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AalborgU Denmark FruitFlyEvolution

PHD STIPEND/INTEGRATED PHD STIPEND IN HEALTHSPAN IN FRUIT FLIES INVESTIGATED USING MULTI-OMICS APPROACHES (18-22041)

At the Faculty of Engineering and Science, Department of Chemistry and Bioscience, a PhD stipend/Integrated PhD stipend is available within the PhD study programme of Biotechnology, Chemistry and Environmental Engineering. The stipend is open for appointment from 1 September 2022 or soon hereafter. The stipend is available for 3 or 4 years depending on whether the applicant already holds a master's degree. Applicants who hold a master's degree can apply for a 3-year position and applicants who has finished 4 years of full-time studies but do not hold a Master's degree can apply for a 4 years PhD stipend (Integrated PhD stipend). The Integrated PhD stipend is only open for appointment with starting date 1 September 2022. The Department consists of two sections with research and teaching in Biotechnology, Chemistry, Chemical Engineering, Environmental Technology and Biology. Place of employment of the position is Section for Chemical Science and Engineering in Aalborg. The Section of Bioscience and Engineering consists of 90 people of which about 30 is associate- and full professors. The section's conducts internationally competitive research within a range of topics within Biology and Biotechnology and publishes more than 100 peer reviewed publications annually. The section is responsible for the educations in Biology, Biotechnology, Medical Biotechnology and Environmental Science and is mostly located in Aalborg, but also conducts research and teaching at Esbjerg Campus.

JOB DESCRIPTION

The PhD student will be working on a project entitled "Integration of the Drosophila melanogaster Microbiome and Transcriptome for Enhanced Prediction of Late-Life Events" and will be positioned in the Bioscience and Engineering section. The project is financed by the Independent Research Fund Denmark and will be a collaborative effort between multiple researchers at Aalborg University, Denmark and Clemson University, South Carolina, USA.

The PhD student will be working on a panel of inbred and genome sequenced fruit fly lines (Drosophila Genomic Reference Panel) exposed to either a caloric-balanced or caloric-enriched diet. At multiple age-points during the life of flies we will assess age-related decline in locomotor activity. Whole-genome RNA transcriptomic analysis and 16s rRNA quantification of the gut microbiome will be performed on young flies from the two environments. Using publicly available genotype information of all lines and the generated transcriptomic and microbiome data, we will develop models for prediction of longevity and healthspan within and across nutritional exposures.

We seek a candidate with a strong interest in experimental work and analyses om omics data and who has knowhow within one or more of the following areas: molecular biology, bioinformatics, physiology, evolutionary biology, or quantitative genetics and genomics. The project can to some extent be tailored to the candidate's interests and expertise.

The PhD student is expected to engage in teaching within genetics and evolutionary biology and will follow courses according to the university's PhD program. As part of the PhD study, it is expected that the candidate spends 4-6 month abroad, likely in laboratories of our collaborators at Clemson University.

Application:

The application must contain: (1) Cover letter of 1-2 pages describing the motivation for applying and an account of the applicant's background in relation to the announced position; (2) Project description, which is required for technical reasons - in this case, where you apply for a specific project, you may upload a copy of the project description above; (3) CV; (4) Diploma and transcripts of records; and (5) Other relevant information.

All interested candidates are encouraged to apply, regardless of their personal background. We value diversity and see it as a strength.

We are a dynamic workplace with high professionalism and efficiency, a good working environment and with a focus on work-life balance. We strive for a culture with collaboration that promotes openness and curiosity towards new initiatives and ideas and with a constructive approach to problem solving. As an employee at the department, you will be part of an international research environment, with a focus on innovation, knowledge sharing and excellency as well as interdisciplinary collaborations.

For further information about scientific aspects of the stipend, please contact Professor Professor Torsten Nygård Kristensen, e-mail: tnk@bio.aau.dk; telephone +45 61463375 or postdoc Palle Duun Rohde, e-mail: palledr@hst.aau.dk; telephone +45 23471197

The Department of Chemistry and Bioscience provides cutting-edge research and teaching in biotechnology, biology, environmental science, chemistry and chemical engineering. Our research solves important topics for the

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CologneU Two EvolutionaryGenetics

A PhD position is available in the research group of Prof. Juliette de Meaux and Prof. Ute Hoecker at the University of Cologne. The PhD student will test and validate novel experimental strategies to determine how gene contribute to determine the ecological niche of a species. The PhD candidate will compare how mutations in >30 major plant pathways modify the ecological niche of the model species A. thaliana and use approaches based on the study of natural variation to validate niche predictions. The PhD candidate will acquire a broad array of skills ranging from genomics to molecular genetics and ecology, and develop a solid basis in— experimental design, data management and analysis.

The position is part of the TRR 341 PhD call. TRR341 is a new Collaborative Research Center funded by the GerÂ'man Research Foundation (DFG) at the Universities of Cologne, DüsselÂ'dorf, Bochum, Marburg and the Max Planck Institute for Plant Breeding Research. In a joint and interdisciplinary approach, combining Plant Molecular Biology and Ecology, we are investigating the genetic underÂ'pinnings of plant responses and adaptation to global environmental change. Together, our aim is to provide new molecular and genetic data and tools to better understand the molecular basis of plant adaptation. We thereby hope to support current and future efforts for the preservaÂ'tion of plant biodiversity.

The applicant must hold a Master degree in Biology, with expertise in plant genetics, quantitative biology and/or ecology. This position is open to applicants of all nationalities but the usual language in the lab is English.— Successful candidates should have a strong interest in generating knowledge on the ecological and genetic adaptation of plants to changing environÂ'ments and thus contributing to the preservation of plant ecosystems/ diversity. Successful candidates will convince us that they are excellent team players, driven by curiosity and with an aptitude for interdisciplinÂ'ary research. (detailed project information on https://ag-demeaux.botanik.uni-koeln.de/trr341). PIs in TRR341 are dedicated to educate young scientific experts in Plant Ecological Genetics and to support them on their career path. Our integrated 'Graduate School in Ecological GenetÂ'ics' (GEcoGen) offers you a comprehensive training program with tarÂ'geted scientific education in the field of Plant Ecological Genetics as well as complementary training supporting your personal and career development. The positions are available as soon as possible and are to be filled for fixed term until 30.06.2026. According to the applicant's personal qualÂ'ification and the institution, employment payment will be based on 65% of salary group 13 TV-L/13 TVöD-Bund. The employment regulaÂ'tions of the respective hiring institution apply. Please apply online at: https://jobportal.uni-koeln.de with proof of the sought qualifications (letter of motivation indicating for which project(s) you apply, CV, degree certificates, transcript of records and contact of two references). The reference number is Wiss2206-01. The project number is A12. The application deadline is 10.07.2022. If you have any questions, please contact (j.groenewold@verw.uni-koeln.de or jdemeaux@uni-koeln.de).

University of Cologne is an equal opportunity employers striving for gender equality and diversity. Applications from individuals with backgrounds that are underrepresented in MINT disciplines are expressly welcome. Women with comparable qualifications will be considered preferentially. Applications from suitably qualified severely disabled persons or people of equivalent status according to Book IX of the German Social Legal Code (SGB - Soziales Gesetzbuch) are encourÂ'aged. Severely disabled applicants of equal merit and qualifications will be given priority.

Prof. Dr. Juliette de Meaux University of Cologne Plant Molecular Ecology Institute of Botany Biozentrum Zülpicher str. 47b D-50674 Cologne Germany

Tel: +49 221 470 8213 jdemeaux@uni-koeln.de

http://www.botanik.uni-koeln.de/1146.html —

A PhD position is available in the research group of Prof. Juliette de Meaux at the University of Cologne. The PhD student will investigate the Genetics of Arabis Floodplain Species. The lab has recently discovered that several Arabis species interbreed in floodplain meadows along the Rhine. For this project, the PhD candidate will determine the phylogeography of one of the species,

Arabis sagittata, which was recently shown to be the receiver of interspecific geneflow. The PhD candidate will explore the functional and ecological impact of gene flow. The PhD candidate will acquire a

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ETH Zurich EvolutionTriploidy

Position for a Ph. D. student at ETH Zurich / Eawag to study the ecological and evolutionary advantages of triploidy and apomixis. The study system is the New Zealand freshwater snail Potamopyrgus antipodarum where diploid sexual and triploid asexual lineages commonly coexist, compete and share virulent coevolving parasites. The broader goal of the project is to understand how host triploidy associates with parasite resistance and what is the evolutionary history of triploid lineages. Depending on the interests of the candidate the project may include field work in New Zealand, an opportunity to conduct laboratory and field experiments and development of molecular genetics tools to answer the study questions and test hypotheses.

The work language in the group is English.

General information about the research group can be found at http://www.ae.ethz.ch/ . Candidates must qualify for admission to the Ph.D. programme of ETH (https://www.ethz.ch/en/doctorate.html). The duration of the position is four years, starting from November 2022. The salary is according to the ETH-scale, starting from 47 kchf/year.

Candidates are invited to apply by email. Please attach a single PDF file including a letter of motivation, a C.V. and the names and addresses of two references. The subject line should read "PHD-Position 2022". Applications can be sent to jukka.jokela@env.ethz.ch.

The evaluation of applications will start in July 2022 and continues until the position is filled.

Jokela Jukka William Juhani <jokela@env.ethz.ch>

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iDiv Leipzig SymbiontEvolution

The Martin Luther University Halle-Wittenberg, in cooperation with the German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig, offers the following position in Leipzig, starting on 1 October 2022 or at the earliest opportunity and initially limited to 31 Mai 2025 (pending approval of further funding).

Doctoral Researcher (m/f/d) as part-time employment (65%) The salary will be up to 65% 13 TV-L, if the personal requirements and tasks are fulfilled. In Germany, this is corresponds to a regular PhD salary.

Project: "Symbiont adaptation in response to host shifts"

A majority of arthropod species harbour specialised bacterial symbionts that may influence many aspects of arthropod biology, and are transmitted from mothers to offspring (hence termed "inherited symbionts"). Occasionally, inherited symbionts are transmitted between unrelated individuals. Such host shifts are key to symbiont spread and evolutionary success, yet this process is poorly understood. The goal of the project is to determine how symbionts evolve in adaptation to novel hosts, and to ascertain the factors involved in successful spread of inherited symbionts in novel hosts. The project will employ the Spiroplasma / Drosophila model, use artificial host shifts to create novel host symbiont combinations, and investigate genomic evolution of symbionts. Symbiont spread in host populations will further be investigated using experimental evolution. The work will thus comprise handling and manipulation of Drosophila populations, as well as microbial genomics and bioinformatics. The candidate will work in an international research environment and will benefit from excellent laboratory infrastructure.

The German Centre for Integrative Biodiversity Research (iDiv) Halle-Jena-Leipzig is a National Research Centre funded by the German Research Foundation (DFG). Its central mission is to promote theory-driven synthesis and data-driven theory in integrative biodiversity research. It is located in the city of Leipzig and it is a central institution of the Leipzig University, jointly hosted by the Martin Luther University Halle-Wittenberg (MLU), the Friedrich Schiller University Jena and the Helmholtz Centre for Environmental Research (UFZ). More information about iDiv: www.idiv.de . The newly established Symbiont Evolu-

tion group of Dr. Michael Gerth aims to better understand how inherited symbionts have become so abundant and diverse, with a particular focus on symbiont host shifts. For more information, please visit our lab website: https://www.idiv.de/en/symbiont-evolution.html. Doctoral researchers at iDiv benefit from inter- and transdisciplinary training and support by the iDiv graduate school yDiv.

Tasks: * Planning and conducting of scientific experiments, cultivation and care of animal cultures (Drosophila) * Molecular biology work: DNA extractions, PCRs, creation of next generation sequencing libraries, performance of Oxford Nanopore MinION sequencing * Bioinformatics work: assembly and annotation of bacterial genomes; determination of genetic variants * Interpretation and presentation of the work at national and international conferences, as well as in the form of publications in international journals

Requirements: * Scientific University degree (Diploma/ M.Sc.) in biology or a related field * Demonstrated knowledge of and interest in evolutionary biology * Experience in handling of Drosophila or similar model organisms desirable * Experience in molecular techniques (PCRs, DNA extractions), genome sequencing, or bioinformatics desirable * Strong interest in symbiont ecology and evolution * Willingness to integrate and contribute to an international research centre * Fluency in English and good communication skills * Knowledge of German is advantageous, but not required

The Martin Luther University Halle-Wittenberg gives priority to applications from severely disabled candidates with equivalent qualifications. Women are particularly encouraged to apply. Applicants with a degree that was not obtained at a German higher education institution must submit a Statement of Comparability for Foreign Higher Education Qualifications from the Central Office for Foreign Education (Zentralstelle für ausländisches Bildungswesen) to prove equivalence.

For informal queries about the research project please contact Dr. Michael Gerth (michael.gerth@idiv.de). Please submit your full application dossier only in English with registration number 4-6786/22-D until 21 July 2022. Applications should be submitted electronically via our iDiv application portal at https://apply.idiv.de. Applications should include motivation letter tailored to the research project, curriculum vitae, a digital copy of

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INRAE Nancy France EvolutionReproductiveMode

We are looking for a motivated and enthusiastic candidate for a fully funded Ph.D. position to work on the evolution of reproductive mode polymorphism in the poplar rust fungus, Melampsora larici-populina.

Advisors Pascal FREY (Senior scientist), main supervisor Fabien HALKETT (Senior scientist), co-supervisor Sébastien DUPLESSIS (Senior scientist), co-supervisor

Host laboratory Department of Tree - Microbe Interactions INRA / University of Lorraine INRA Grand-Est - Nancy research centre 54280 Champenoux http://-mycor.nancy.inra.fr/IAM/ Funding University doctoral contract. Duration 3 years. Monthly net salary about euro 1600.

Thesis summary The variability of reproductive modes is a long-standing conundrum in evolutionary biology. Yet, it conditions the evolutionary trajectories of populations and the morphological or physiological characteristics of the individuals that compose them. The phytopathogenic fungus Melampsora larici-populina, causing poplar rust, is particularly interesting for the study of the polymorphism of reproduction modes. Indeed, like most Pucciniales, this species presents a life cycle that alternates between an asexual multiplication phase and a sexual reproduction phase. Besides, we have demonstrated that lineages of the fungus do survive strictly asexually over decades.

The thesis proposes to address the issue of variability in reproductive modes along three complementary axes:

1. An evolutionary ecology approach that will allow us to determine the geographical distribution of the asexual lineages of M. larici-populina using population genetics.

2- A phenotypic approach that will aim to experimentally demonstrate the level of investment of asexual lineages in sexual reproduction.

3- A genomic and evolutionary transcriptomic approach that will aim to elucidate the functional basis of the cycle and to find the determinants of the variation of the sexual and asexual reproduction modes.

Required skills The candidate should have a Master degree in ecology, evolutionary biology and/or population biology. He/she should have skills in population genetics

and/or genomics and an interest in plant-microorganism interactions. A strong taste for teamwork is essential. Knowledge of French will be an asset but is not mandatory.

Application Send CV, cover letter and contact details of two referees to Pascal Frey (pascal.frey@inra.fr) and Fabien Halkett (fabien.halkett@inrae.fr) before June 28, 2022.

Fabien Halkett <fabien.halkett@inrae.fr>

JagiellonianU ZebraFinchEvolution

4-year PhD scholarship in Physiological Ecology Institute of Environmental Sciences, Jagiellonian University, Cracow, Poland We are seeking a highly motivated PhD student with interest in animal experimental biology and a general interest in avian physiology for our NCN funded project "The effect of aging on body temperature dependent oxidative stress: the burden of heterothermy". The experimental work on captive zebra finches (Taeniopygia guttata) will be performed at Jagiellonian University.

Duration: 4 years Starting Date: October 2022 Scholarship: regular PhD Stipend and additional 5000 PLN / month from the project as scientific stipend Requirements:

1. MSc in life science (biology, ecology, evolution, zoology or related)

2. interest physiological ecology and animal metabolism

3. experience, or at least interest in experimental work with birds

4. analytical thinking, creativity, and high motivation in learning new methods

5. excitement to perform research in an international team

6. good level of spoken and written English

Project in brief:

As endotherms, mammals and birds have evolved the capacity to thermoregulate, an evolutionary achievement with profound impact on biology and ecology. Endothermy, however, does not necessarily entail a constant body temperature throughout a day, a year or a life time. Instead, many mammals are known to hibernate seasonally or enter torpor, reducing their body temperature by a few Â^{o}C to several tens of Â^{o}C below the normothermic level. Birds are known to also become torpid or and reduce body temperature during the night by rather a few Â^{o}C with some exceptions of up to two tens of Â^{o}C. These on first sight small temperature drops may, however, have profound effects on enzymatic activity. The rate of biochemical reactions in general, and enzymatic reactions in particular are highly temperature dependent, which also applies to enzymes that act as antioxidants against free radicals. They protect against the negative effects of oxidative stress through free radical scavenging and if this protective enzymatic action is reduced in its rate, free radicals may remain unchecked and lead to oxidative damage of biomolecules. Such oxidative damage risks functional integrity of biomolecules and is currently one of the most frequently forwarded driver of aging. Our research is designed to understand how regulation of body temperature may be hampered by increasing age and how this impaired thermoregulatory capability may lead to increased oxidative stress when animals grow old.

While it is well established for mammals, including us humans, that body temperature and the capacity to thermoregulate declines with increasing age, such data are virtually absent for birds, and in addition were never linked to oxidative stress. Our research project will provide thorough understanding how age in the context of senescence influences thermoregulation in birds. The second goal of our research is then to relate the thermogenic capacity of birds of different age to oxidative stress to test the hypothesis that body temperature is related to the rate of oxidative damage.

Please submit for application in a single pdf by 20th of June 2022 via e-mail (ulf.bauchinger@uj.edu.pl) containing:

1. Letter of motivation

2. CV

3. certificates

4. Contact details for two scientists who can provide reference letters

Students must be accepted as PhD student at Institute of Environmental Sciences, UJ (please see details for application process at https://irk.uj.edu.pl/en-gb/offer/-SD_PC_22/programme/n.scis.przy_phd.biol_sd_PC/-?from=org-unit:UJ.SDSP .Shortly, the registration for the Doctoral School ends at 27th June 2022. Entry exam will be between 04th and 8th July 2022. Entries to the Doctoral School: 22nd - 25th August 2022. One needs to have Msc degree before entry to the Doctoral School.

For further information do not hesitate and contact Ulf

Bauchinger (ulf.bauchinger@uj.edu.pl)

Ulf Bauchinger <ulf_bauchinger@uri.edu>

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JamesCookU EvolutionGroupLiving

The van de Pol Lab at James Cook University (Townsville, Australia) invites applications for a PhD position in evolutionary demography / behavioural ecology. The successful candidate will work on projects investigating the evolution of group living and cooperation. Specific projects are flexible based on discussion with the candidate, but we specialize in combining evolutionary/demographic modelling of fitness consequences with the analysis of long-term individual-based field data on cooperatively breeding birds.

An example of previous work on this topic on which this project could build: https://www.journals.uchicago.edu/doi/abs/10.1086/706475. For more details about our research and recent publications, see https://research.jcu.edu.au/portfolio/martijn.vandepol/ . We are looking for a student with a background in ecology, behavioural biology and/or evolution. Strong quantitative (mathematical and statistical) skills are desirable, but most important the candidate should have a keen interest in modelling and analysing existing long-term dataset to study questions about evolutionary demography of group living / cooperation. Good communication skills, scientific curiosity and enthusiasm for research are essential.

JCU's college of Science & Engineering is a large and research-intensive unit, and globally ranked as one of the best research places in Ecology & Evolution. Tropical Townsville offers year-round warm weather, plenty of outdoor activities and native wildlife, and is close to the Wet Tropics and Great Barrier Reef.

Acceptance for this PhD is contingent on successful application for a PhD scholarship. PhD scholarships for domestic and international students are available. Competition for international scholarship is particularly strong, and candidates should have received very high grades during their degree (MSc/ first class Honours or equivalent) and have at least one 1st-authored publication in a peer-reviewed journal (or multiple co-authored ones). Deadline of the international application is 23rd of September 2022, but earlier is better as this leaves more time to prepare the application. For more information on the procedure see https://www.jcu.edu.au/graduate-research-school/hdr-candidates/postgraduate-research-scholarships and for criteria see https://www.jcu.edu.au/graduate-research-school/forms-and-policies/scholarship-scoring-procedure Interested applicants should send a brief outline of their research interests and a CV (with grades and publication record) to martijn.vandepol@jcu.edu.au. Informal inquiries also welcome.

Martijn van de Pol

martijn.vandepol@jcu.edu.au

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JamesCookU FairyWrenEvolution

Expression of interest: PhD scholarship behavioural adaptation to climate change in fairy-wrens

I'm looking for outstandingcandidates who wish to apply for a competitive PhD scholarship at James Cook University (Townsville, Australia) to study topics related to behavioural adaptation to climate change using fairy-wrens as a study system. The project involves a combination of fieldwork in south-west Australia with analyses of long-term datasets.

Summary: It has been suggested that social species have evolved in harsh environmental conditions, allowing for successful reproduction and survival in environments where pairs alone cannot succeed. This implies that social behaviour may buffer against adverse weather conditions. However, an overlooked issue is that social behaviour itself will also be affected by adverse weather. This project will study the dynamic interplay between ecological conditions and social behaviour through new experiments and detailed behavioural observations using an iconic Australian bird as a model system.

You need to be eligible to apply for an (International) Research Training Program Scholarship (https://www.jcu.edu.au/graduate-research-school/hdr-candidates/postgraduate-research-scholarships). Requirements typically include at least one first-authored peer reviewed publication and a MSc/ first class Honours, or equivalent (https://www.jcu.edu.au/graduate-research-school/forms-and-policies/scholarship-scoring-procedure)

Please send me a letter with your interests, including a current CV to Dr Lyanne Brouwer: Lyanne.Brouwer at jcu.edu.au

See my website for more information about my research: https://myscience.eu/lyanne/ Lyanne Brouwer Lecturer

College of Science & Engineering James Cook University, Australia

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1 James Cook Drive Townsville QLD 4811 AUSTRALIA

jcu.edu.au

We acknowledge the Australian Aboriginal and Torres Strait Islander peoples as the traditional owners of the lands and waters where we live and work.

Your feedback is appreciated and can be submitted to: feedback@jcu.edu.au

Lyanne.brouwer@jcu.edu.au

Krakow Poland SaproxylicBeetleGenetics

Institute: Institute of Systematics and Evolution of Animals Polish Academy of Sciences Title: Population genetics of saproxylic beetle assemblages in protected and managed forests Name of potential supervisor dr hab. ukasz Kajtoch (ORCID 0000-0001-7345-9400). Background information: The recruitment concerns Polish National Science Center project - summary of the project idea:

https://www.ncn.gov.pl/sites/default/files/listy-rankingowe/2021-09-15okipi34a/streszczenia/538567-pl.pdf Maintaining biodiversity is one of the most important problems of our time and forests are particularly affected by human activities because they are used for timber production. At the same time, wood is a microhabitat that is home for numerous organisms called saproxylics. The availability, quality and quantity of deadwood in many forests are severely limited what forces many species to live only in some remnants of natural forests. Other saproxylic organisms benefit from forest management and some of them might even be detrimental to forestry, especially during outbreaks. For proper protection of rare and threatened taxa, and for effective management of eruptive species (called 'pests'), it is necessary to understand what determines the viability and structure of their populations. Thanks to the development of modern DNA sequencing and genotyping techniques, it is now possible to study genetic polymorphism in detail to understand the factors and microevolutionary processes that shape population structure. The addition of environmental features to genetic data (via landscape genetics) makes it possible to find answers to the question of which features of the environment (e.g., availability and connectivity of old-growth forests, quantity and quality of deadwood, etc.) determine the genetic polymorphism of saproxylic beetle populations. The main question to be addressed in the project: In this project saproxylic beetle species will be examined, both relicts of primeval forests and common taxa (including those with eruptive populations), with different species-specific traits (such as phylogenetic and trophic relationships, habitat and food specialization) to find answers to the following questions:

1) how genetic polymorphism of saproxylic beetles varies in forests with different habitat quality and microhabitat quantity? 2) how the duration of protection preserves the high genetic variability of saproxylic beetle's populations? 3) how the spatial distribution of suitable patches determines the dynamics of meta-populations of saproxylic beetles? 4) how distance to refuges in old-growth forests reduces genetic polymorphism of saproxylic beetles? 5) how population genetics of saproxylic beetles are influenced by traits such as specialization, abundance, and phylogeny?

Information on the methods/description of work: Selected saproxylic beetle species will be sampled from multiple sites in old-growth, protected and managed forests. Sampling will focus on Polish forests, as there are still primeval forests in this country known to be hotspots for relict for deadwood beetle species. The sampled beetles will be genotyped using next-generation sequencing technology and modern bioinformatics, which will allow the description of molecular polymorphism. Next, we will combine the genetic data with information on the environmental conditions of the sampled sites and species-specific traits. The PhD student will be involved mostly in laboratory (nucleid acids isolation, DNA barcoding, genomic library preparation, sequencing), bioinformatics and statistics. Sample collection and habitat measurements in the field will be done in cooperation with specialists.

Additional information (e.g., special requirements from the student): Requirements: - an M.Sc. degree in biology, biotechnology or related fields; - strong interest in use of molecular data in ecological and evolutionary studies (experience in next generation sequencing, SNP genotyping and bioinformatic analyses are welcome); - good English language; - at least basic familiarity with R environment; - no contraindications for fieldwork. - documented active participation in various forms of disseminating scientific research results and co-authoring scientific or popular science publications. - a category B driving license is welcome.

Recruitment is combined with recruitment to the Doctoral School of Natural and Agricultural Sciences. Candidates must meet the requirements provided for in the rules of enrollment to the Doctoral School of Natural and Agricultural Sciences. These rules and recruitment documents (including the personal questionnaire) can be found at:

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LMU Munich ComputationalPhylogenetics

PhD Position in Computational Phylogenetics

I invite applications for one doctoral position in computational-phylogenetics in my research group at the GeoBio-Center of the Ludwig-Maximilians-Universität (LMU), München. The position is part of my ERC Starting Grant "MacDrive". This is a research-only PhD position funded for 3 years (no classes and teaching required but possible). The starting date is flexible between 1st September 2022 and 1st September 2023. This position focuses on computational research but I strongly encourage applicants with a biological background too.

The Project MacDrive aims to test which factors drive diversification rates, e.g., species-specific factors such as body size, habitat and diet, versus external factors such as the environment. To answer this question, we will estimate several species-level phylogenies with extant species and fossil species. Additionally, we will develop new statistical methods to estimate these time-calibrated phylogenies with fossil taxa based on both molecular and morphological data, as well as new statistical methods for diversification rate estimation. The methods will be integrated into our software RevBayes (https://github.com/revbayes/revbayes).

In this part of the project MacDrive, you will be responsible for developing and testing new approaches to estimate phylogenies for extant and fossil species from morphological data. Methods for estimating phylogenies from molecular data are currently much more mature and tested than methods for morphological data. Specifically, in this project we need to develop better models and methods for correlated morphological character and morphological clock models. Your work is focused on computational phylogenetics with an emphasis on testing and modifying existing models in RevBayes. Your methods will be used to estimate several time-calibrated phylogenies for which we are generating the data in my group. These phylogenies will ultimately be used to perform macroevolutionary analyses to test for drivers of diversification rates.

Applicants should have a Master's degree, completed or completion imminent, in evolutionary biology, bioinformatics, computational biology or a related field. The key skills required are basic programming skills (for example R or C++), basic experience in performing statistical analysis and good communication skills (oral and written English). Basic knowledge in phylogenetics is beneficial but not required. Training in these skills will be provided depending on need. No knowledge of German is required but some basic knowledge will be helpful outside of work. Enthusiasm, determination and the capacity to work independently are essential. The candidate is highly encouraged to develop their own research ideas complementing the current research direction.

My group is broadly working on theory and computational methods for Bayesian inference of phylogeny (https://hoehnalab.github.io). Our research directions include phylogeny inference, divergence time estimation, diversification rate estimation and model testing. All of our methods are implemented in the open-source program RevBayes (http://www.RevBayes.com) which is the successor software of the popular program MrBayes. The successful applicant will be part of our vibrant RevBayes group. There will be opportunities for the successful applicant to work with and visit the research groups of my collaborators in Europe and the USA. Furthermore, I expect the candidate to become actively involved in our RevBayes workshops as a lecture or teaching assistant.

My group is located at the GeoBio-Center of the LMU Munich, one of Germany's and Europe's top Universities (#32 world-wide; #8 in Europe; #1 in Germany; https://www.timeshighereducation.com/world-university-rankings/lmu-munich). The GeoBio-Center is located at the Königsplatz which is in walking distance to the historic city center (Marienplatz) and English Garden (city park with 3.75 kmÂ^2 area). The GeoBio-Center is highly interdisciplinary and consists of researchers from different departments including paleontology, molecular and evolutionary biology, zoology and botany.

The position will be compensated according to the standard LMU salary scheme for doctoral students (approx. 3050 euro monthly gross salary; approx. 1850 euro monthly net salary). The salary includes benefits such as health care, 30 days of vacation per year, pension, unemployment insurance, child support (if applicable) and parental leave.

LMU Munich is an equal opportunity employer. The University continues to be very successful in increasing the number of female faculty members and strongly encourages applications from female candidates. LMU Munich intends

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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

MemorialU CaribbeanBiogeography

I am seeking a motivated PhD student to test the role of different hypotheses (e.g. Cenozoic vicariance, over-water dispersal, the GAARlandia colonization route, in situ speciation) on the evolution and assembly of Caribbean flora. The Caribbean is important to conserve because it is one of the world's top five biodiversity hotspots. We will compile divergence times and ancestral areas of Caribbean endemic plant lineages from the literature or from our own analyses (dated phylogenetic trees and biogeographic modeling). With these data we will estimate colonization and speciation rates through time. We hypothesize that different speciation rates through time could explain the absence of a time-for-speciation effect in the Caribbean as we previously demonstrated, and a decreased colonization rate into the Caribbean because islands will reach carrying capacity with time. In addition, the systematics of the genus Copernicia (Arecaceae), a radiation of 21 palm species mostly endemic to Cuba, will be conducted using Genotyping-by-Sequencing (GBS). The student will conduct fieldwork in Cuba. We expect to find phylogenetic splits reflecting the history of fragmentation and rejoining of Cuban paleo-archipelagos, and between Cuba and Hispaniola. Other research questions of interest to the student are welcome. The PhD student will work under the mentorship of Dr. Julissa Roncal at Memorial University of Newfoundland in Canada, and will collaborate with Raul Verdecia from Las Tunas University in Cuba for the systematics of Copernicia.

Student's qualifications: - A MS degree in a related discipline (e.g. biology, botany, systematics, ecology, molecular biology, bioinformatics) - Experience in organismic botany, phylogenetics and/or population genetics analyses, biogeographic modeling, and bioinformatics is highly desirable. - Excellent writing, analytical, organization and communication skills. Attention to detail. - Written and oral proficiency in English is mandatory for international students. TOEFL or IELTS test is required for admission to the university.

Position characteristics: Project start date is September 2022 or January 2023. The PhD program comprises four years with an annual stipend of CAD$ 22,500 and the possibility to obtain the Dean's Doctoral Award of CAD$5,000 per year. The student is expected to teach 60 hours during the fall and winter semesters (Sept through April) but not in the spring. The department of Biology at Memorial University has 25 faculty members and 74 graduate students. Memorial University is Atlantic Canada's largest university offering a multicultural environment. Screening will begin immediately and will continue until the position is filled. Position is funded by an NSERC Discovery Grant, but as part of the student's training I encourage every student to apply for grants and awards.

How to apply: Interested applicants should send their CV, a one-page statement of research interests and career goals, transcripts, and contact information of 3 references (who have agreed to be contacted) in a single pdf or word file to Dr. Julissa Roncal at Email: jroncal@mun.ca before applying formally to MUN. For more information on the research group visit: https://julissaroncal.wordpress.com. For instructions on how to apply to Memorial's graduate program visit: http://www.mun.ca/become/graduate/apply/-index.php Information on the Biology department can be found: https://www.mun.ca/biology/our-people/-faculty/ Julissa Roncal, Ph.D. (she/her) Associate Professor and Curator of the Ayre Herbarium Depart-

ment of Biology Memorial University of Newfoundland 45 Arctic Avenue St. John's, NL, A1C 5S7, Canada Office CSF4331, phone (709) 864 2241 Ayre herbarium (709) 864 6233 Mobile: (709) 351 6771 http://-julissaroncal.wordpress.com/ Twitter @roncaljulissa

Associate Editor of Botany https://cdnsciencepub.com/-journal/cjb _We acknowledge that the lands on which Memorial University's campuses are situated are in the traditional territories of diverse Indigenous groups, and we acknowledge with respect the diverse histories and cultures of the Beothuk, Mi'kmaq, Innu, and Inuit of this province._

Julissa Roncal <jroncal@mun.ca>

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MLU Halle Germany BeePopGenomic

At the Martin Luther University Halle-Wittenberg (Germany), Natural Sciences Faculty I, Institute of Biology, the General Zoology group offers a 3 years position (65%) starting on the 01.09.2022 for a

Doctoral Researcher (m-f-d)

on the project “A comparative population genomic approach to address the effects of habitat loss and fragmentation on South American Centris oilbees”

The salary is according to national norms, i.e. 65% of 13 TV-L.

The project: Landscape fragmentation and habitat loss are among the major threats to global bee diversity. However, it is still not well understood if certain functional traits render some bee species more vulnerable to environmental change than others. We seek a highly motivated PhD student to investigate whether South American oil bees of the genus Centris that vary in functional traits also differ in their population genomic response to fragmentation and habitat loss. Moreover, the PhD student will study the effects of such habitat disturbances on Centris bee- oil plant-interactions as well as on the ecosystem service of pollination. This will allow to link habitat disturbance, population genomics, ecologically relevant traits, species interactions and ecosystem services (pollination). The research work includes large scale sampling of bees in Brazil (3-4 months), whole genome sequencing to generate single nucleotide polymorphism (SNP) data, landscape genomics, building plant-pollinator networks and conducting pollination experiments. The selected PhD candidate will work in an ambitious international research team with modern lab facilities.

Requirements:

MSc/Diploma in Biology or related subject Knowledge on population genetics/genomics and SNP data Field work experience (especially in collecting insects) Knowledge on wild bee biology, using GIS, R and Linux is an advantage but not mandatory Experience in speaking and writing in English Knowledge of German and Portuguese is an advantage but not mandatory Driving license (class B) Willingness to work under potentially uncomfortable field conditions Team-oriented and strong organizational skills

The Martin Luther University Halle-Wittenberg gives priority to applications from severely disabled candidates with equivalent qualifications. Women are particularly encouraged to apply.

All applications should include the following:

Cover letter in English describing your motivation, research interests and relevant experience Curriculum vitae including names and contact details of two scientific references Digital copy of MSc/Diploma certificates and transcript of records

Kindly send your application in electronic form as a single PDF file, quoting the reference number 5-5672/22-D to Dr. B. Kahnt (E-Mail: belinda.kahnt@zoologie.uni-halle.de). Submission deadline is 27/06/2022. For queries concerning the application process and for project-related questions also contact Dr. B. Kahnt per mail or phone (0049 345 55-26502). The position is offered with reservation of possible budgetary restrictions. Selected candidates will be invited to an online interview.

Belinda Kahnt <belinda-k@gmx.de>

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MPI Cologne PlantAdaptation

PhD position in population genetics and genomics of adaptation in plants.

Position open for a Ph. D. student at the Max Planck Institute for Plant Breeding Research in Cologne to study the population genetics and genomics of plant adaptation to harsh environments. The study system is the perennial plant Arabis alpina, which grows across Europe including at high-latitude sites in Scandinavia. These environments are harsh, with extreme temperatures and short growing seasons followed by continuous snow cover. The student will use population genetics methods and genomic data to model the postglacial colonization history of Scandinavia by A. alpina and identify genomic regions and phenotypes associated with adaptation to high latitudes.

Experience in population genetics, genomics and/or in plant sciences, including plant growth, phenotyping, greenhouse or growth-chamber experiments, and GWAS is beneficial. An aptitude towards bioinformatics, statistics, quantitative biology will be preferred. Curiosity and an interest in learning new topics is essential.

Instructions for the application process can be found here: https://jobportal.uni-koeln.de/ausschreibung/-renderFile/849?propertyName=flyer Any question can be sent by email to fulgione@mpipz.mpg.de. The work language is English. Screening of applications will start immediately and the deadline is the 10th of July 2022. The project is part of a new consortium that links Ecology to Plant Genetics: https://ag-demeaux.botanik.uni-koeln.de/trr341 Expertise from more than 20 labs is combined into a multidisciplinary environment where you will receive highly competitive training in a vibrant research community.

Contact: Andrea Fulgione, Ph.D Group Leader Max Planck Institute for Plant Breeding Research Carl-von-Linnï¿½-Weg 10 50829 Kï¿½ln email: fulgione@mpipz.mpg.de

Andrea Fulgione <fulgione@mpipz.mpg.de>

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Norway SalmonEvolution

Dear All,

Hi, I am looking for a three-year PhD student (fully paid) who has a strong interest in evolution, genomics and bioinformatics, at the Norwegian University of Life Sciences.

Project: The main goal of this project is to reveal the adaptive evolution and functional effect of structural variants in Atlantic salmon. The main tasks are bioinformatic analyses of publicly available genomics and transcriptomics dataset in the view of evolution.

Specific tasks:

* Estimate the effect of genomic structural variants on smoltification, the physiological “metamorphose” from fresh water to seawater in Atlantic salmon. * Compare population-scale genomes of geographically broadly distributed wild Atlantic salmon and farmed Atlantic salmon and identify adaptive genomic evolution. * Extend the evolutionary analysis at the cross-species scale and reveal the deeper evolutionary history of target genes.

For more into and application, please see the page below. https://www.jobbnorge.no/en/available-jobs/job/-228438/phd-scholarship-on-evolutionary-genomics Best, Marie Marie SAITOU, Ph.D. Tenure-Track Principal Investigator, Centre of Integrative Genetics (CIGENE), Faculty of Biosciences, Norwegian University of Life Sciences https://sites.google.com/view/saitou-lab Marie Saito <marie.saitou@nmbu.no>

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UAM Poznan ButterflyEvolutionAndGenomics

We are looking to recruit two PhD students on a research project funded by the Polish Science Foundation (NCN).

One PhD student would focus on fieldwork and laboratory experiments. You would carry out fieldwork and

experiments in India, Kenya, and South Africa, and gather data from collaborators and museums, perform data management, data analysis, and MS writing, and participate in conferences. We are looking for candidates with an MSc in Biology, and demonstrated interest in evolutionary ecology and field studies, preferably related to entomology. Strong interpersonal skills, and a good level of English are also important.

The other PhD student would focus on genomic analyses. You would carry out an experiment (in India), gather butterfly genome samples from collaborators, perform DNA extraction, data management, data analysis (major task!), and MS writing, and participate in conferences. You will receive training from the Centre for Genomic Research in Liverpool and co-advisor Vicencio Oostra (Queen Mary University, London). We are looking for candidates with an MSc in Biology, with a demonstrated interest in evolutionary ecology and molecular genetics, preferably with programming experience (e.g. R, Python). Strong interpersonal skills, and a good level of English are also important.

The Adam Mickiewicz University is among the best institutes in evolutionary biology and ecology in Poland and you would be part of an international team of experts with complementary skills. The doctoral school includes coursework and requires some hours of teaching practice. The stipend of 5000 PLZ per month (Brutto) is comfortable in Poland, and Poznan is a pleasant city.

If interested, please send your CV with a cover letter, a (draft) publication or report, and the names and e-mail addresses of two references to fremol@amu.edu.pl.

Sincerely,

Freerk Molleman https://www.researchgate.net/profile/Freerk-Molleman Ullasa Kodandaramaiah http://www.vanasiri.in/ Vicencio Oostra https://www.vicencio.eu/ Urszula Walczak https://www.researchgate.net/profile/Urszula-Walczak Freerk Molleman <fremol@amu.edu.pl>

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UAM-Poznan ButterflyPhylogeography

We are looking a PhD student on the research project "Success of a widespread butterfly: Local adaptation or phenotypic plasticity?" funded by the National Science Centre (NCN, Poland). The aim of the project is to determine how the widespread butterfly Melanitis leda (L.) (Nymphalidae: Satyrinae) has colonized its range and adapted to varying climates and habitats.

You would gather butterfly genome samples from collaborators, perform DNA extraction, data management, data analysis, and MS writing, and participate in conferences. You could also carry out a laboratory experiment on seasonal phenotypic plasticity (in India). You will receive training in genome analysis from Vicencio Oostra (Queen Mary University, London) and attend training courses.

We are looking for candidates with an MSc in Biology, a demonstrated interest in evolutionary ecology and molecular genetics, and preferably with programming experience (e.g. R, Python). Strong interpersonal skills and a good level of English are also important.

The Adam Mickiewicz University is among the best institutes in evolutionary biology and ecology in Poland and you would be part of an international team of experts with complementary skills. The doctoral school includes coursework and requires some hours of teaching practice. The stipend of 5000 PLZ per month (gross) is comfortable in Poland, and Poznan is a pleasant city.

If interested, please send your CV with a cover letter, a (draft) publication or report, and the names and e-mail addresses of two references to fremol@amu.edu.pl.

Please add a signed consent clause in your application: "I hereby give consent for my personal data included in my application to be processed for the purposes of the recruitment process under the Regulation (EU) 2016/679 of the European Parliament and of the Council of 27 April 2016 on the protection of natural persons with regard to the processing of personal data and on the free movement of such data, and repealing Directive 95/46/EC (General Data Protection Regulation).

Successful candidates will be subject to the recruitment to the Doctoral School of Natural Sciences at the Adam Mickiewicz University.

Sincerely,

Freerk Molleman https://www.researchgate.net/-profile/Freerk-Molleman Ullasa Kodandaramaiah http://www.vanasiri.in/ Vicencio Oostra https://-/www.vicencio.eu/ Urszula Walczak https://-www.researchgate.net/profile/Urszula-Walczak Freerk Molleman <fremol@amu.edu.pl>

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UBern CichlidEvolution

10 June, 2022

PhD in Evolutionary Genomics of Cichlid Fishes (100%)

Supervisors: Dr. Pooja Singh and Prof. Ole Seehausen Starting date: 01-09-2022

We are seeking to fill a PhD position funded for 4 years in the group led by Prof. Ole Seehausen based at the University of Bern (Bern) and the Swiss Federal Institute of Aquatic Sciences (EAWAG) on the shores of Lake Lucerne. We are looking for an enthusiastic young researcher to work towards understanding the evolutionary dynamics of speciation and adaptive radiation in cichlid fishes of Lake Victoria in East Africa by integrating genomics, transcriptomics, morphology and ecology. It is important that the applicant has an inquisitive mind and can shape the research questions based on their interests.

Lake Victoria, the largest tropical lake in the world, hosts a radiation of ~500 endemic species of cichlid fishes that arose in the last ~15,000 years. This radiation represents the fastest known sustained rates of speciation in vertebrates. The cichlid species-flock of Lake Victoria is incredibly diverse phenotypically and ecologically, and thus is an exciting and dynamic system to study the processes underlying speciation, ecological diversification, coexistence and extinction. You will be working alongside group members who are focused on various aspects of the evolution of this radiation such as: ecology, morphology, taxonomy, paleolimnology, and genomics.

Requirements: A background in molecular genetics. Experience with linux and coding in R and/or Python. Experience handling NGS data and bioinformatics. Prior experience in morphometrics is desirable but not required. Ability to work independently but also synergistically with other group members is important. The working language of the group is English, and knowledge of French/German is not required.

Salary: Determined according to University of Bern salary scheme for PhD students.

Diversity and equity are key values of our group, and we especially encourage people of colour, individuals from the Global South and other underrepresented groups in Ecology and Evolution to apply for this position.

Review of applications starts on 31st of July 2022 and continues until the position is filled. Please direct inquiries to Prof. Ole Seehausen (ole.seehausen@unibe.ch) or Dr. Pooja Singh (pooja.singh@unibe.ch)

Applications: One pdf file only, with CV, letter of motivation, transcript of MSc with grades, publication list, and contact details of three referees should be send by email to pooja.singh@iee.unibe.ch. The email subject should be: 'phd cichlid application'.

Switzerland offers an excellent quality of life and is a great springboard for a successful career globally.

pooja.singh@unibe.ch

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UBielefeld Two Evolution

Job listing 1: _____

The Faculty of Biology, Department of Evolutionary Biology, has the following job opening:

Research Position (PhD candidate) in Evolutionary Genetics ID: Wiss22435 - Start: 01.01.2023 - part-time 65 % - salary according to Remuneration level 13 TV-L - fixed-term

The PhD position is part of the "Freigeist" research project "Plasticity-led evolution in the phenotype of a freshwater snail: from the epigenome to genetic change" funded by the Volkswagen-Stiftung. Phenotypic plasticity allows organisms short-term adaptation to environmental changes. The epigenetic mechanisms underlying this ability might influence the genome in the long-term. This hypothesis is intended to be tested, using experimental evolution in the freshwater gastropod Physella acuta which is a simultaneous hermaphrodite. The aim is to track phenotypes, epigenotypes and genotypes over many generations to gain a better understanding regard-

ing the role of plasticity in the evolutionary process.

Your Tasks research tasks (95 %): - experimental work with freshwater gastropods - preparation of epigenetic and genetic libraries - analysis of epigenetic and genetic data - collaboration with other researchers - preparation of contributions for scientific conferences - writing scientific publications for international journals other tasks (5 %): - organizational tasks within the research group

The employment is designed to encourage further academic qualification

We offer - salary according to Remuneration level 13 TV-L - fixed-term (3 years) (?? 2 (1) sentence 1 of the WissZeitVG; in accordance with the provisions of the WissZeitVG and the Agreement on Satisfactory Conditions of Employment, the length of contract may differ in individual cases) - part-time 65 % - internal and external training opportunities - variety of health, consulting and prevention services - reconcilability of family and work - flexible working hours - job ticket for regional public transport network - supplementary company pension - collegial working environment - open and pleasant working atmosphere - exciting, varied tasks

Your Profile

We expect - completed scientific university degree (e. g. Master of Science or equivalent) in evolutionary ecology, genetics, epigenetics, bioinformatics or any related field - experience in experimental work with living animals - proven skills in the preparation of genetic and epigenetic libraries as well as in the bioinformatic analysis of epigenetic (ATAC-Seq) and genetic (ddRAD-Seq, whole-genome sequencing) data or high motivation to rapidly acquire such skills - excellent oral and written English language skills - independent, self-reliant and dedicated style of work - strong organizational and coordination skills - ability to cooperate and work in a team

Preferred experience and skills - experience in preparing scientific publications - experience with R - experience with antipredator phenotypic plasticity - experience in working with gastropods or with the model species Physella acuta

Application Procedure We are looking forward to receiving your application. For full consideration, your application should be received via either email (a single PDF document is required) sent to denis.meuthen@uni-bielefeld.de or post (see postal address). Please mark your application with the identification code: Wiss22435. Please note that the possibility of privacy breaches and unauthorized access by third parties cannot be excluded when communicating via unencrypted e-mail. For Information on the processing of personal data click here.

application deadline: 07.07.2022

Contact Dr. Denis Meuthen denis.meuthen@uni-bielefeld.de

Postal Address Universit??t Bielefeld Faculty of Biology Dr. Denis Meuthen Postfach 10 01 31 33501 Bielefeld

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Job Listing 2: ----

The Faculty of Biology, Department of Evolutionary Biology, has the following job opening:

Research Position (PhD candidate) in Chemical Ecology ID: Wiss22436 - Start: 01.04.2023 - part-time 65 % - salary according to Remuneration level 13 TV-L - fixed-term

The Phd position is part of the “Freigeist” research project “Plasticity-led evolution in the phenotype of a freshwater snail: from the epigenome to genetic change” funded by the Volkswagen-Stiftung. Phenotypic plasticity allows organisms short-term adaptation to environmental changes. Antipredator plasticity, the ability of individuals to plastically respond to the presence of predators with inducible defenses, is one of the best-studied instances of phenotypic plasticity. The freshwater gastropod Physella acuta, a simultaneous hermaphrodite, is a well-established model system for antipredator plasticity. While there are numerous different chemical predator-related cues that can induce defenses in this species, little is known about their properties and their chemical identity. The aim is to study behavioral and morphological responses

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UCologne PolygenicAdaptationPleiotropy

Two PhD positions in theoretical and computational genetics

We are looking for two PhD students for a collaborative project between the groups of Prof. Joachim Krug (Institute for Biological Physics) and Dr. Markus Stetter (Institute for Plant Sciences) on the roles of polygenic adaptation and pleiotropy in the evolution of

plant populations under changing environments. The project combines analytic theory, simulations, and the analysis of large-scale empirical data from different plant species, and is part of the new Collaborative Research Center TRR341 "Plant Ecological Genetics" funded by Deutsche Forschungsgemeinschaft (DFG). The focus of the project is the joint adjustment of multiple phenotypic traits, so-called adaptive trait syndromes, which play an important role in ecological specialization.

PhD1 (Krug lab): The student will develop and study analytical models for the adaptation of single and multiple traits under different environmental scenarios. The mathematical framework is based on Fisher's geometric model (Hwang et al. 2018), which combines an additive genotype-phenotype map with a nonlinear phenotype-fitness map displaying a unique optimal trait combination. The project is suitable for applicants with a background in theoretical population genetics, theoretical physics or mathematics.

PhD2 (Stetter lab): The student will employ forward-in-time simulations to study the adaptation of single and multiple traits under different environmental scenarios. Building up on previous research (Stetter et al 2018) you will apply these models to explicit plant populations and compare them to empirical data. The project is suitable for applicants with a background in (theoretical) population genetics, quantitative genetics or mathematics.

What we expect and what we offer: We are looking for highly motivated individuals with a basic knowledge in population and quantitative genetics, good computational skills, and a degree in biology, physics, mathematics or computer science. Previous experience with population genetic simulations is an asset but not a requirement. Successful candidates will be integrated into the newly established Graduate School in Ecological Genetics (GEcoGen). Salary will be based on 65% of the level E13 of the German public service salary scale (TV-L). The project can start as soon as we have found a suitable candidate.

How to apply: Applications including a CV, degree certificates, a letter of motivation, and names and contact information of two references should be submitted before July 10, 2022 at https://jobportal.uni-koeln.de. The reference number is Wiss2206-01. Please mention project "B6" and the name of the lab (Krug or Stetter) to be associated to the correct project. For further information about the project and the consortium please contact the PI's or consult https://jobportal.uni-koeln.de/-ausschreibung/renderFile/849?propertyName=3Dflyer Joachim Krug (jkrug@uni-koeln.de) Markus Stetter (m.stetter@uni-koeln.de)

Dr. Markus Stetter Group Leader cropevolution.org m.stetter@uni-koeln.de @mgstetter

University of Cologne Institute for Plant Sciences Biozentrum Zï¿½lpicher Str. 47b 50674 Cologne/Germany

Markus Stetter <m.stetter@uni-koeln.de>

UGothenburg QuantitativeGenetics

Apologies for the repeat posting! The original post somehow contained broken links, which have now been corrected, I hope!

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Fully Funded PhD Position on the quantitative genetic paradox of stasis, and its relevance for sustainable pest control. Deadline for applications is July 4, 2022.

Webpage for advertisement, including link for applying, is here: https://-web103.reachmee.com/ext/I005/1035/main?site=-7&validator89bead79bb7258ad55c8d75228e5b7&lang=UK&rmpage=job&rmjob&217 Advertisement in Swedish is here: https://web103.reachmee.com/-ext/I005/1035/main?site=6&lang=-SE&validator038fcf1516ea1184a6da70a891f87da&rmpage=job&rmjob&214 *** Doctoral student in Natural Science, specialising in Biology

Ref PAR 2022/952

The University of Gothenburg tackles society's challenges with diverse knowledge. 56 000 students and 6 600 employees make the university a large and inspiring place to work and study. Strong research and attractive study programmes attract scientists and students from around the world. With new knowledge and new perspectives, the University contributes to a better future.

Doctoral position in Natural Science, specialising in Biology

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 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 Kristineberg Marine Research Station. The current position is placed in the Gothenburg Botanical Garden.

General information about being a doctoral student at the University of Gothenburg can be found on the university's doctoral student pages.

https://medarbetarportalen.gu.se/doktorand/-?languageId=0001&skipSSOCheck=true Project description

The quantitative genetic paradox of stasis, and its relevance for sustainable pest control.

Pathogens provide some of the strongest selection pressures in nature, driving continual dynamic coevolutionary interactions with their hosts. While such strong selection might normally erode genetic variation, genetic variation for resistance to pathogens is typically high, because hosts can usually only resist a subset of pathogens circulating in a population (i.e., pathogens tend to show specificity in their ability to infect hosts). As soon as particular pathogen strains or host genotypes become prevalent, they experience negative frequency-dependent selection that favours other strains or genotypes, and thereby maintains genetic variation in the wider population.

These phenomena are relevant for the sustainable use of biopesticides, a welcome new technology that enlists living organisms in the fight against crop pests. Synthetic chemical pest control can be problematic because it often conflicts with other sustainable development goals by damaging non-target organisms and disrupting natural food webs. Moreover, despite intensive research and development, insects continue to evolve resistance to synthetic pesticides with predictable regularity, eluding even the most ingenious attempts to prevent resistance evolution.

The fact that insect pathogens rarely engender resistance is therefore an alluring aspect on the side of biopesticides. However, unlike natural enemies, industrially produced biopesticides cannot coevolve with pests, and most research and development has focussed intensely on a small number of highly pathogenic strains. We therefore urgently need to find alternative ways to prevent pest resistance to biopesticides.

We have recently proposed an innovative and evolutionarily sustainable approach to pest control that harnesses rather than resists the enormous evolutionary potential of pest populations. It relies on the observation that strong pathogen-induced selection in nature does not always produce evolutionary responses, the so-called "paradox of stasis". The paradox can arise for multiple reasons, including trade-offs between characters or across habitat patches, and it could conceivably allow farmers to vary selection in subtle ways that preserve genetic diversity

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UHelsinki WildlifeBiology

Dear all

LUOVA (the Doctoral Programme in Wildlife Biology) offers doctoral researcher positions for 1-4 years, starting January 1st, 2023. The call for applications is open from August 29 to September 16, 2022 on LUOVA's webpage.

Mia Vehkaoja, PhD Planning officer, Doctoral education Tel: +358 294158150, +358 504722525 Room 2801, Biocenter 3 PO Box 65, Viikinkaari 1 00014 University of Helsinki, Finland FoodHealth - Doctoral programme in Food Chain and Health foodhealth-info@helsinki.fi

Luova - Doctoral programme in Wildlife Biology luova-info@helsinki.fi

MBDP - Doctoral programme in Microbiology and Biotechnology mbdp-office@helsinki.fi

YEB - Doctoral school in Environmental, Food and Biological Sciences yeb-info@helsinki.fi

"Vehkaoja, Mia C" <mia.vehkaoja@helsinki.fi>

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UIllinois FishEvolutionGenomics

UIllinois.FishEvolutionGenomics

The Biodiversity Genomics Lab of the Illinois Natural History Survey (Tan Lab) at the University of Illinois at Urbana-Champaign is seeking to recruit a M.S. or Ph.D. graduate student interested in fish evolution and genomics to start in Fall semester of 2023. The lab's theme is in studying evolution and diversification in fishes by applying phylogenetic, genomic, and comparative methods. Projects in the lab focus on multiple fish systems including catfishes, cypriniforms (carps and minnows), and shark. Projects in the lab can apply a variety of methods including phylogenomics, comparative phylogenetic methods, genomics, bioinformatics, transcriptomics, and morphological studies including museum specimens. Experience with genomics is 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 has a strong collection of faculty in the Department of Evolution, Ecology, and Behavior and the School of Integrative Biology. The student may enroll with 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. Since 1858, the INHS has been the guardian and recorder of the biological resources of Illinois the state's biological memory. With a staff of over 200 scientists and technicians, it is recognized as the premier natural history survey in the nation. The INHS 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 prior to express their interest and communicate about the opportunity. Application deadlines for EEB and PEEC programs are as early as December 1st 2022, applications will be considered after that date.

Thanks,

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

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

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UInnsbruck HeatwaveAdaptation

Graduate Position: UInnsbruck.HeatwaveAdaptation

A PhD student position is available in the group of Aquatic Evolutionary Ecology at the University of Innsbruck (Research Department for Limnology, Mondsee), Austria.

The position is initially for 20 hours per week. Followed by the submission of the dissertation agreement, the working hours will increase to 30 hours per week.

In this position, you will experimentally examine the evolutionary ecology of the responses of the freshwater snail Lymnaea stagnalis to changing environmental conditions under climate change. The specific goals are to reveal (1) how selection imposed by heatwaves operates on snail phenotypes and (2) how snails evolve over generations when periodically challenged by high temperature. The project is linked to other work in the research group of aquatic evolutionary ecology (led by Prof. Seppälä) that focuses on the evolutionary adaptation of organisms to environmental change and natural enemies.

General information about the research group and the institute can be found at https://www.uibk.ac.at/limno/ The Research Department for Limnology is located on the edge of the Alps in the small town of Mondsee (Upper Austria). The nearest city is Salzburg, which offers history, culture and entertainment at a convenient distance from Mondsee.

We invite highly motivated students with a strong background in evolutionary ecology and experimental work to apply for this position. A master's degree (or equivalent) is required. Earlier experience with the study system is not necessary. The project is funded for 4 years.

Earliest starting date: July 1, 2022.

Qualified persons are invited to apply through the Career Portal of the University of Innsbruck (position: BIO-12725) at: https://lfuonline.uibk.ac.at/public/karriereportal.details?asg_id_in=12725 Please include a CV and a written idea for your dissertation project (max. 5 pages; only full applications will be considered). The deadline for applications is June 23, 2022. Top candidates will be interviewed.

The minimum gross salary (stipulated by collective agreement) for 20 hours per week amounts to EUR 1.529 per month (14 times). The salary will be increased to EUR 2.293 once the dissertation agreement has been signed and sent to the Personnel Department. The salary will be higher if you have worked in a similar position earlier. Furthermore, the university has numerous attractive offers (https://www.uibk.ac.at/universitaet/zusatzleistungen/).

For more information considering the project, please contact Prof. Otto Seppälä: otto.seppaelae@uibk.ac.at

"Burggraf, Sonja" <Sonja.Burggraf@uibk.ac.at>

UInnsbruck HeatwaveAdaptation DeadlineExtended

The deadline for the applications was extended until 7th July 2022.

Dear EvolDir Community!

JOB OFFER: Graduate Position: UInnsbruck.HeatwaveAdaptation

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In this position, you will experimentally examine the evolutionary ecology of the responses of the freshwater snail Lymnaea stagnalis to changing environmental conditions under climate change. The specific goals are to reveal (1) how selection imposed by heatwaves operates on snail phenotypes and (2) how snails evolve over generations when periodically challenged by high temperature. The project is linked to other work in the research group of aquatic evolutionary ecology (led by Prof. Seppälä) that focuses on the evolutionary adaptation of organisms to environmental change and natural enemies.

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The minimum gross salary (stipulated by collective agreement) for 20 hours per week amounts to EUR 1.529 per month (14 times). The salary will be increased to EUR 2.293 once the dissertation agreement has been signed and sent to the Personnel Department. The salary will be higher if you have worked in a similar position earlier. Furthermore, the university has numerous attractive offers (https://www.uibk.ac.at/universitaet/zusatzleistungen/).

For more information considering the project, please contact Prof. Otto Seppälä: otto.seppaelae@uibk.ac.at

"Burggraf, Sonja" <Sonja.Burggraf@uibk.ac.at>

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UKonstanz EvoDevo

PhD position in evo-devo

University of Konstanz, Department of Biology, Chair of Zoology and Evolution

Konstanz, Germany.

Earliest starting date:August 1st, 2022 or later

Description The project will investigate shared and divergent genetic programs underlying the formation of scales and fin rays as well as how these elements have diversified across the radiation of teleost fishes. The primary model organism will be direct-developing cichlid fish (Astatotilapia burtoni) but also zebrafish and sturgeon will be used during the course of the project. The ideal candidate has a strong interest in evo-devo and already has experience with the embryology of aquatic vertebrates and standard molecular laboratory methods. The project is funded by the German Research foundation (DFG) and appointment will be for a period of three years at 65% TVL13 according to a standard German PhD contract at the University of Konstanz in Southern Germany. The candidate could already start this summer and we anticipate to fill the position no later than fall 2022.

Qualifications

Required: Master degree in Biological sciences or related

Preferred: Experience in developmental biology/embryology.

Application Instructions

To Apply Submit the following documents to joost.woltering@uni-konstanz.de

- Cover letter - C.V. - Contact information for 2 References

Applications will be considered until the position is filled.

Informal inquiries about the position are encouraged: joost.woltering@uni-konstanz.de

Joost Woltering <joost.woltering@uni-konstanz.de>

ULyon ComparativePhylogeneticMethods

A fully funded PhD position (3 years) on macroevolution ≪ understanding how past environmental changes (such as climatic changes) have influenced the tempo of species phenotypic evolution ≫ is available at the University of Lyon (France) with Julien Clavel, in collaboration with Hélène Morlon at the Biology Institute of the Ecole Normale Supérieure in Paris (France) and Anjali Goswami at the Natural History Museum (UK). The PhD is part of a ANR (French National Research Agency) project "CHANGE" and start is expected in September 2022 (but potential later start is possible). Deadline for application: July 26th 2022.

The successful candidate will work on the development of new phylogenetic comparative tools to assess how species ecologies interact with various environmental changes to modulate phenotypic evolution. These developments will be used on empirical data (including 3D morphological data) to assess the effect of past environmental changes at various evolutionary scales across tetrapod clades. Strong competences in statistics/statistical modelling and coding (e.g., R) are highly recommended.

Candidates are invited to apply by email (to julien.clavel@univ-lyon1.fr). Please attach a single PDF file including a letter of motivation, a C.V. and the names and addresses of two references.

Julien CLAVEL - CR CNRS UMR CNRS 5023 LEHNA Université Claude Bernard Lyon 1 Bât. Forel - 6, rue Raphaël Dubois 69622 Villeurbanne - France julien.clavel@univ-lyon1.fr Tel. : +33 (0)4 72 44 84 24

Julien Clavel <clavel@biologie.ens.fr>

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UMississippi EvolutionTreeFrogs

Ph.D. Positions in Neuroendocrinology

We seek to recruit two highly motivated Ph.D. students with strong interests in neuroendocrinology to work

with Christopher Leary, Lainy Day, and Susan Balenger in the Department of Biology (biology.olemiss.edu) at the University of Mississippi (https://www.olemiss.edu/-). The successful candidates will be directly involved in NSF funded research aimed at understanding how changes in gene dosage associated with polyploidization in the gray treefrog species complex impact neuroendocrine regulation. Students will learn mechanisms of endocrine control, hormone manipulation procedures, radioimmunoassay, immunocytochemistry, and brain anatomy and sectioning. Research results will be integrated with steroid receptor mRNA expression levels from brain regions regulating gonadal and glucocorticoid production and steroid binding protein data. The candidates will be directly involved in extensive field data collection from populations of frogs across the eastern United States and broader impacts initiatives aimed at training high school and undergraduate students. Previous training in neuroendocrinology, radioimmunoassay procedures, immunocytochemistry, brain sectioning, or experience working with amphibians is highly desirable but not required. The candidate will be expected to present their findings at scientific conferences and prepare manuscripts for publication in high-quality peer-reviewed journals.

Required Qualifications: A strong interest in pursuing dissertation research involving amphibians, endocrinology, and neurobiology. Ability to work long hours in the field at night at various locations throughout the eastern U.S. This position is for a term of up to four years as a research assistant during the Spring and Summer and will be supplemented with departmental teaching assistantships during the Fall semester.

Please send inquiries to Christopher Leary (cjleary@olemiss.edu). Proposed Start Date: Fall semester 2022 or Spring 2023.

Susan Balenger, PhD Assistant Professor Dept. of Biology University of Mississippi http://-susanbalenger.weebly.com/ balenger@olemiss.edu

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UMuenster Beetles EvolEpigen

The Institute for Evolution and Biodiversity at the University of Muenster, Germany, invites applications for the position of a

Doctoral Research Associate (PhD position) (salary level TV-L E 13)

We are offering this fixed-term PhD position (salary 65% FTE) within the research group of Prof J Kurtz for 3 years, starting at the earliest possible date.

Your tasks: This research project focuses on the evolution of epigenetic regulation and the means by which epigenetic regulation is achieved in insects shows a remarkable evolutionary flexibility. Even within the group of beetles, some species rely on CpG methylation, while other species have lost the relevant DNA methyltransferases (Dnmt genes). Using beetles as models, our project aims to understand the evolution of epigenetic regulation systems, elucidate the alternative functions of DNA methyltransferases and assess the mutual dependences between DNA methylation and histone modification.

The successful candidate will make use of the combined power of sequencing technology to analyse epigenetic processes (Methyl-Seq, Cut&Tag, RNAseq) and functional validation (RNAi) in up to ten beetle species. The candidate will collaborate intensively with a PhD student in the group of Prof Sonja Prohaska, University of Leipzig, who will contribute expertise in bioinformatics.

The project is part of the Priority Programme "Genomic Basis of Evolutionary Innovations (SPP 2349 GEvol, https://g-evol.com)" funded by the German Research Foundation (DFG). The goal of GEvol is to collaboratively and interdisciplinarily exploit new computational and OMICS methods to reveal the history of genomes in the insect taxon through comparative genomics.

Our expectations: Applicants should be a highly motivated scientists interested in interdisciplinary work. They should have the equivalent of a master's degree in biology, preferentially with a focus on evolution, molecular biology, genomics or a related field. A background, and ideally some experience, in any of the following areas will be useful: molecular laboratory skills, functional genomics and/or practical insect work. Applicants should have excellent communication skills and be able to work both independently and as part of a multidisciplinary

team. The working language of the Institute and the lab is English, and good proficiency in spoken and written English is a requirement.

Advantages for you: The Institute for Evolution and Biodiversity provides a stimulating research environment with a number of scientific groups researching diverse topics centred on different aspects of evolution. As a part of the Priority Programme GEvol (SPP 2349) the project will involve intensive collaboration with consortium partners across Germany.

Information about the University of Muenster, Germany: 45,000 students and 8,000 employees in teaching, research and administration, all working together to shape perspectives for the future ' that is the University of Muenster (WWU). Embedded in the vibrant atmosphere of Muenster with its high standard of living, the University's diverse research profile and attractive study programmes draw students and researchers throughout Germany and from around the world.

The University of Muenster is an equal opportunity employer and is committed to increasing the proportion of women academics. Consequently, we actively encourage applications by women. Female candidates with equivalent qualifications and academic achievements will be preferentially considered within the framework of the legal possibilities. The University of Muenster is committed to employing more staff with disabilities. Candidates with recognised severe disabilities who have equivalent qualifications are given preference in hiring decisions.

Are you interested? Then we look forward to receiving your application, written in English, in one single PDF file, by 30 June 2022. Applications should be sent to Prof Joachim Kurtz at: Joachim.Kurtz@uni-muenster.de. Please note that we cannot consider other file formats. Applications should include 1) a cover letter with a statement of research interests and motivation (max. 1 page), 2) a CV including details about research experience and publications, and 3) contact details for at least two referees.

Prof. Dr. Joachim Kurtz

University of Muenster Institute for Evolution and Biodiversity Animal Evolutionary Ecology Group Huefferstr. 1, 48149 Muenster, Germany

Phone (secretary): + 49 251 83 21638 Phone (direct): + 49 251 83 24661 Fax: + 49 251 83 24668 Room: 109 joachim.kurtz@uni-muenster.de http://www.uni-muenster.de/Evolution/-animalevolecol/kurtz.shtml DFG Research Training Group GRK 2220 EvoPAD https://www.uni-muenster.de/EvoPAD/ DFG SFB-TRR 212 NC3

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UMuenster EvolutionaryGenomics

Dear friends and colleagues,

A new Priority Programme (SPP 2349) funded by German Science Foundation (DFG), starting summer 2022: "Genomic Basis of Evolutionary Innovations (GEvol)" Several open position will be offered in different cities of Germany in the next months. At the moment you can find already three open positions on our webpage. Please check the webpage regularly to keep updated or follow us on twitter, where open positions will be tweeted and retweeted.

https://g-evol.com/opens.html twitter: @SPP_GEvol

Best wishes,

Anna Kersting

Dr. Anna Kersting Westfälische Wilhelms-Universität Münster Institute for Evolution and Biodiversity - Molecular Evolution and Bioinformatics - @SPP_GEvol Hüfferstr. 1 48149 Münster

Handy: + 49 (0) 1577 2630927 a.kersting(at)uni-muenster.de http://bornberglab.org/people/kersting/ https://g-evol.com/members.html Anna Kersting <a.kersting@uni-muenster.de>

(to subscribe/unsubscribe the EvolDir send mail to golding@mcmaster.ca<mailto:golding@mcmaster.ca>)

UMuenster TheoreticalEvolGenetics

Graduate position: UMuenster.TheoreticalEvolGenetics

PhD position in Theoretical Biology at University of Muenster, Germany. Application deadline July 31

Dear evoldir community,

I am looking for a PhD student to work in theoretical evolutionary genetics. The PhD project will explore po-

tential conflict and collaboration between transposons and their Drosophila hosts. To this end the PhD student will model population dynamics of transposable elements both within a genome and across species. This project is also highly interdisciplinary as these theoretical results will be compared to the experimental findings from the collaborative project by Prof. Wilfert (University of Ulm).

The position is funded for three years as part of the project FlyInnovation, a collaborative project together with the empirical group of Prof. Wilfert, working within the DFG-funded Priority Programme GEvol (http://g-evol.com/). The goal of GEvol is toï¿½collaboratively and interdisciplinarily exploit new computational and OMICS methods to reveal the history of genomes in the insect taxon by comparative genomics. The PhD candidate will optimally start in Fall 2022.

Research tasks: - development and analysis of eco-evolutionary models; - numerical implementation (e.g. C++, Julia, Python); - genomic data analysis (obtained from the Wilfert lab and the wider consortium of the GEvol Priority Programme) and comparison to theoretical predictions; - writing of scientific publications; - interdisciplinary collaboration with the Wilfert lab

Our expectations: - university degree in a relevant scientific discipline (e.g. mathematics, physics, bioinformatics, biology); - aspiration and ability to do a doctorate; - programming skills in at least one programming language (e.g. R, Python, Julia, C++); - interest in both biological and mathematical questions; - good proficiency in spoken and written English; - excellent communication skills to work as part of an interdisciplinary collaborative team

Preferred experience and skills: - experience with mathematical modelling and/or experience with genomic data analysis

Please send your application in one single PDF file by July 31 2022. Applications should be sent to p.czuppon@uni-muenster.de and should include 1) a cover letter with a statement of research interests and motivation (max. 1 page), 2) a CV including details about research experience and (if it applies) publications, and 3) contact details for two references.

For full details, please see the official advertisement at: https://www.uni-muenster.de/Rektorat/Stellen/-ausschreibungen/st_20222406_sk13.html Best wishes, Pete Czuppon

p.czuppon@uni-muenster.de

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UQueensland AntibioticResistance

The Engelstaedter Lab at The University of Queensland, Brisbane, Australia, invites applications for a PhD position in microbial evolutionary biology. The successful candidate will work on projects investigating the evolution of antibiotic resistance in bacteria. Specific projects are flexible and will be arrived at in discussion with the candidate. Our previous research includes work on the evolution of natural transformation, integron evolution, fitness landscapes underlying drug resistance evolution and the predictability of evolutionary dynamics. We use a combination of different approaches in our lab, including mathematical modelling, bioinformatics and experimental evolution. For details about our research and recent publications, see our website at http://engelstaedterlab.org/ . We are looking for a highly motivated student with a strong background in evolutionary genetics, bioinformatics, mathematics and/or microbiology. Applicants should possess a Bachelor's degree with Honours, Master of Science, MPhil or equivalent. Good communication skills, scientific curiosity and enthusiasm for research in evolutionary biology are essential.

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

Acceptance for this PhD is contingent on successful application for a PhD scholarship. Several PhD scholarships for domestic and international students are available; options will be discussed during the interview.

Interested applicants should send a cover letter (including a brief outline of their research interests), CV, and academic transcript to j.engelstaedter@uq.edu.au. Informal inquiries are also welcome. Please submit your application before 24 June 2022 to be considered for the international scholarships.

Dr Jan Engelstï¿½dter Associate Professor School of Biological Sciences The University of Queensland Brisbane QLD 4072 Australia

phone: +61 7 336 57959 fax: +61 7 336 51655 http://-engelstaedterlab.org/ j.engelstaedter@uq.edu.au

UtrechtU Two QuantBiodiversity

At Utrecht University (NL) a new research unit (Quantitative Biodiversity Dynamics) has two PhD positions available focussed on the application and development of methods to quantify processes underlying the origination,maintenance and dynamics of biodiversity. Incorporating multiple disciplines from ecology, evolution, mathematics and information sciences to achieve a better understanding of the dynamics of biodiversity. For more information or to apply, please visit https://www.uu.nl/en/organisation/-working-at-utrecht-university/jobs/two-phd-positions-in-dynamics-of-ecology-10-fte . Best,

Edwin.

Dr. E.T. (Edwin) Pos|ScientificDirector Utrecht Botanic Gardens|UtrechtUniversity|Address Gardens:Budapestlaan17, 3584 CD Utrecht|Postal Address: P.O.Box 80162, 3508TD Utrecht, The Netherlands|+31(0)6 3435 6984|+31(0)30 2531826|e.t.pos@uu.nl|botanische.tuinen@uu.nl|uu.nl/botanischetuinen|Follow us onFacebook|Twitter|Instagram

"Pos, E.T. (Edwin)" <E.T.Pos@uu.nl>

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UUlm Two InsectEvolution

—- One of Two —-

Fully funded PhD position in evolutionary genetics of Drosophila-transposon interactions at the University of Ulm, Germany.

Title - FlyInnovation - Are telomere specific retroelements an innovative solution to the end-replication problem?

This PhD project in evolutionary insect genetics studies potential conflict and collaboration between transposons and their Drosophila hosts. The position is funded for three years as part of the project FlyInnovation at the University of Ulm, Germany, and is part of the large interdisciplinary DFG funded Priority Programme GEvol. Eukaryotes face a challenge: they must protect coding DNA from getting shorter with each round of cell replication. Telomeres are a widespread solution to this challenge. These repetitive DNA motifs cap chromosome ends and protect coding DNA. Because telomeres and telomerase (the enzyme that maintains telomeres) are vital to chromosome integrity they are highly evolutionarily conserved. This makes the Diptera unusual ' flies have lost telomeric repeats and telomerase. Among the Diptera, Drosophila are unique: they are the only genus we know of where transposable elements (TEs) are the sole means of maintaining chromosome ends. These TEs act like telomerase, extending telomeric regions by successive transposition. This system has been heralded as a clear-cut example of TE domestication but evidence in support of this idea is lacking. We will unite theoretical and empirical approaches to determine if telomere-specific TEs are an innovative means of preserving chromosome ends in the absence of telomerase, or selfish genetic elements avoiding host-silencing in a genomic safe-site.

This project works alongside a theoretician who will apply methods from ecology to model the evolutionary dynamics of TEs. This studentship will test these models, and link TE abundance and diversity to phenotype to understand if TEs and hosts are cooperating, or in conflict. This will involve large scale laboratory experimentation with multiple insect species, molecular analyses (qPCRs, preparing samples for sequencing) and cytological analyses (oligopainting and Fluorescence in Situ Hybridization). The project will also entail analyzing molecular data and phylogenetic analyses.

This PhD studentship is part of a collaborative project with Dr. Pete Czuppon (University of Mi¿$\frac{1}{2}$nster), working within the DFG funded Priority Programme GEvol. The goal of GEvol is to collaboratively and interdisciplinarily exploit new computational and OMICS methods to reveal the history of genomes in the insect taxon by comparative genomics. At the institute of Evolutionary Ecology and Conservation Genomics, an interactive and international team studies diverse topics in evolutionary ecology, including host-pathogen interactions (Prof. Wilfert), insect evolutionary genetics and metabolomics (Dr. Ruth Archer), conservation genomics (Prof. Sommer) and pollinator ecology (Profs. Ayasse and Tschapka), with the possibility to collaborate with Prof. Niessing (Institute of Pharmaceutical Biotechnology) on FISH analysis.

Applicants will possess a relevant Master degree in evolutionary biology or a related field of study. The successful applicant should have expertise in the fields of evolutionary ecology, genetics or evolutionary genomics. Applicants should ideally have expertise in experimen-

tal quantitative genetics, molecular techniques and/or bioinformatics. Experience in working with live insects would be desirable. The successful applicant will be able to work autonomously but also collaboratively and will have excellent oral and written English language skills.

The position will be based at the University of Ulm, at the Institute of Evolutionary Ecology and Conservation Genomics. Ulm is a delightful historic city on the Danube in Southwestern Germany; it is one hour from the Alps, Lake Constance, Munich and Stuttgart. Additionally, the position includes work in partner labs in Cologne, Freiburg and Hannover.

For further information, please contact Prof. Lena Wilfert (lena.wilfert@uni-ulm.de) or Dr. Ruth Archer (rutharcher0@gmail.com). The closing date is the 27th of June 2022. Applications should include a cover letter describing your motivation and research interest, a CV and digital copy of your MSc/Diploma certificates and transcript of records. The job advert with detailed information on profile and responsibilities, as well as the link to the online application system can be found here (reference 22078) https://stellenangebote.uni-ulm.de/jobposting/-d7f4aa4e8e7ece88e62127477c8d7e4347cfef23 Please note that applications have to be processed online!

Prof. Dr. Lena Wilfert University of Ulm Institute of Evolutionary Ecology and Conservation Genomics Albert-Einstein Allee 11 D-89069 Ulm Germany Tel.: 0049-731-5030615 Fax: 0049-731-5022683

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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

UZurich AppliedEvolutionaryBiology

We are seeking a PhD student to join us (Prof. Anna Lindholm & Dr. Andri Manser) in a research project at the Department of Evolutionary Biology and Environmental Studies at the University of Zurich, Switzerland, assessing the potential of a naturally occurring selfish genetic element (called t haplotype) as a tool to control invasive mouse pests on islands where they harm endemic wildlife. The t haplotype is a supergene in house mice with two seemingly ideal characteristics for pest control. First, males that carry two copies of the gene (t/t homozygotes) are completely sterile. Second, males that carry only one copy of the t (+/t heterozygotes) pass the gene on to 95% of their offspring rather than the 50% expected under Mendelian inheritance (gene drive), allowing the genetic propagation of the sterile t in a population. Preliminary work suggests that sterile t releases could offer a powerful, versatile, and humane tool to eradicate target populations due to a lack of fertile males. The aim of the project is to assess the potential of the sterile t as a pest control tool from a wide range of methodological angles.

What will you be doing?

The applicant will study the impact of sterile males on offspring production in settings of increasing complexity, from a laboratory experiment, to enclosure populations, to releases into a semi-natural population where sterile males have to integrate into a preexisting complex social environment. Additionally, the applicant will have the opportunity to contribute to analysis of relevant large datasets, and/or modelling.

What are we looking for?

You are passionate about evolutionary biology and keen to explore how evolutionary concepts could be applied to solve a major practical problem. You enjoy working with animals as well as designing and implementing experiments to test your ideas. You are highly motivated, collaborative and an excellent communicator, and have a demonstrable desire to learn new skills. Experience with animal experiments, data analysis, and modelling will be viewed as a bonus. You bring a relevant MSc degree or equivalent.

What we offer

The great majority of your time will be spent on research. We offer excellent experimental facilities, great collaborators, and strong support in developing your scientific skills and abilities. Participation in teaching activities, and taking classes, is part of your training. The project has four years of funding, with a generous salary. We provide a highly international largely English speaking environment.

How to apply

Please submit applications as a single pdf file, including a letter of motivation that highlights your interest in and suitability for the project, your CV, and recommendation letters or contact details of 2 references, by email to Dr Anna Lindholm (anna.lindholm@ieu.uzh.ch). Screening of applicants is ongoing and continues until the end of July 2022. Starting date: Autumn 2022 (to

be negotiated)

Prof Anna Lindholm

Department of Evolutionary Biology and Environmental Studies University of Zurich

Winterthurerstrasse 190 8057 Zurich Switzerland

anna.lindholm@ieu.uzh.ch

Jobs

CalicoLifeSci QuantitativeGenetics 37
Canberra PaidFieldAssist AvianEvolution 38
CCharleston 1yr EvolutionaryNeuroscience 38
ClemsonU ResTech DrosophilaToxicogenomics 39
FlindersU EvolutionBehaviour 40
NewMexicoStateU ResAssist ViralEvolution 41
NorthCarolinaStateU GeneticsGenomicsCommunication 41
PennsylvaniaStateU ProjectManager MicrobiomeCenter 42
SGN Frankfurt ScienceCoordinator 43
SGN Frankfurt TeamLeader OceanSpeciesAlliance . 44
StonehillC EcolEvol 45
UEdinburgh StatQuantGeneticist 46
UGeorgia SREL OutreachEducation 46
UGothenburg BotanySystematics 47
UGuelph OutreachCoordinator Biodiversity 47
UMinnesota Curator PlantDiversityEvolution 48
UMississippi 1yr ResAssoc EvolutionGeneticsEcol . 49
UMontpellier GenomicsPlantAdaptation 49
Uppsala Fellowship EvolutionaryBiology 50
UppsalaU Three BioinformaticsGenomics 50
URichmond EvolutionaryGeneticsLabManager 51
VanderbiltU EvolutionaryMicrobiologist 52
VanderbiltU ResAssist Genomics 52
ZhejiangU Evolution 53

CalicoLifeSci QuantitativeGenetics

Title: Scientist, Quantitative Genetics in Model Organisms

Location: Calico Life Sciences in South San Francisco, CA

Who we are: Calico (Calico Life Sciences LLC) is an Alphabet-founded research and development company whose mission is to harness advanced technologies and model systems to increase our understanding of the biology that controls human aging. Calico will use that knowledge to devise interventions that enable people to lead longer and healthier lives.

Position description: Calico seeks an experienced quantitative geneticist who is enthusiastic to perform GWAS-style genetic analyses in model-organism populations. The ideal candidate will have extensive experience with genetic mapping and derivative analyses (GWAS, genetic risk scores, genetic correlations, co-localization, Mendelian randomization, etc.). That background may come from either analysis of human populations or non-human model organisms. She/he/they will be familiar with prominent tools in this field (e.g. BOLT-LMM, LDSC, etc.) and will have a sufficient theoretical foundation to feel comfortable adapting or implementing methods for novel organism populations.

This role exists within a small, cross-functional but data-science-focused team, where this individual will bear primary responsibility for genetic analyses, as well as for the presentation, write-up, and publication of results. The ideal candidate will be comfortable multi-tasking across multiple projects that are unified in their use of quantitative genetics methodology and explore diverse, exciting domains of physiology. She/he/they will also be enthusiastic about working collaboratively with a cadre of highly-skilled quantitative geneticists who are distributed across multiple groups at Calico.

Position requirements: - PhD in Biology or related discipline, with an emphasis on genetics. - A publication record that reflects the successful application of quantitative genetics techniques to solve biological questions. - Either: - Direct experience analyzing human GWAS