parasite local adaptation in control of the agriculturally important plant-parasitic nematode Meloidogyne arenaria by its natural parasite Pasteuria penetrans. Projects in both these areas have the potential to merge experimental evolution, genomics, field sampling, and theory, based upon interest and expertise.

The Biology Department at UVA (http://-bio.as.virginia.edu/) is an excellent training environment for curious, highly motivated scientists. The successful applicant can expect to interact frequently with the departments strong, collegial group of evolutionary biologists (https://www.eebvirginia.org/). There may be opportunities for research and training at Mountain Lake Biological Station (https://mlbs.virginia.edu/), in southwestern Virginia. The Gibson lab is committed to fostering diversity in STEM and promoting a safe and inclusive working environment.

Qualification requirements: A Ph.D. in evolution, ecology or related fields is required by the start date of the appointment. Candidates must have experience with experimental design and statistical analysis, as well as with one or more of the approaches routinely used in our work, such as experimental evolution, field sampling, modeling, and/or techniques associated with our study organisms. A strong publication record, excellent written and verbal communication skills, and the ability to work well with others are required. The ideal candidate will demonstrate ambition, creativity, and independence.

Application procedure: Apply at https://-uva.wd1.myworkdayjobs.com/en-US/UVAJobs/-job/Charlottesville-VA/Research-Associate-in-Biology_R0007201 and attach a cover letter, a curriculum vitae, contact information for 3 references, and 2-3 writing samples (preferably first-author publications, published or in prep).

Application deadline: review of applications will begin on June 20, 2019. The position will remain open until filled.

This is a one-year appointment. There is a possibility of extension, contingent upon performance and available funding.

Interested applicants are invited to email Amanda Gibson, Assistant Professor, at akg5nq@virginia.edu to discuss the position.

For questions about the application process, please contact Richard Haverstrom, Faculty Search Advisor, at rkh6j@virginia.edu.

For information on the benefits available to postdoctoral associates at UVA, visit postdoc.virginia.edu and hr.virginia.edu/benefits.

The University of Virginia, including the UVA Health System and the University Physicians Group are fundamentally committed to the diversity of our faculty and staff. We believe diversity is excellence expressing itself through every person's perspectives and lived experiences. We are equal opportunity and affirmative action employers. All qualified applicants will receive consideration for employment without regard to age, color, disability, gender identity, marital status, national or ethnic origin, political affiliation, race, religion, sex (including pregnancy), sexual orientation, veteran status, and family medical or genetic information.

– Amanda Kyle Gibson, Ph.D.

Assistant Professor Department of Biology University of Virginia Charlottesville, VA

email: akg5nq@virginia.edu website: https://-coevolving.org/ "Gibson, Amanda K (akg5nq)" <akg5nq@virginia.edu>

UWisconsin Madison PlantInbreedingDepression

Hello,

There is a position opening in my laboratory for a postdoctoral fellow interested in applying evolutionary concepts to agricultural systems. Areas of interest include examining management practices that most affect

selfing rates in alfalfa seed production fields and quantifying inbreeding depression over the life cycle of alfalfa. Knowledge of plant mating system, inbreeding depression and some experience with genomics are preferred. The postdoc is funded via ORISE as detailed below:

https://www.zintellect.com/Opportunity/Details/-USDA-ARS-2019-0074 Please apply directly on zintellect (link above). Feel free to contact me if you have specific questions. Thank you.

Dr. Johanne Brunet

USDA-ARS VCRU Dept. of Entomology 1630 Linden Drive University of Wisconsin Madison, WI 53706 (608) 265- 3587

http://labs.russell.wisc.edu/brunet/ < http:/-/www.scientia.global/wp-content/uploads/-Johanne_Brunet/Johanne_Brunet.pdf > https://-www.researchgate.net/profile/Johanne_Brunet < http://www.scientia.global/wp-content/uploads/-Johanne_Brunet/Johanne_Brunet.pdf > https:/-/www.scientia.global/dr-johanne-brunet-buzzing-blooming-bee-flower-interactions-in-crop-production/ < https://www.facebook.com/brunetlab > < https:/-/www.researchgate.net/profile/Johanne_Brunet/-contributions >

jbrunet@wisc.edu

Vienna EvolutionaryBioinformatics

Applications are invited as a postdoctoral researcher or programmer to work on a larger project entitled "Genome-wide molecular dating" (https://-www.wwtf.at/programmes/mathematics/MA16-061) at the Institute of Population Genetics, Vetmeduni Vienna. Starting date will be August/September or shortly thereafter. The position is for one year in the first instance.

Standard phylogenetic methods reduce entire populations to single points in genotypic space by modelling evolution as a process in which a single gene mutates along the branches of a phylogeny. In this project, we are developing new theory and software to tackle the problem of species tree estimation and molecular dating genome-wide. Visits to St Andrews, Budapest and Aarhus for collaborations with Carolin Kosiol, Gergely Szollosi and Asger Hobolth are possible.

The successful candidate should have programming experience in language such as C, C++, Java and a scripting language such as Python or Perl. Theywill have a degree in Bioinformatics, Computer Science, Statistics, Mathematics, Physics or a related field. Prior experience with either phylogeny or population genetics, or comparative genomics is a benefit.

To receive full consideration, applicants should submit a single PDF file by e-mail to Carolin Kosiol (carolin.kosiol@vetmeduni.ac.at orck202@st-andrews.ac.uk) including (i) Cover letter with a brief summary of previous experience and motivation for the position and (ii) CV including a list of publications (iii) Names and contact details of 2-3 references.

Informal enquires are welcome. Screening will start end of June till the position is filled.

Carolin Kosiol <carolin.kosiol@vetmeduni.ac.at>

Vienna ExperimentalEvolutionDrosophila

Experimental Evolution in Drosophila

A postdoctoral position is available at the Institute of Population Genetics, Vetmeduni Vienna (Austria). The research focus of the Institute of Population Genetics is on understanding the genetics of adaptation. This central question in evolutionary biology is being tackled using up-to-date methods and a variety of approaches, including experimental evolution, quantitative genetics, functional genetics, empirical population genetics, bioinformatics, and statistics.

The successful candidate will be part of a team of scientists studying the adaptation of experimental Drosophila populations to temperature stress. Since our experimental evolution study is performed under controlled environmental conditions with a high level of replication we have a powerful system to successfully employ a combination of DNA sequencing, RNA-Seq, metabolomics and high-level phenotyping to characterize the architecture of adaptation in an outcrossing species. With some of our populations approaching 200 generations, this project provides the opportunity to follow adaptive trajectories through time.

We are looking for a candidate with excellent quantitative training and experience in handling large data sets. A background in population genetics and/or experience with the analysis of RNA-Seq and Pool-Seq data are a bonus. Candidates interested to study the co-evolution of microbiome and host genome are also

invited to apply. The successful applicant will supervise a team of technicians to collect high-level phenotypes (e.g. respiration, behavior, metabolism etc.).

Postdocs with outstanding performance will be offered a group leader position at the institute, allowing them to establish their own independent research at the institute.

The positions are available for at least two years starting August 2019, but the exact starting date is negotiable. The application should be emailed to christian.schloetterer@vetmeduni.ac.at <christian.schloetterer@vu-wien.ac.at> as a single pdf containing CV, list of publications, a statement of research interests, and the names of three references with contact details. While the search will continue until the position is filled, applications should be received by 21.6.2019 to ensure full consideration.

Background:

Barghi N, Tobler R, Nolte V, Jaksic AM, Mallard F, Otte KA, Dolezal M, Taus T, Kofler R, Schlotterer C. 2019. Genetic redundancy fuels polygenic adaptation in *Drosophila*. PLoS Biol 17:e3000128.

Jaksic AM, Karner J, Nolte V, Hsu SK, Barghi N, Mallard F, Otte KA, Svecnjak L, Senti KA, Schlotterer C. 2019. Neuronal function and dopamine signaling evolve at high temperature in *Drosophila*. bioRxiv. doi: https://doi.org/10.1101/585422 Kofler R, Senti KA, Nolte V, Tobler R, Schotterer C. 2018. Molecular dissection of a natural transposable element invasion. Genome Res 28:824-835.

Mallard F, Nolte V, Tobler R, Kapun M, Schlotterer C. 2018. A simple genetic basis of adaptation to a novel thermal environment results in complex metabolic rewiring in *Drosophila*. Genome Biol 19:119.

Tobler R, Franssen SU, Kofler R, Orozco-Terwengel P, Nolte V, Hermisson J, Schlotterer C. 2014. Massive habitat-specific genomic response in *D. melanogaster *populations during experimental evolution in hot and cold environments. Mol Biol Evol 31:364-375.

Christian Schlotterer <schlotc@gmail.com>

WorkshopsCourses

Berlin AdaptationGenomics Dec2-6

Course: Adaptation Genomics

Where: Free University (FU) Berlin (Germany)

When: 2-6 December 2019

Instructors: Dr. Jessica Stapley (ETH Zurich, Switzerland) and Dr. Philine Feulner (EAWAG, Switzerland).

Overview:

Our course will guide biologists through the analysis and interpretation of genome-wide genetic data to study adaptation. Participants will receive training in population genetics and statistics that forms the basis for adaptation genomic approaches. They will also receive hands-on experience in the preparation of genomic data, the use of bioinformatic tools to identify regions of the genome that have been under selection and regions that area associated with population structure, phenotypic variation and environmental variation,and in identifying thefunctional significance of these regions using comparative tools. The course will combine lectures, groups discussions and hands-on practical exercises using bioinformatic analysis pipelines.

Topics to be covered include:

Genomic data handling, preparation and filtering. Determining population structure and calculating population genomic summary statistics. Quantify changes in allele frequencies during rapid adaptation Identifying signatures of selection, finding regions of high differentiation and identifying genotype-environment and genotype-phenotype associations. Identifying potential candidate genes or gene pathways within genomic regions of interest.

For the full programme, please see: (https://www.physalia-courses.org/courses-workshops/course50/)

For the full list of our courses and workshops, please see: (https://www.physalia-courses.org/courses-workshops/course11/)

Should you have any questions, please feel free to contact us: info@physalia-courses.org

Thanks and 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 BasedModellingUsingNetLogo Oct21-25

Course: Individual-based modelling using NetLogo

When: 21-25 October

Where: Free University Berlin (Germany)

Instructors: Instruction will be led by Professors Steve Railsback and Volker Grimm, leading experts, educators and authors of agent-based modelling theory and practice.

Overview: This five-day course will introduce the principles of agent-based modelling using NetLogo, a development environment and a domain specific computer language for agent-based modelling. Participants will learn how to design, implement, and evaluate agent-based models that are relevant to their own fields of research and teaching.

For more information, please visit our website: (https://www.physalia-courses.org/courses-workshops/course52/)

Here is the full list of our courses and Workshops: (https://www.physalia-courses.org/courses-workshops/)

Please feel free to contact us if you need any further information.

All the best,

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 GenomicsWithBioconductor Sep16-20

Dear all,

we still have a few places on our course " Genomics with R and Bioconductor"

Where: Free University (FU) Berlin (Germany)

When: 16-20 September 2019

Instructor: Dr. Ludwig Geistlinger - CUNY Graduate School of Public Health and Health Policy, New York (USA)

Course: This course will provide biologists and bioinformaticians with practical statistical analysis skills to perform rigorous analysis of high-throughput genomic data. The course assumes basic familiarity with genomics and with R programming, but does not assume prior statistical training. It covers the statistical concepts necessary to design experiments and analyze high-throughput data generated by next-generation sequencing, including: exploratory data analysis, principal components analysis, clustering, differential expression, and gene set analysis.

Programme:

Session 1 V Introduction

Monday - 09:30 to 17:30

Lecture 1: Data distributions

- random variables - distributions - population and samples

Hands-On 1: Introduction to R

Lecture 2: Creating high-quality graphics in R

- Visualizing data in 1D, 2D & more than two dimensions - Heatmaps - Data transformations

Hands-On 2: Graphics with base R and ggplot2

* Session 2 V Hypothesis testing

Tuesday - 09:30 to 17:30

Lecture 1: Hypothesis testing theory

- type I and II error and power - multiple hypothesis testing: false discovery rate, familywise error rate - exploratory data analysis (EDA)

Hands-On 1: Standard tests & EDA

Lecture 2: Hypothesis testing in practice

- hypothesis tests for categorical variables (chi-square, Fisher's exact) - Monte Carlo simulation - Permutation tests

Hands-On 2: Permutation tests

* Session 3 - Bioconductor

Wednesday V Classes from 09:30 to 17:30

Lecture 1: Introduction to Bioconductor

- Incorporating Bioconductor in your data analysis - ExpressionSet / SummarizedExperiment - Annotation resources

Hands-On 1: Leveraging Bioconductor annotation resources

Lecture 2: Genomic intervals

- Introduction to genomic region algebra - Basic operations: construction, intra- and inter-region operations - Finding overlaps

Hands-On 2: Solving common bioinformatic challenges with GenomicRanges

* Session 4 - Next-generation sequencing data

Thursday - 09:30 to 17:30

Lecture 1: High-throughput count data

- Characteristics of count data - Exploring count data - Modeling count data

Hands-On 1: Analyzing next-generation sequencing data

Lecture 2: Clustering and Principal Components Analysis

- Measures of similarity - Hierarchical clustering - Dimension reduction - Principal components analysis (PCA)

Hands-On 2: Clustering & PCA

* Session 5 - Differential expression and gene set analysis

Friday - 09:30 to 17:30

Lecture 1 - Differential expression analysis

- Normalization - Experimental designs - Generalized linear models

Lab 1: Performing differential expression analysis with DESeq2

Lecture 2 - Gene set analysis

- A primer on terminology, existing methods & statistical theory - GO/KEGG overrepresentation analysis - Functional class scoring & permutation testing - Network-based enrichment analysis

Lab 2: Performing gene set enrichment analysis with the EnrichmentBrowser

For the full list of our courses and Workshops, please see: [https://www.physalia-courses.org/courses-workshops](https://www.physalia-courses.org/courses-workshops/course11/)

Should you have any questions, please feel free to contact us

Thanks and 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>

analyses of their own data

For more information about the program, please visit our website: https://www.physalia-courses.org/courses-workshops/course45/curriculum45/ Here is the full list of our courses and Workshops: https://www.physalia-courses.org/courses-workshops/ Should you have any questions, please feel free 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 17645230846 https://groups.google.com/forum/-#!forum/physalia-courses "info@physalia-courses.org" <info@physalia-courses.org>

Berlin PhylogeneticComparativeMethods Sep23-27

Dear all,

we have still a few places available on our course "Phylogenetic Comparative Methods", which will be held at the Free University (FU) Berlin from the 23rd to the 27th of September.

Course Website: https://www.physalia-courses.org/-courses-workshops/course44/ Instructors:

1) Dr. Francesco Santini ((https://scholar.google.com/-citations?userÃy5LlsAAAAJ&hl=en))

2) Dr. Bruno Frédérich ((https://scholar.google.com/-citations?user=TuwejFEAAAAJ&hl=en))

This course will introduce students, researchers and professionals to the theoretical and practical aspects of generating ultrametric trees, reconstructing trait evolution and investigating rates of lineage diversification. It will consist of both lectures to cover theory, as well as practical tutorials.

Students will be provided with previously published datasets that have been selected to highlight some of the complexities of various types of methods and analyses, as well as to reproduce the type of dataset that they might use in their own research. Students are also encouraged to bring their own dataset in case they want to seek input from the instructors on how to set up

Berlin RNAseqForNonModelOrganisms Nov11-15

Course: RNA-seq Analyses in non-model organisms

Where: Free University (FU) Berlin (Germany)

When: 11-15 November 2019

Instructors: Dr. Nicolas Delhomme and Bastian Schiffthaler (Umea Plant Science Center, Sweden)

Course overview:

This course provides an overview of modern applications of transcriptome sequencing and popular tools and algorithms for exploring transcript reconstruction and expression analysis in a genome-free manner, leveraging the Trinity software and analysis framework. Attendees will perform quality assessment of Illumina RNA-Seq data, assemble a transcriptome using, among others, Trinity, quantify transcript expression, leverage Bioconductor tools for differential expression analysis, and apply Trinotate to functionally annotate transcripts. In parallel to the short-read assembly, participants will perform the pre-processing of 3rd generation sequencing data (PacBio IsoSeq) and the resulting assemblies will be compared. Additional methods will then be explored for characterizing the assembled transcriptome and revealing biological findings.

Intended audience

This course is aimed primarily at biologist researchers that have basic bioinformatics skills and are pursuing RNA-Seq projects in non-model organisms. Attendees will gain skills needed to successfully approach transcriptome sequencing, de novo transcriptome assembly, expression analysis, and functional annotation as applied to organisms lacking a high quality reference genome sequence. Attendees are also invited to bring a subset of their own data.

Teaching format

The course will be delivered over the course of four and a half days, with each session entailing lectures followed by practical hands-on sessions. Most computing will be done on the cloud and attendees will use their own laptop computers with the Google Chrome web browser providing all the necessary interfaces to the cloud computing environment, including the linux command terminal. Attendees can also use the native terminal emulator of their Operating System (and ssh). This works natively for Linux, MAC and Windows 10. For Windows 7 users, installing MobaXTerm would be recommended.

For the full programme, please see: (https://-www.physalia-courses.org/courses-workshops/course2/-curriculum2/)

For the full list of our courses and Workshops, please see: (https://www.physalia-courses.org/courses-workshops/-course11/)

Should you have any questions, please feel free to contact us

Thanks and 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 SexChromosomes Sep20-22 DeadlineJun30

Dear colleagues,

we hereby announce an international workshop, funded by the German Science Foundation (DFG) and supported by the Leibniz-Institute of Freshwater Ecology and Inland Fisheries (IGB),

on sex chromosome evolution, to be held in Berlin, Germany, 20-22 Sept. 2019:

ºParadigm shift in sex chromosome evolution: Conceptual and empirical challenges from studies in vertebrates±. Preliminary website: http://bit.ly/-IGBworkshopParadigmShiftSC Talks and discussions will be on Friday 20 and Saturday 21.

We encourage especially early career researchers to apply for participation; no attendance fees are required (but please organize transfer and stay by yourself)

We can offer up to 6 slots for talks by interested participants (max. 15 min talks + 5 min discussion);

additional applicants can present posters OR MAY JUST ATTEND TO LISTEN TO TALKS.

If interested, please, send an email to: matthias.stoeck@igb-berlin.de Or: lukas.kratochvil@natur.cuni.cz

with information on career stage, few sentences on motivation and an abstract IF you would like to present a poster or a talk (till June 30 at the latest).

Confirmed invited speakers include: Mnica Bullejos Martn, Universidad de Jan, Spain Blanche Capel, Duke University, USA Ben Evans, McMaster University, Canada Tony Gamble, Marquette University, USA Yann Guiguen, INRA, Rennes, France Amaury Herpin, INRA, Rennes, France Karel Janko, Czech Academy of Sciences, Lib, Czech Republic Daniel L. Jeffries, University of Lausanne, Switzerland Martina Johnson Pokorn, Charles University, Prague, Czech Republic Werner Kloas, IGB, Germany Ikuo Miura, Hiroshima University, Japan Catherine Peichel, University of Bern, Switzerland Nicolas Perrin, University of Lausanne, Switzerland Michail Rovatsos, Charles University, Czech Republic Manfred Schartl, University of W'rzburg, Germany (and Texas A&M University, USA) Vladimir Trifonov, Russian Academy of Sciences, Novosibirsk, Russia Nicole Valenzuela, Iowa State University, USA

Matthias Stoeck <matthias.stoeck@igb-berlin.de>

Crete MorphoPhylogenetics Nov04-08

Dear evoldir members,

Transmitting Science is offering the course 'MORPHOLOGICAL PHYLOGENETICS: PRINCIPLES, APPLICATIONS AND TECHNIQUES'.

Instructors: Dr. Tiago SimÃµes (Harvard University, USA) & Oksana Vernygora (University of Alberta, Canada) Dates: November 4th-8th, 2019 Location: Crete, Greece

COURSE OVERVIEW: An accurate reconstruction of evolutionary relationships among species is the cornerstone of evolutionary biology. Building phylogenetic trees thus provides the fundamental framework upon which systematic, biogeographic and evolutionary research operates. Morphological phylogenetics provides a unique toolkit for inferring relationships, considering that the vast majority of the species that have ever lived are now extinct and can only be assessed based on morphological data. Additionally, combining fossils and morphological data with molecular data from extant species is becoming the most comprehensive method of assessing phylogenetic relationships on deep time and the time of origin of major evolutionary lineages.

In this course, we will focus on the analysis of morphological data (and combining morphological data with molecular data) using multiple optimality criteria for phylogenetic inference. We will discuss the best available approaches to construct morphological data sets and their impact on phylogenies. We will follow with theory and hands-on practice of phylogenetic programs using maximum parsimony, maximum likelihood and Bayesian inference. Participants will learn how to combine morphological and molecular data for total evidence analyses, how to conduct time-calibrations using tip and node dating, different birth-death models, morphological clocks and combined evidence relaxed clock analyses.

Software: Mesquite, TNT, RAxML, IQTree, Mr. Bayes and BEAST.

PROGRAM:

Monday, November 4th, 2019. Morning: - Theory of morphological character construction: Homology: assessment and tests. Avoiding logical and biological biases in morphological characters. Challenges behind morphological data sets in the era of big data. - Working with data files: File structure of main types of data matrices (NEXUS, PHYLIP, TNT). Creating and editing data files. Afternoon: - Practice: Exercise 1.1: Morphological character construction.

Tuesday, November 5th, 2019. Morning: - Maximum Parsimony: Principles and assumptions. Fitch, Farris, and Goloboff algorithms. Tree search using New Technology (T.N.T) ' introduction to the T.N.T. software. Afternoon: - Practice: maximum parsimony analysis using T.N.T.: Morphological data analysis using Traditional and New Technology search algorithms. Implied weights parsimony analysis. Working with trees ' constructing consensus, calculating support values, mapping synapomorphies, etc.

Wednesday, November 6th, 2019. Morning: - Probabilistic methods in phylogenetics: Concepts and assumptions. Differences between probabilistic methods and parsimony (includes discussion on the performance comparison MP vs ML and BI for morphological data). - Maximum likelihood: Theory of maximum likelihood. Application in phylogenetics. Afternoon: - Exercise 1: Maximum likelihood analysis in IQ-tree using webserver. - Exercise 2: Maximum likelihood analysis using command line version of IQ-tree.

Thursday, November 7th, 2019. Morning: - Bayesian inference: Bayes theorem and its application in phylogenetics. Introduction to Markov chain Monte Carlo (MCMC) method. Metropolis coupling of MCMC chains. Priors. Introduction to Mr Bayes software. - Clock-based (time calibrated) Bayesian inference analysis: Principle behind molecular clock. Introduction to morphological clock. Types of clocks (strict, autocorrelated, relaxed, random). - Tree priors: Birth-Death model. Fossilized Birth-Death model. Afternoon: - Exercise 1: Bayesian inference analysis using Mr Bayes: Writing and adding Mr Bayes block to a data set. Performing non-clock analysis and overview of each component. Analysing output. - Exercise 2: Model-fit analysis using Bayes factor. - Exercise 3: Time-calibrated analysis in Mr Bayes.

Friday, November 8th, 2019. Morning: - Combined data sets: Combining different types of data (molecular and morphological. Divergence time estimation using combined evidence clocks. Analysing output. - Clock analysis using BEAST: Major differences to Mr Bayes Overview of the modular configuration of BEAST 2. Afternoon: - Exercise 1: Data partitioning and running combined evidence analysis. - Exercise 2: Time-calibrated analysis using BEAST 2 (Morphology and combined evidence datasets).

For more information and registration: http://bit.ly/morphological-phylogenetics . Contact: courses.crete@transmittingscience.org

All the best, Haris Saslis, PhD Course Coordinator Transmitting Science www.transmittingscience.org

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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

CUNY NYC SLiMEvolutionaryModeling Nov4-8

Hi all.

First of all, as background: SLiM is a software package for creating evolutionary models/simulations that are individual-based and genetically explicit. It is scriptable, flexible, fast, and includes an interactive graphical modeling environment. You can read more about it on its home page (https://messerlab.org/slim/).

November 4-8, 2019, a five-day SLiM workshop will be offered at City University of New York (New York City, USA). It will be hosted by Michael Hickerson and Connor French, both of CUNY, Brian Smith of the American Museum of Natural History (AMNH), and Deren Eaton, of Columbia University. It will be free, and open to participants outside of the university. HOWEVER, registration is required, a limited number of seats are available, and priority will be given to registrants affiliated with CUNY/Columbia/AMNH. To apply, please send an email to all five of us (mhickerson@ccny.cuny.edu, french.connor.m@gmail.com, bsmith1@amnh.org, de2356@columbia.edu, bhaller@mac.com) with the info below. The deadline for applying is the end of the day on 20 September.

For this workshop, your application email should include: (1) your name, (2) your university or institutional affiliation, (3) a link to a research website or similar academic page, if you have one, (4) a 1-2 sentence description of your level of experience with SLiM and any other forward genetic simulation software, if any, (5) a 1-2 sentence summary of why you want to attend the workshop (i.e., the connection to your research), and (6) 1-2 sentences about any specific topics within SLiM that you hope to learn about in the workshop. Note that you will be responsible for your own lodging and your own transportation. Please do not apply to the workshop unless you are sufficiently serious that you will actually attend, if accepted. Note that acceptance will likely be first-come-first-served (apart from the priority for those from the hosting institution), so early application is advised.

The plan is to try to cover all the major topics in the SLiM manual, starting with lots of introductory material to get beginners up to speed with SLiM and its associated scripting language Eidos, and hopefully ending up at advanced topics like non-Wright-Fisher models, tree-sequence recording, continuous-space models, and nucleotide-based models. We won't cover everything in the manual V that would be overwhelming! V but we'll try to cover all the big topics. There will also be time for attendees to work on their own models with help from me, and we may also have time to explore some optional side topics that are of particular interest to those attending each workshop. The workshops will be taught principally using SLiMgui on macOS. It is not yet determined whether Macs will be provided, or whether attendees will need to bring their own Mac laptop. (A Mac is required to run SLiMgui, which is necessary for teaching purposes.)

I'm hoping to continue doing workshops in future; if you would like to invite me to give a workshop at your institution, please send me an email (off-list).

Cheers,

Benjamin C. Haller Messer Lab Cornell University

Ben Haller <bhaller@mac.com>

FortCollins SustainingBiodiversityInfrastructure Oct15-17

What: Ecological Society of America Professional Development: Sustaining Biological Infrastructure, Strategies for Success

When: October 15-17, 2019

Where: Fort Collins, CO

Description 3 days of training focused on helping you create a sustainable action plan for your project, network with colleagues facing similar challenges, and develop the skills you need for success.

100% of our alumni agree that the fundraising, communications, and planning skills they gained on the course will have a meaningful impact on their project within the next 6-12 months.

Apply Now at http://esa.org/sbi/how-to-applyTake your lab, field station, collection, or research center to the next level of success with our 3 day intensive training.

Contact: Chelsea Fowler, ESA Science Programs Specialist, 202-833-8773 ext. 221, chelsea@esa.org

Emily Mastrianni <emily@esa.org>

Glasgow Microbiome Jun24-28 PartialScholarships

5 PART-FUNDED SCHOLARSHIPS for the course "Microbiome Data Analysis Using QIIME2 (MBQM01)"

https://www.prinformatics.com/course/microbiome-data-analysis-using-qiime2-mbqm01/ PR informatics are pleased to offer through their funding scheme 5 all inclusive places on the up-coming course "Microbiome Data Analysis Using QIIME2 (MBQM01)"

All inclusive course fees have been subsidized by over 40% to pounds 500 (from pounds 845.00).

This fee covers the 5 day course and accommodation, breakfast, lunches, and refreshments (full details at the bottom of this email).

This course will be delivered by Dr. Yoshiki Vazquez and Dr. Antonio Gonzalez Pena from June 24th - 28th in Glasgow City Centre.

Applications should be sent to oliver-hooker@prinformatics.com and contain the following.

1. Full name 2. Institute name 3. PhD subject title or Post doc research questions 4. Do you hold a funded position 5. 150 words why this course would be relevant to your research or how it would help.

Application deadline is Tuesday 18th June and decisions will be made by Thursday 20th June.

Course Overview: This course will provide a theoretical, analytical and practical introduction to QIIME 2 (canonically pronounced Âchime two'), which stands for Quantitative Insights into Microbial Ecology 2, and Qiita (canonically pronounced Âcheetah'), a multiomics and multi-study online tool. QIIME 2 and Qiita are open source software packages for comparison and analysis of microbial communities, primarily based on high-throughput amplicon sequencing data (such as SSU rRNA) generated on a variety of platforms, but also supporting analysis of other types of data (such as shotgun metagenomic, metabolomics or proteomics). The main Qiita deployment (http://qiita.microbio.me/) allows users to manage and analyze large studies, their metadata and the multiple data types generated from the same samples. Additionally, it allows users to combine their samples with other published and public studies available in the system. QIIME 2 is a stand-alone environment for the analysis of individual microbiome data sets that can be used on your laptop, university computational resources, and cloud computing resources.

Course objectives: By the end of the course, participants will be able to: 1) Understand the most recent QIIME2 and Qiita features for microbial community analysis 2) Select the best workflow and parameters to perform the different steps for microbial community analysis 3) Understand and apply on their own datasets different phylogenetic and non-phylogenetic metrics to compare microbial diversity samples 4) Upload and analyze their own datasets using Qiita and compare their studies with other public studies

ALL INCLUSIVE PACKAGE ' Includes breakfast, lunch, refreshments and welcome dinner Monday evening. Self-catering facilities are available in the accommodation. Accommodation is approximately a 6-minute walk from the PR informatics head office. Accommodation is multiple occupancy (max 3-4 people) single sex en-suite rooms. Arrival Sunday 23rd June (between 17:00 ' 21:00 and departure Friday 28th June (accommodation must be vacated by 09:15).

Check out our sister sites www.PRstatistics.com (Ecology and Life Sciences) www.PRstatistics.com/-consultancy www.PSstatistics.com (Behaviour and cognition)

1. June 17th ' 21st 2019 ADVANCED PYTHON FOR BIOLOGISTS (APYB03) Glasgow, Scotland, Dr. Martin Jones www.prinformatics.com/course/-advanced-python-biologists-apyb03/ 2. June 24th ' 28th 2019 MICROBIOME DATA ANALYSIS USING QIIME2 (MBQM01) Glasgow, Scotland, Dr. Yoshiki Vazquez Baeza, Dr. Antonio Gonzalez Pena https://www.prinformatics.com/course/microbiome-data-analysis-using-qiime2-mbqm01/ 3. July 1st ' 5th 2019 BIOACOUSTICS FOR ECOLOGISTS: HARDWARE, SURVEY DESIGN AND DATA ANALYSIS (BIAC01) Glasgow, Scotland, Dr. Paul Howden-Leach https://www.prstatistics.com/course/bioacoustics-for-ecologists-hardware-survey-design-and-data-analysis-

biac01/ 4. July 8th ' 12th 2019 INTRODUCTION TO BAYESIAN HIERARCHICAL MODELLING USING R (IBHM03) Glasgow, Scotland, Dr. Andrew Parnell https://www.psstatistics.com/course/introduction-to-bayesian-hierarchical-modelling-using-r-ibhm03/ 5. July 29th ' August 2nd 2019

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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

Leysin SwissAlps SingleCellOmics Oct13-18

Dear all,

The SIB Swiss Institute of Bioinformatics (www.sib.swiss) and NBIS/SciLifeLab Sweden (www.nbis.se) are pleased to announce a joint Autumn School in

"Single Cell Analysis"

This special event will take place 13-18 October 2019 in Leysin, a nice all-season resort in the Swiss Alps. This school aims at training students and young researchers in cutting-edge methodologies about single cell analysis in the various omics. With a mix of lectures and hands-on sessions, supervised by expert speakers / tutors, and in a nice environment and atmosphere, we are convinced that this School will meet your expectations.

*PhD students from SIB and from a Swedish University have the priority but the School is open to everyone.

Detailed information and course application: https://-www.sib.swiss/training/course/2019-10_single-cell IM-PORTANT: please note that your application will not be considered if you do not complete the form indicated in the course information page.

We look forward to meeting you at the Autumn School! With kind regards,

The organization committee: Bjorn Nysted, NBIS/SciLifeLab Grégoire Rossier, SIB

The scientific committee: Åsa Bjorklund, NBIS/SciLifeLab Charlotte Soneson & Michael Stadler, SIB and Biozentrum Vincent Gardeux, EPFL

Bjorn Nystedt, PhD Joint head of facility Bioinformatics Long-term Support (WABI) National Bioinformatics Infrastructure Sweden at SciLifeLab www.nbis.se, www.scilifelab.se/platforms/bioinformatics

BMC E10:3206, entrance C11 Husargatan 3, SE-752 37 Uppsala

Phone: 018 - 471 4413 E-mail: bjorn.nystedt@scilifelab.se

När du har kontakt med oss på Uppsala universitet med e-post så innebär det att vi behandlar dina personuppgifter. For att läsa mer om hur vi gor 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 Bjorn Nystedt <bjorn.nystedt@scilifelab.se>

NorwichUK AdvancedPython Jul22-26

Dear all,

We are holding an Advanced Python for Biologists course at Earlham Institute, Norwich, UK.

This Advanced level workshop is ideal for researchers and technical workers with a background in biology and a basic knowledge of Python, to develop bigger or more complicated programs and increase skills and knowledge about the language, including object-oriented approaches to programming.

Dates: 22-26 July 2019 Trainer: Dr Martin Jones Cost: 600 Registration deadline: 16 June 2019

For full information and to register: http://-www.earlham.ac.uk/advanced-python-biologists For questions contact: training@earlham.ac.uk

Best wishes, Roanne

Roanne Ephithite Events Manager [ei-as-signature-4] Norwich Research Park Norwich Norfolk NR4 7UZ +44 1603 450 264 roanne.ephithite@earlham.ac.uk www.earlham.ac.uk "Roanne Ephithite (EI)" <Roanne.Ephithite@earlham.ac.uk>

Scotland RNA-seq Aug5-7

Course: Introduction to RNA-seq Data Analysis 5-7 August 2019

Where: University of Edinburgh, Kings Buildings, Edinburgh, Scotland

Tutors: Dr Frances Turner, Dr Urmi Trivedi, Dr Nathan Medd

Overview: RNA sequencing (RNA-seq) is the method of choice for transcriptome profiling. Nevertheless, it is a non-trivial task to transform the vast amount of data obtained with high-throughput sequencers into useful information. Thus, RNA-seq data analysis is still a major bottleneck for most researchers in this field. The ability of correctly interpreting RNA-seq results, as well as knowledge on the intrinsic properties of these data, are essential to avoid incorrect experimental designs and the application of inappropriate analysis methodologies.

The aim of this workshop is to familiarise researchers with RNA-seq data and to initiate them in the analysis by providing lectures and practicals on analysis methodologies. In the practicals Illumina-generated sequencing data and various widely used software programs will be used.

Registration fee: £500

For more information and to register see: http://-genomics.ed.ac.uk/services/introduction-rna-seq-data-analysis For more courses coming soon please check out our training web-page: https://genomics.ed.ac.uk/-services/training Kind Regards

Nathan Medd

– Training and Outreach Manager - Edinburgh Genomics

MEDD Nathan <nathan.medd@ed.ac.uk>

ULaval Quebec IntroductionToGWAS Sep9-13

Dear all,

Physalia-courses in collaboration with Laval University (Québec, Canada) is organizing two courses (1 - Speciation Genomics; 2- Introduction to GWAS) in Canada this September.

2nd course: Introduction to genome-wide association studies (GWAS)!

Where: Institut de Biologie Intégrative et des Systèmes (IBIS), Université Laval Québec (Québec) , Canada

When: 9-13 September

Instructors: 1 - Dr. Filippo Biscarini (Italian National Research Council) 2- Eric Normandeau (Laval University, Canada)

Overview: This course will introduce students, researchers and professionals to the steps needed to build an analysis pipeline for Genome-Wide Association Studies (GWAS). The course will, on one hand, describe all the necessary steps involved in a typical GWAS study; on the other hand, we will build a reusable and reproducible GWAS pipeline.

TARGETED AUDIENCE & ASSUMED BACKGROUN: The course is aimed at students, researchers and professionals interested in learning how to build a structured pipeline for semi-automated and reproducibile GWAS analyses. It will include information useful for both beginners and more advanced users. We will start by introducing general concepts of GWAS and bioinformatics pipeline building, progressively describing all steps and putting there seamlessy together in a general workflow. Attendees should have a background in biology, specifically genetics; previous exposure to GWAS experiments would also be beneficial.

For more information, please visit our website: (https://www.physalia-courses.org/courses-workshops/-course49/)

Here is the full list of our courses and Workshops: (https://www.physalia-courses.org/courses-workshops/)

Please feel free to contact us if you need any further information.

All the best,

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>

Valencia IntroductionToPhylogenomics Oct7-11

Dear Colleagues,Transmitting Science is organizing the following course that can be of interest for members of this list: INTRODUCTION TO PHYLOGENOMICS, October 7th-11th, 2019.INSTRUCTORS: Dr. Jeremy M Brown (Louisiana State University United States of America) and Dr. Robert Thomson (University of Hawaii United States of America).More information and registration: https://www.transmittingscience.org/-courses/evolution/introduction-to-phylogenomics/ Course overviewThis workshop will introduce participants to the theory and tools for phylogenetic inference in the era of genome sequencing. Course material will focus on statistical methods for phylogeny estimation, software implementing these methods, applications of these methods to large molecular datasets, and discuss trade-offs and tools for improving the accuracy of phylogenomic analyses. In hands-on practical sessions, participants will gain experience working with bioinformatic and statistical tools for analyzing large datasets.The course is intended to facilitate ongoing or planned phylogenomics projects by students, so they are encouraged to notify instructors in advance about the topics of greatest relevance to their own work.Example software: RevBayes, IQTree, SVDQuartets, ASTRAL, TreeScaperPLACE: Gandía, Valencia (Spain).Other Transmitting Science courses: https://www.transmittingscience.org/-courses/With best regardsSoleSoledad De Esteban-Trivigno, PhDScientific DirectorTransmitting Sciencewww.transmittingscience.org Soledad De Esteban Trivigno <soledad.esteban@transmittingscience.org>

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.