

Participant introduction



Abush Zinaw
PhD Student



UiO : Naturhistorisk museum

Project SpeciationClock: How fast does the plant 'speciation clock' tick in the African Sky Islands?



Draba fladnizensis



A ? B
Y

How long it take for new, reproductively isolated species to arise and what factors influence the rate of speciation?



Sex chromosomes, reproductive isolation and speciation in algae



Agnieszka
Lipinska

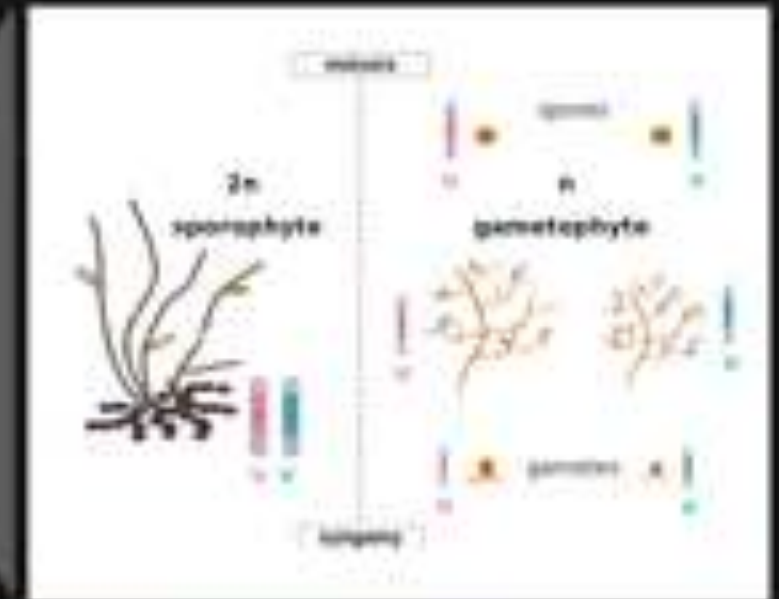
Group Leader

Department of Algal Development and Evolution
Max Planck Institute for Developmental Biology
Tübingen, Germany

alipinska@tuebingen.mpg.de



THE HAPLOID-DIPLOID LIFE CYCLE AND THE UV SEX CHROMOSOME SYSTEM



2n / n

Differential gene expression during the gametophyte and sporophyte generations



Sex chromosomes and evolution of sexual dimorphism in algae



Genetic architecture of gamete differentiation and male-female gamete recognition



The role of UV sex chromosomes in speciation

Albertien van Heerden: MSc student





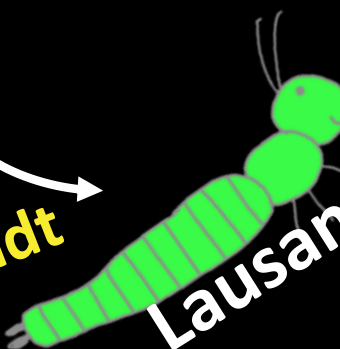
Göttingen



Herrenhäuser



Alexander Brandt
Group Schwander
DEE, UNIL



Lausanne



Cesky Krumlov

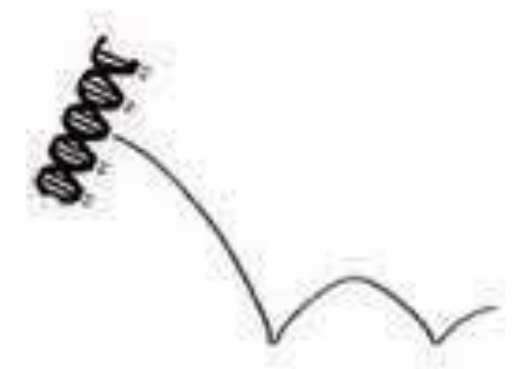


Me (Alex)



Alexander Sang-Jae Suh

서상재 徐商在



Mobile DNA (transposable elements, endogenous viruses, weird chromosomes) variation between *cells/populations/species*



What is the genomic basis for rapid convergent evolution?

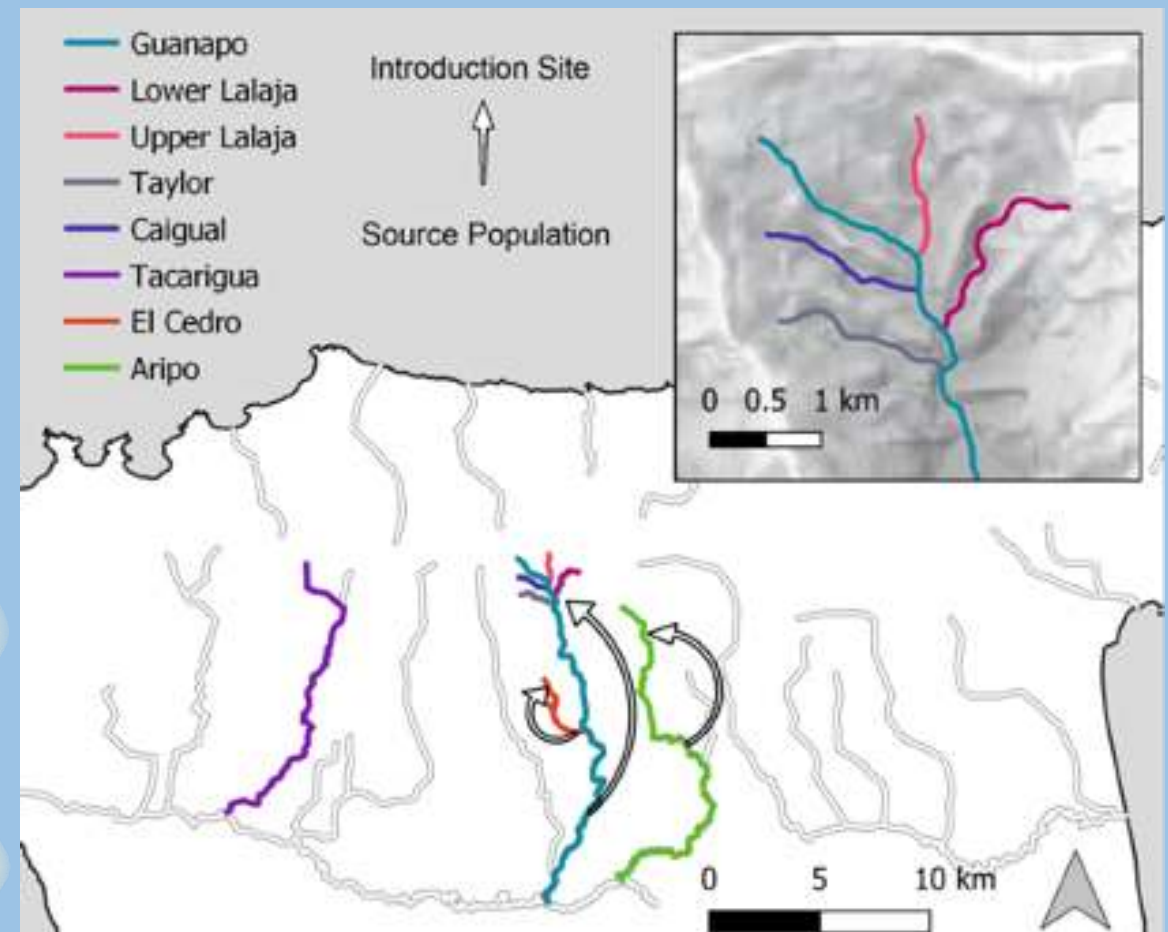
Wild guppies disperse via the coast to rivers with many predators. Then they migrate upstream to tributaries with few predators.

Low predation guppies evolve a low predation phenotype. (colourful males, life-history traits, schooling behaviours...)

Experimental translocations have shown that this is rapid and repeatable, and now we are able to sequence these populations.

Data:

- 7 natural low and high predation sites
- 3 introduction experiments
 - Two established around 1980 with differing demographic histories
 - One conducted in 2008-9 with four replicate pops from the same source pop, sampled in 2013 and 2018 for temporal analysis.



Ali Hudson

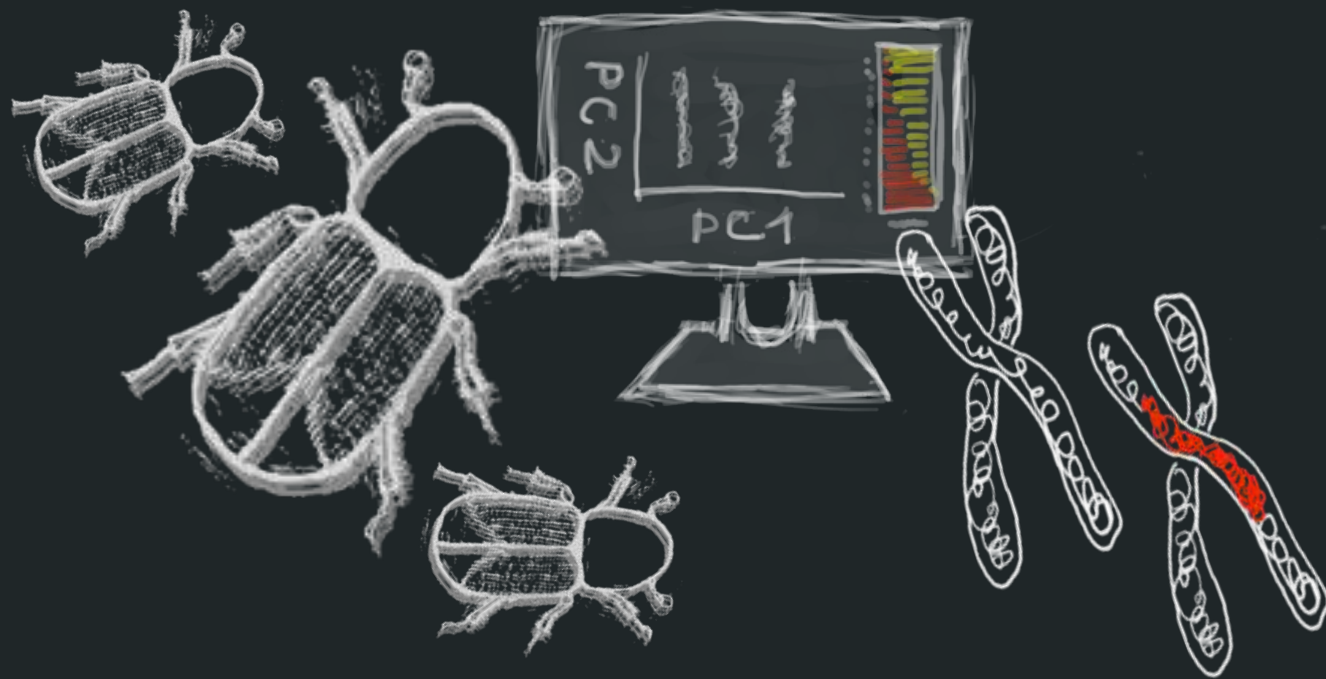
1st year PhD, University of Exeter, UK

Amanda Lazdina



- I have recently completed a master's in Biology at University of Latvia;
- Research Institute of Food Safety, Animal Health and Environment "BIOR";
- Molecular Geneticist in the Inland Water Department.
- Until now, there has not been enough effort in the genetic studies of fish populations in Latvia. Right now, I am researching the genetic diversity of salmon in Latvian rivers.
- Attendance of this workshop would greatly facilitate the fulfillment of my work objectives and also give me valuable knowledge and skills that could be used in planning and implementation of future projects involving genetic studies in Latvian fish populations.





Genomics of population outbreaks

Neutral and adaptive evolution in spruce bark beetle

Mykhailenko Anastasiia

Jagiellonian University, Institute of Environmental Sciences

anst.mykhailenko@gmail.com



ask me about soil!

Population genomics of the blackcap

The remix

SNPs

ASE

TEs



International Max Planck
Research School
for Evolutionary Biology

Andrea Bours
MPRG Behavioural Genomics
(advisor Prof Dr M. Liedvogel)

Max Planck Institute for
Evolutionary Biology



- How organisms respond and adapt to environmental change?
- Genomic basis and environmental drivers of adaptation

genomics | bioinformatics | ecological modelling | conservation



Atlantic herring
(*Clupea harengus*)



Atlantic horse mackerel
(*Trachurus trachurus*)

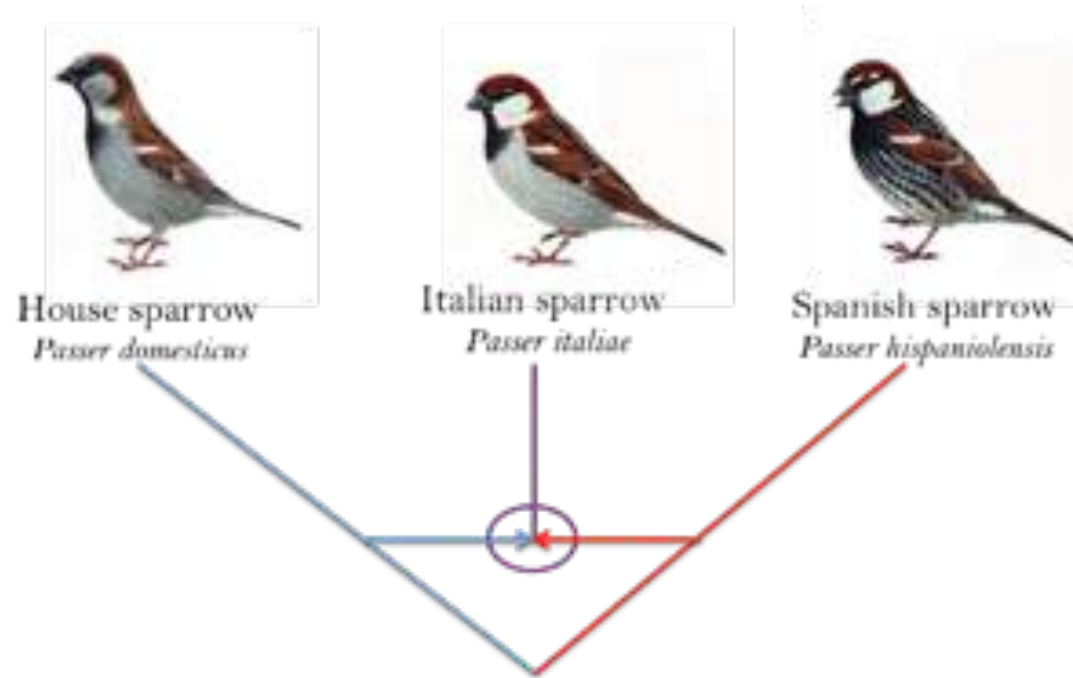


Bean beetles
(*Acanthoscelides obtectus*)



Adaptive potential of a hybrid species

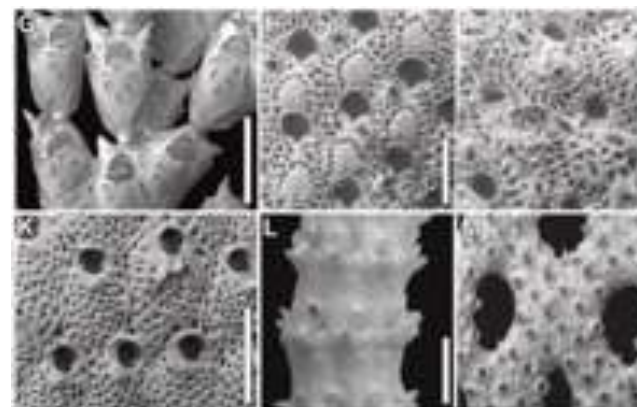
Ancient DNA viking cod



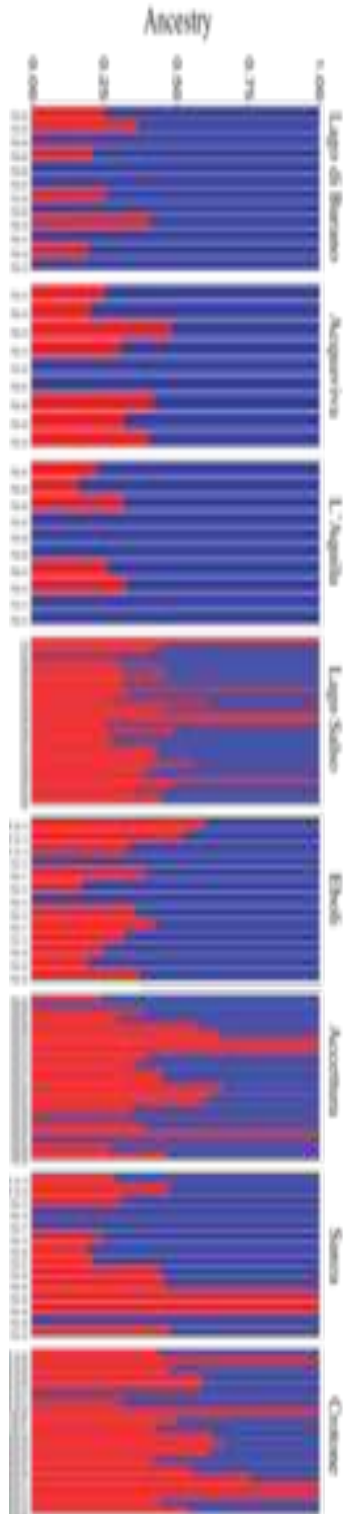
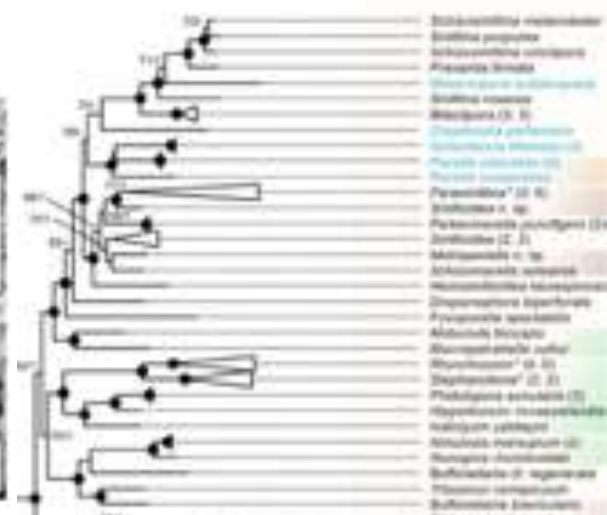
Gadus morhua



Phylogenomics in Bryozoa



Orr et al., 2022 Science advances





Annabelle de Vries

BSc Biology – Leiden University, Netherlands

MSc Biology: Evolution, Biodiversity & Conservation – Leiden University, Netherlands

Research Assistant, Palm seed evolution – Royal Botanic Gardens Kew, UK

PhD (3rd year) – Warwick University & Natural History Museum London, UK

Oceanic island museomics: human impact and the natural laboratory paradigm

Human impact brought the genus *Trochetiopsis* almost to extinction

Comparing ancient DNA to the modern genome

- Observing the change in genetic diversity over the last 320 years
- Explore how herbarium specimens can help us understand evolution of island plant groups affected by human impact



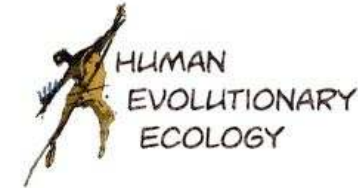
Barbara Rocha Venancio Meyer-Sand



Cecilia Padilla-Iglesias



University of
Zurich^{UZH}



- PhD student at Evolutionary Ecology Group, **UZH**

Ecology

- Climate
- Physical landscape

Population dynamics

- Demography
- Mobility
- Connectivity

Human evolution

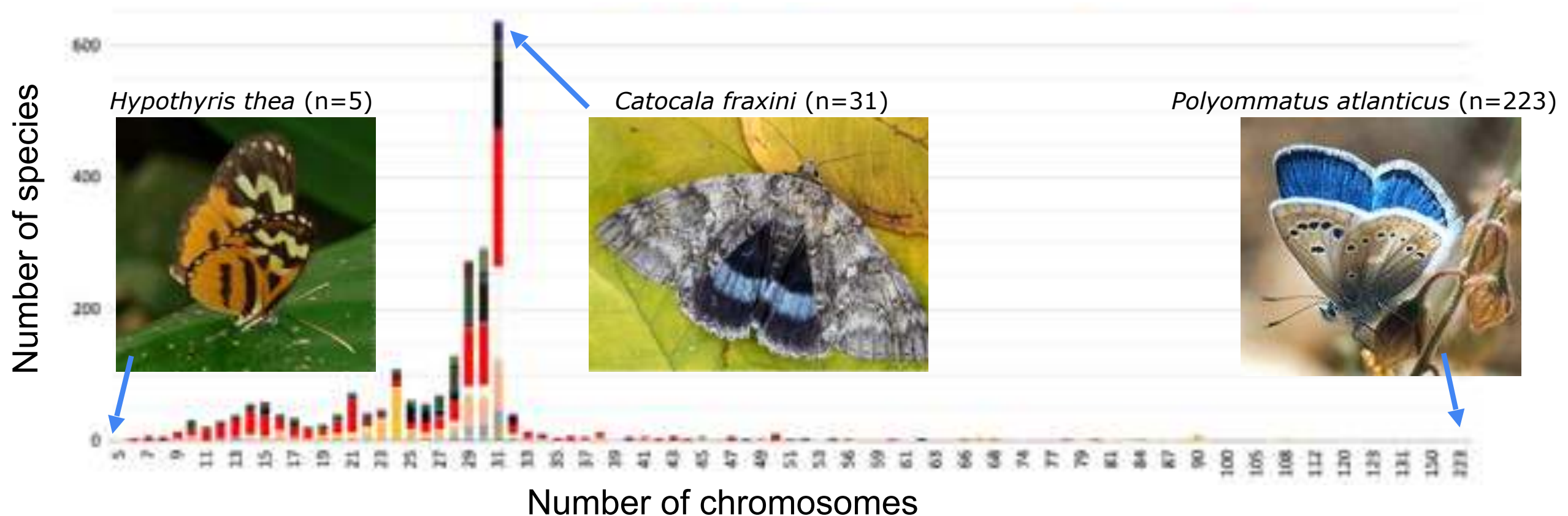
- Cultural diversity
- Genetic diversity

- Contemporary **hunter-gatherer** populations from Africa
- Computational **modelling, bioinformatics**, ethnographic **fieldwork** in Republic of Congo



Image courtesy from Paulo Sayeg

Chromosome evolution in the Lepidoptera

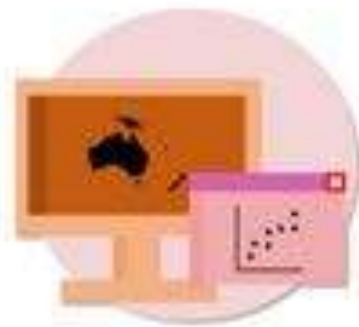
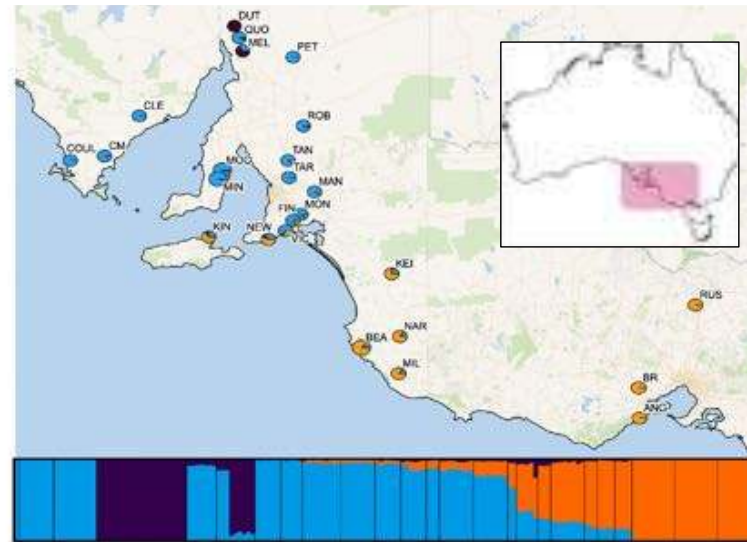


Charlotte Wright

@CharJWright 

Blaxter Lab, Wellcome Sanger Institute





Colette Blyth

Project Coordinator – DivSeek International
Regional Hub for Australasia

PostDoc – Environment Institute, University of
Adelaide



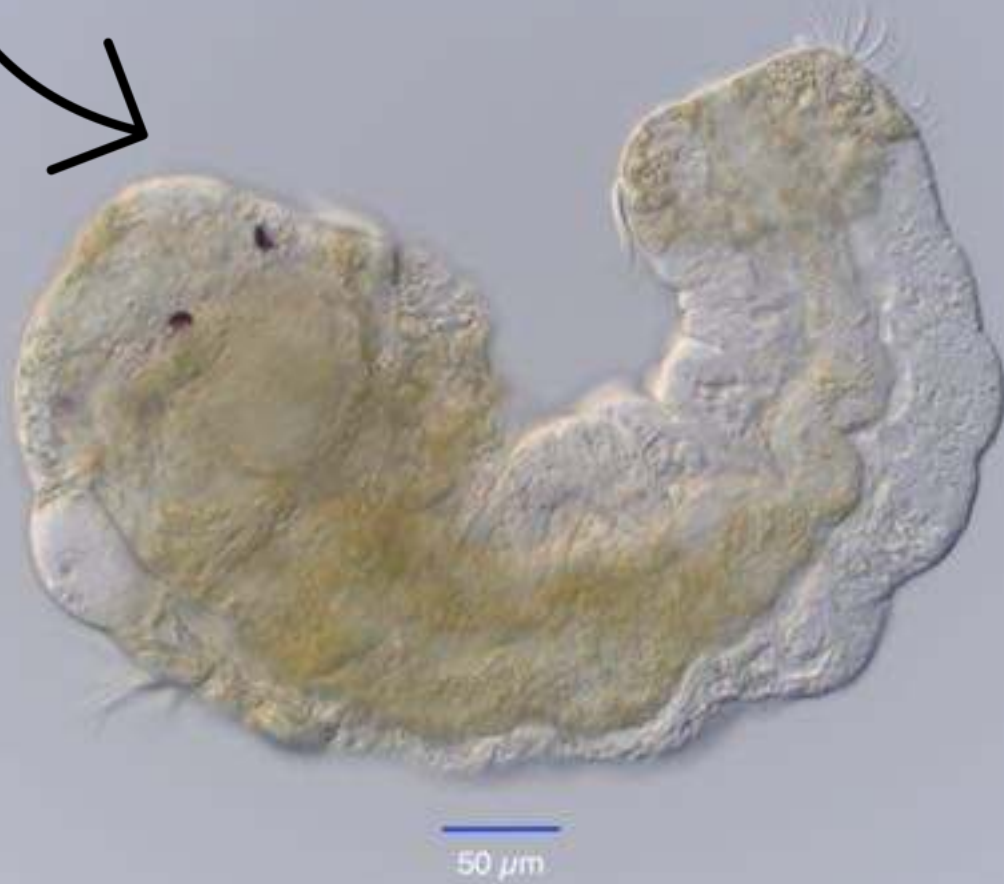
- Seed sourcing for restoration
- Conservation genomics of threatened plant species
- Stocktake of Australasian plant genetic resources

lecithotrophic
female

Conor Gilligan
New York University
Rockman Lab

planktotrophic
female

Streblospio benedicti has a heritable
intraspecific life-history dimorphism





Daniela Souza



Phd candidate
University of Basel
Salzburgerlab

Flounders forensic ID
and conservation
genetics

2014

2018

RAD and amplicon
seq pipeline

2021

Present

Flounders
Complete mitochondrial
phylogenetic analysis

Phd candidate
How genetic diversity
is determined
in cichlid fishes



Dr Darren O'Connell

Postdoc in University
College Dublin

 darren.oconnell@ucd.ie

 @Dar_OConnell

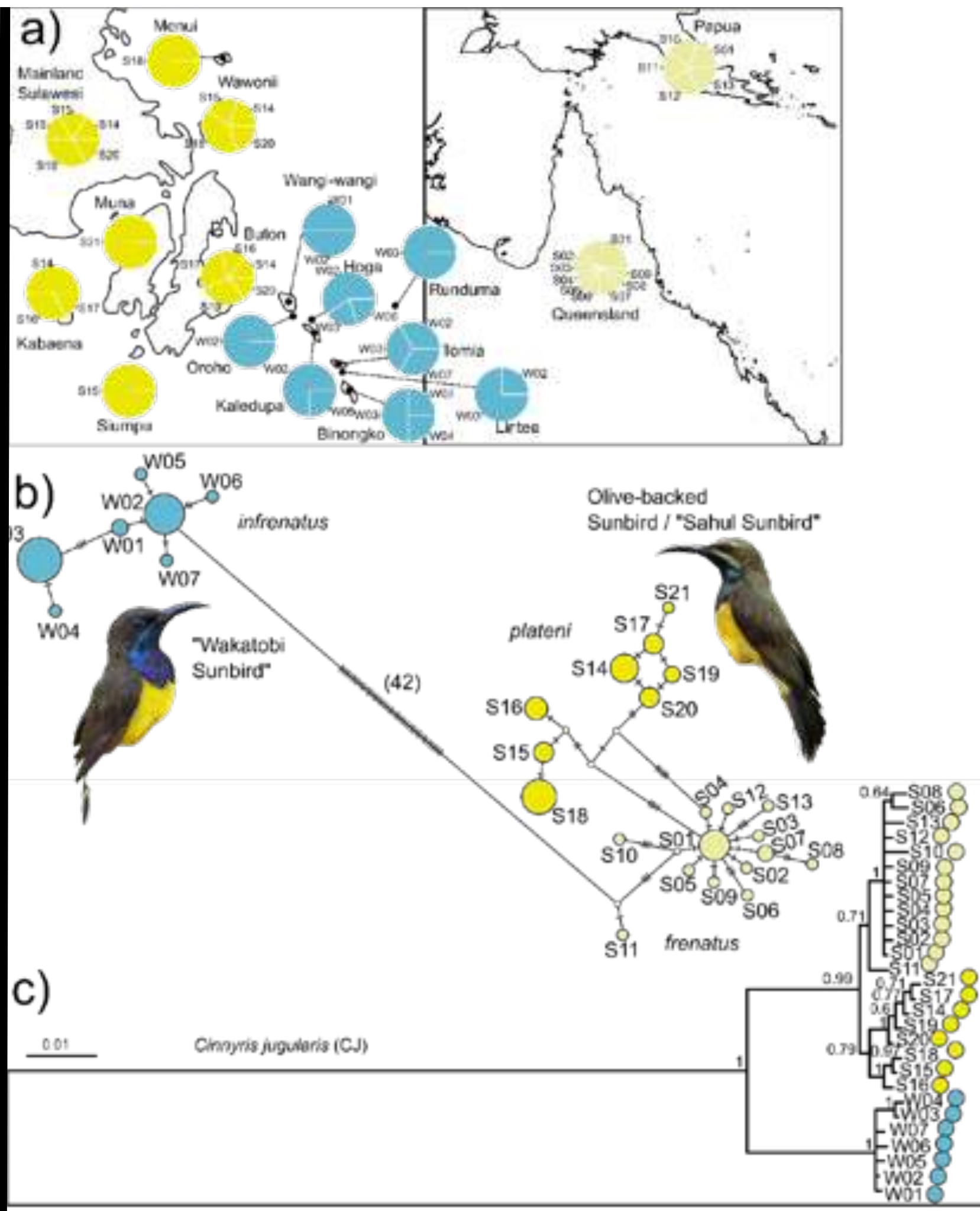
Primarily work with birds
and bees

Interests:

Speciation

Biogeography

Comparative genomics



Derek Setter

Email: derek.setter@ed.ac.uk
Twitter: [@derek_setter](https://twitter.com/derek_setter)

BSc In Genetics



KU THE UNIVERSITY OF
KANSAS

PhD in Mathematics



universität
wien

Postdoc with Konrad Lohse



THE UNIVERSITY
of EDINBURGH

Population genetic theory and inference

VolcanoFinder: Genomic scans for adaptive
introgression

Derek Setter^{1,2,3}, Sylvain Mousset¹, Xiaoheng Cheng⁴, Rasmus Nielsen⁵,
Michael DeGiorgio^{6†}, Joachim Hermisson^{1,2,7†}

Estimating the rates of crossover and gene conversion
from individual genomes

heRho

Derek Setter^{*,1,2}, Sam Ebdon^{*,1}, Ben Jackson^{*} and Konrad Lohse^{*}
^{*}Institute of Evolutionary Biology, University of Edinburgh, Edinburgh, EH9 3FL, UK

The Origin of Hexaploid Bread Wheat

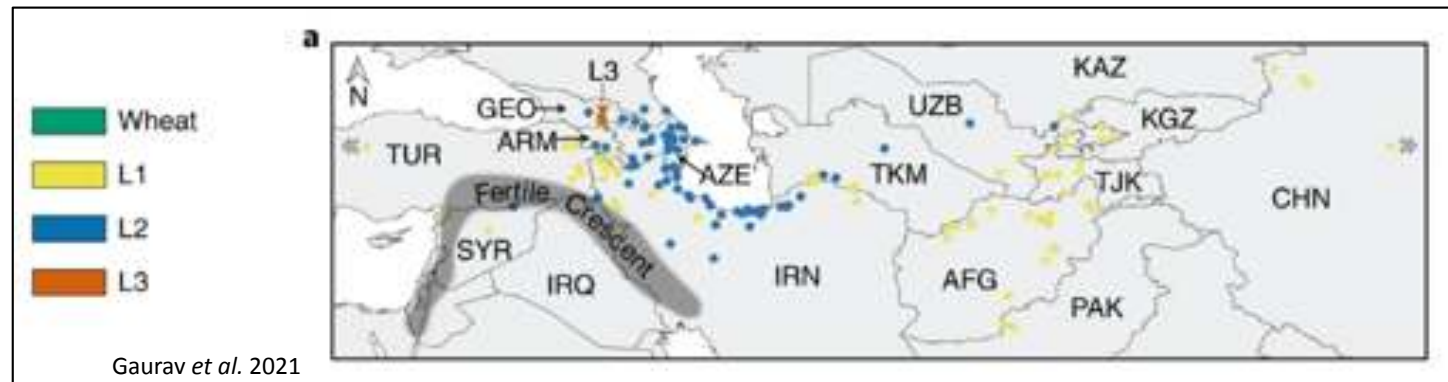
Emile Cavalet-Giorsa



How many times?

Where?

Who?



Prof. Simon Krattinger Group

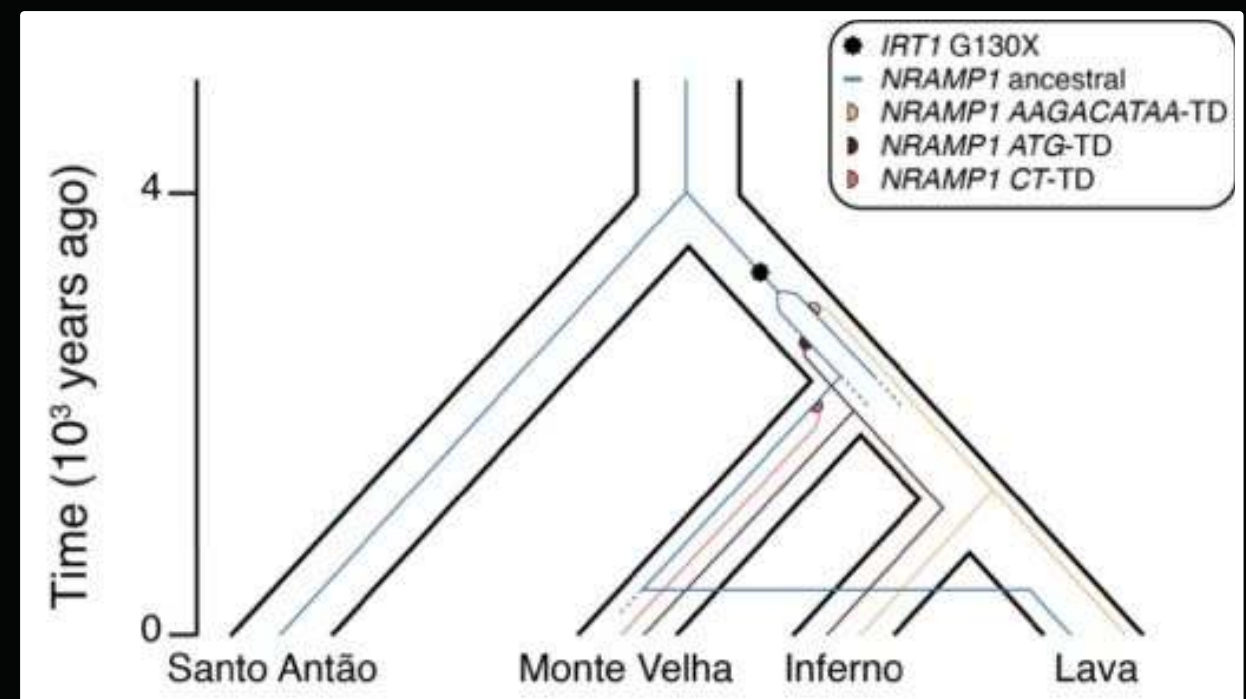


Emmanuel Tergemina
Angela Hancock's group
Max Planck Institute for Plant Breeding Research
Cologne, Germany



 @ETergemina

How do plants colonize challenging soil environments?



[10.1126/sciadv.abm9385](https://doi.org/10.1126/sciadv.abm9385)



Emiliano Trucchi

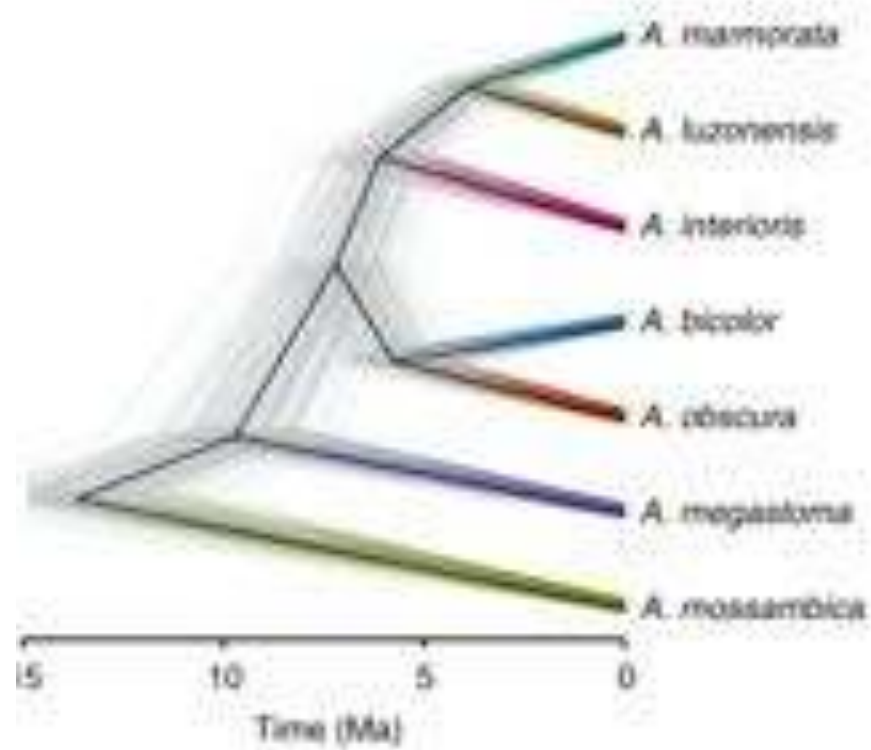
Studying demographic and adaptive processes in natural populations of (mostly) non-model species



ENDEMIXIT
Genomic susceptibility
to extinction of five
Italian endemic species

Keywords

Population genetics, Molecular Ecology, Genomics,
Bioinformatics, Conservation biology



Eva Paulus

University of Salzburg,
Austria



GENOMICS OF SUCCESSFUL LESSEPSIAN ALIEN FISHES COLONISING THE MEDITERRANEAN SEA

Genomic traits of a potential
invasive population

Impact of the invasive process on
genetic variability

Methods:

Genomic and transcriptomic data

Simulations of population dynamics



Francesco Giannelli, PhD student
Supervisor: Emiliano Trucchi - Emanuela Fanelli
Genomics Lab - Dept of Life and Environmental Sciences
Polytechnic University of Marche, Italy



UNIVERSITÀ
POLITECNICA
DELLE MARCHE

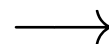
- I am teaching the `msprime/tskit/tsinfer` sessions next Thursday.
- I am a `tskit` developer, with a particular focus on computational models for identity-by-descent, local ancestry and other haplotype-based information.

Email: `g.tsambos@gmail.com`

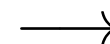
Twitter: GeorgiaTsambos



Stephen Leslie
Damjan Vukcevic



Peter Ralph
Andy Kern

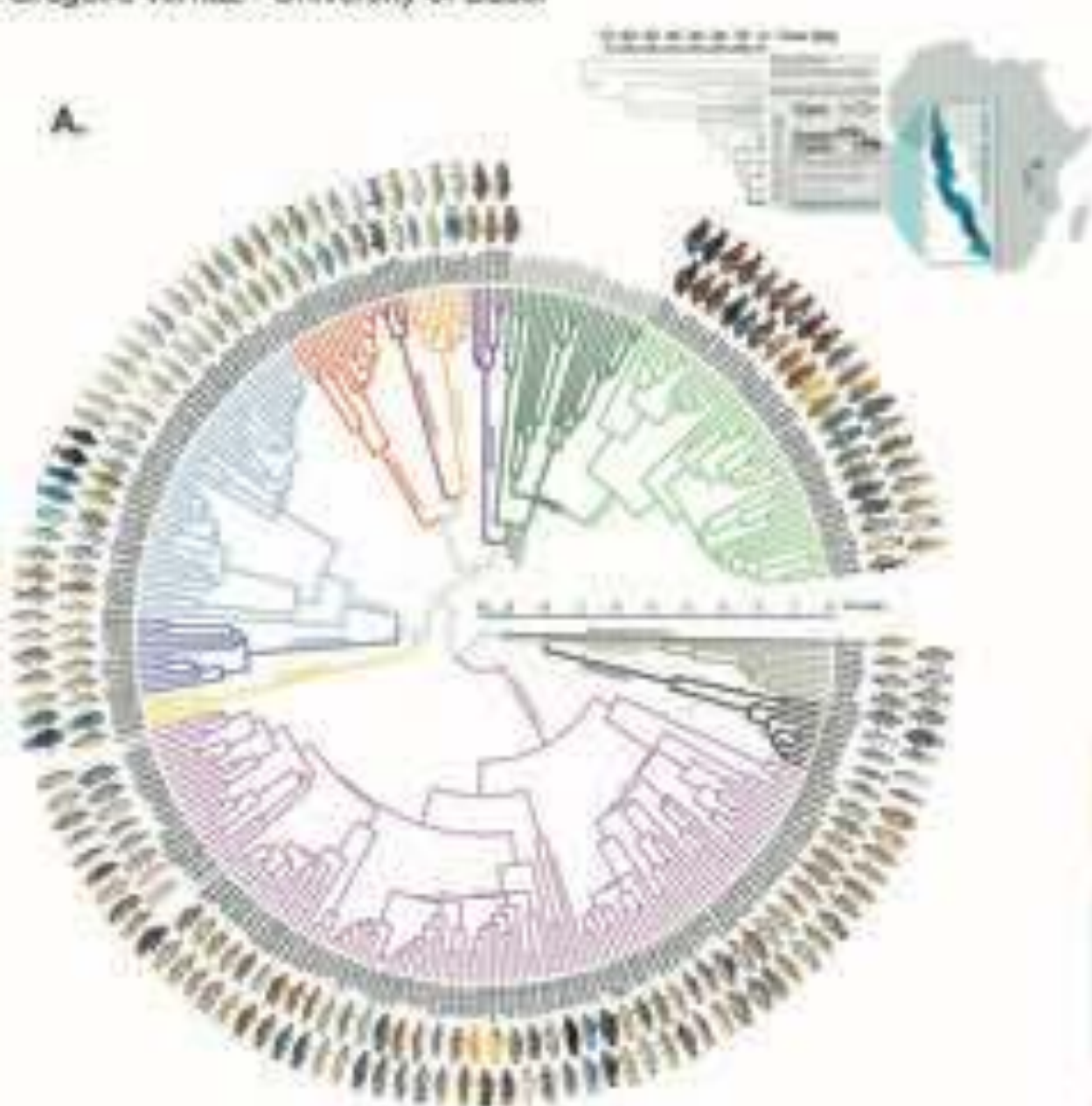


Kelley Harris

The Mobilome of the Lake - the role of transposable elements dynamics during a massive vertebrate radiation

The case of Lake Tanganyika cichlids

Grégoire Vernaz - University of Basel



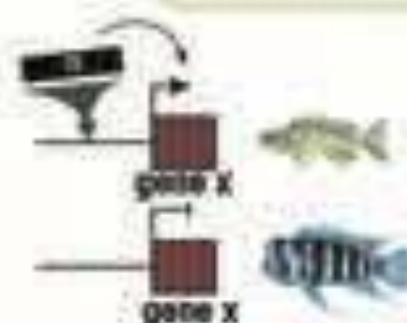
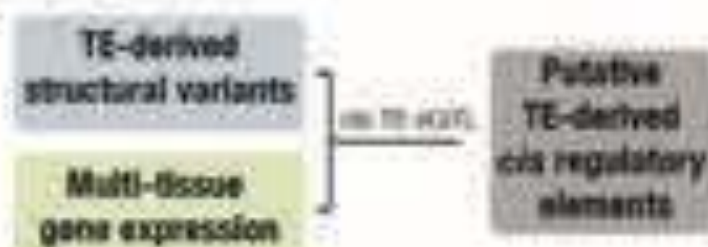
B.



C.



D.



Project

- TEs might represent major actors of phenotypic divergence, generating functional structural variants and epigenetic variation, in particular during development (PhD)

Methods

- Long Read PacBio Genomes of one representative species across LT radiation (comparative TE dynamics)
- Multi-tissue RNAseq (adult and embryonic; comparative transcriptomics)
- Comparative approach: cisTE candidates, and in vivo experimentation (CRISPR)

Goal

- Population genomics - analytical and conceptual approach - international expertise



Universität
Basel

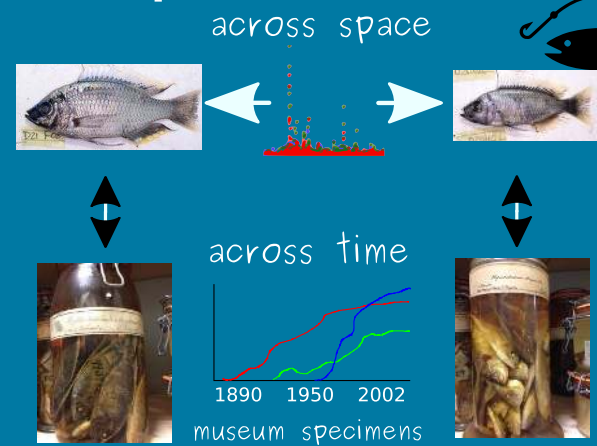
Rapid adaptation and diversification

Hannes Svardal

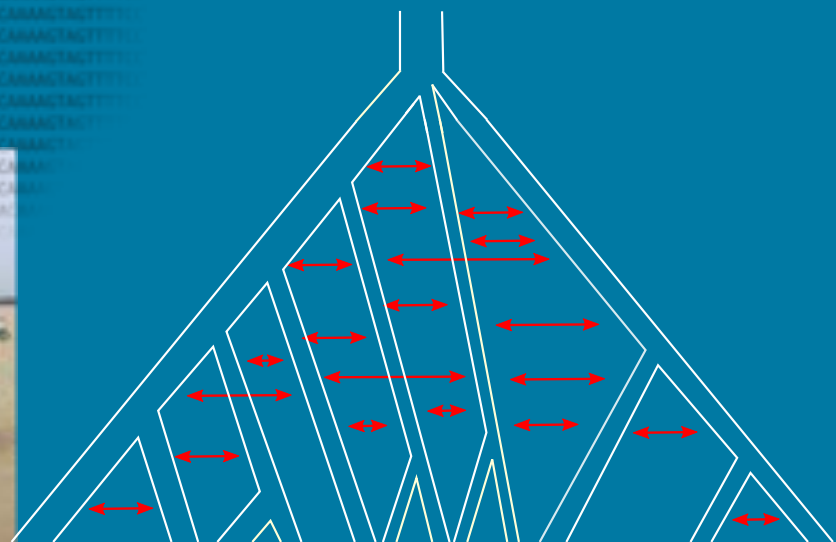
hannes.svardal@uantwerpen.be



Adaptation to fishing

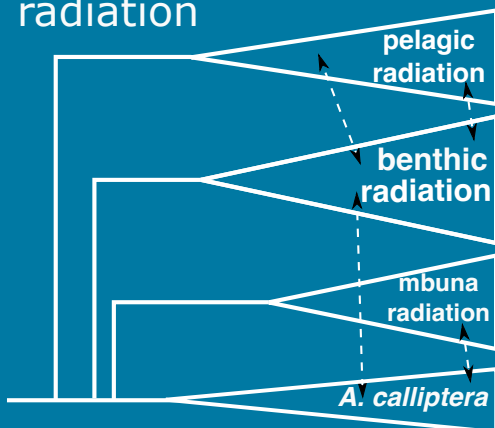


Role of gene flow



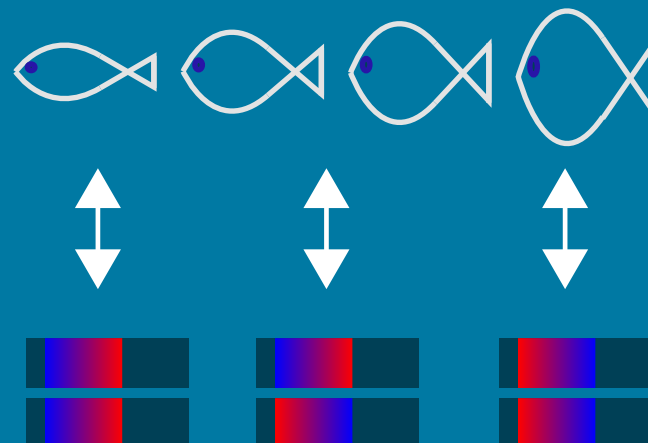
Role of genomic inversions in adaptive diversification

Malawi cichlid adaptive radiation



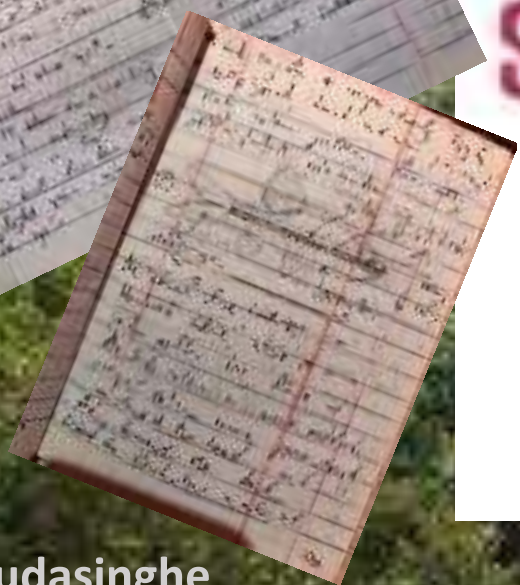
Cross 1

Cross 2



Looking for a postdoc/PhD!

Computational genomics

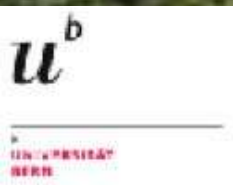


MINIATURIZATION
PHYLOGENETICS
HERPETOLOGY **SYSTEMATICS**
SPECIATION BIOGEOGRAPHY POPULATION GENETICS
EVOLUTIONARY BIOLOGY
GENOMICS ICHTHYOLOGY
CYPRINIFORMES **TAXONOMY**
BIODIVERSITY CONSERVATION

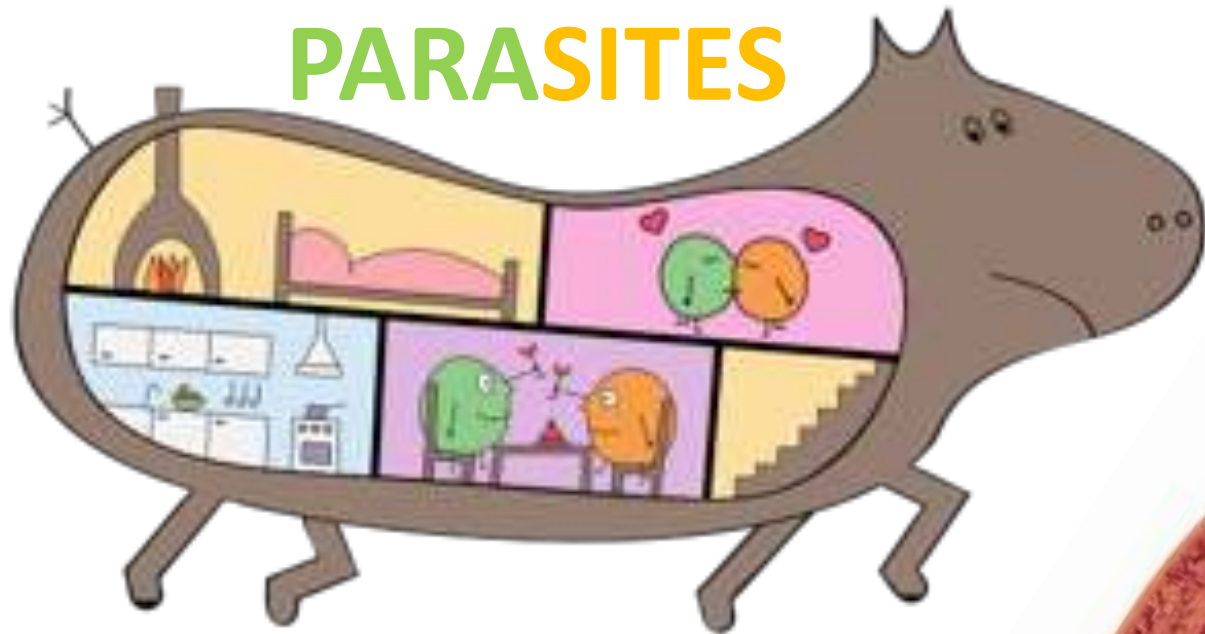


Hiranya Sudasinghe

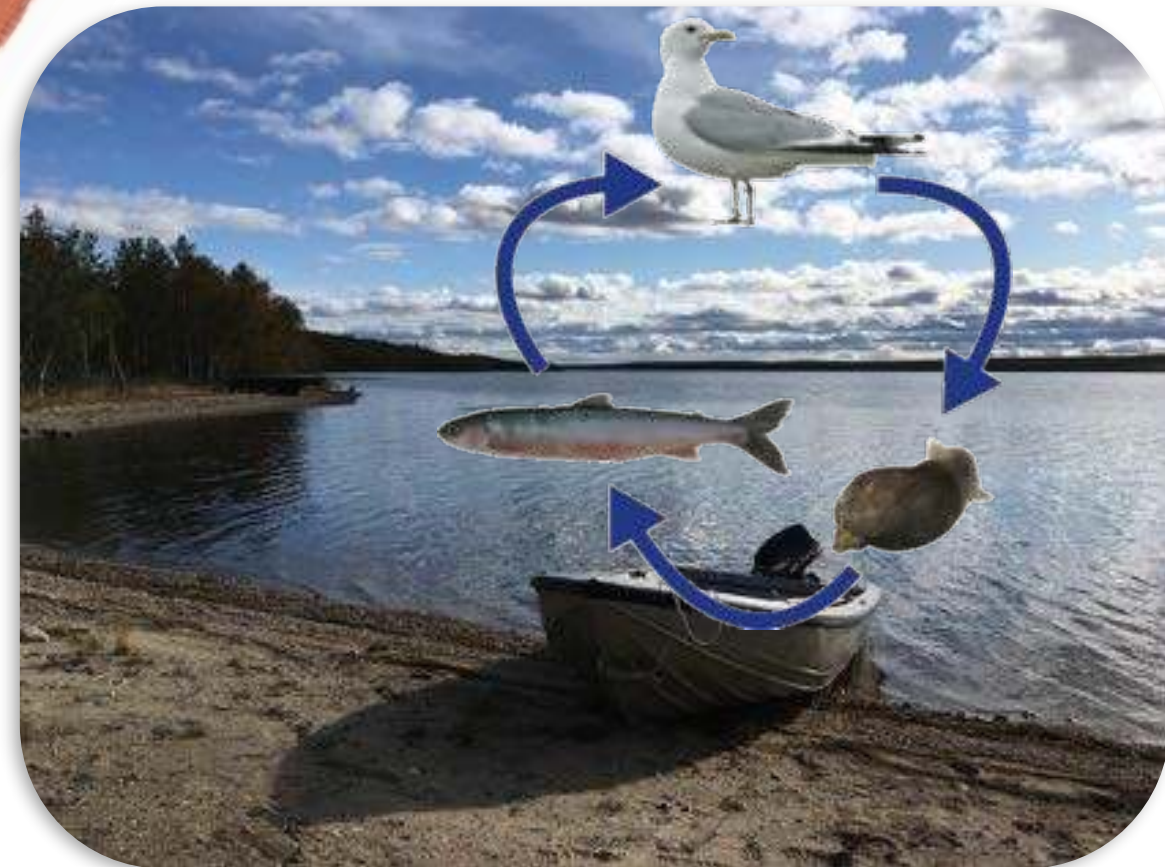
PhD student, Evolutionary Ecology, Institute of Ecology and Evolution, University of Bern, Switzerland & Naturhistorisches Museum Bern, Switzerland



PARASITES



Isabel BLASCO COSTA
Natural History Museum
of Geneva, CH



Jack Harper

2nd year BBSRC PhD student at the
University of Nottingham, UK

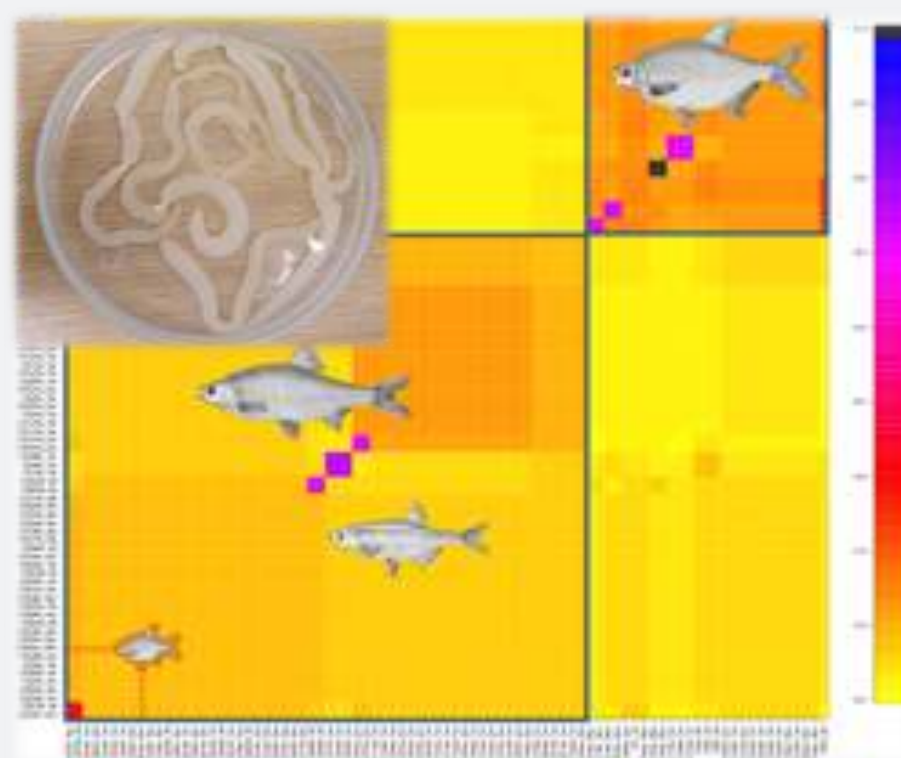
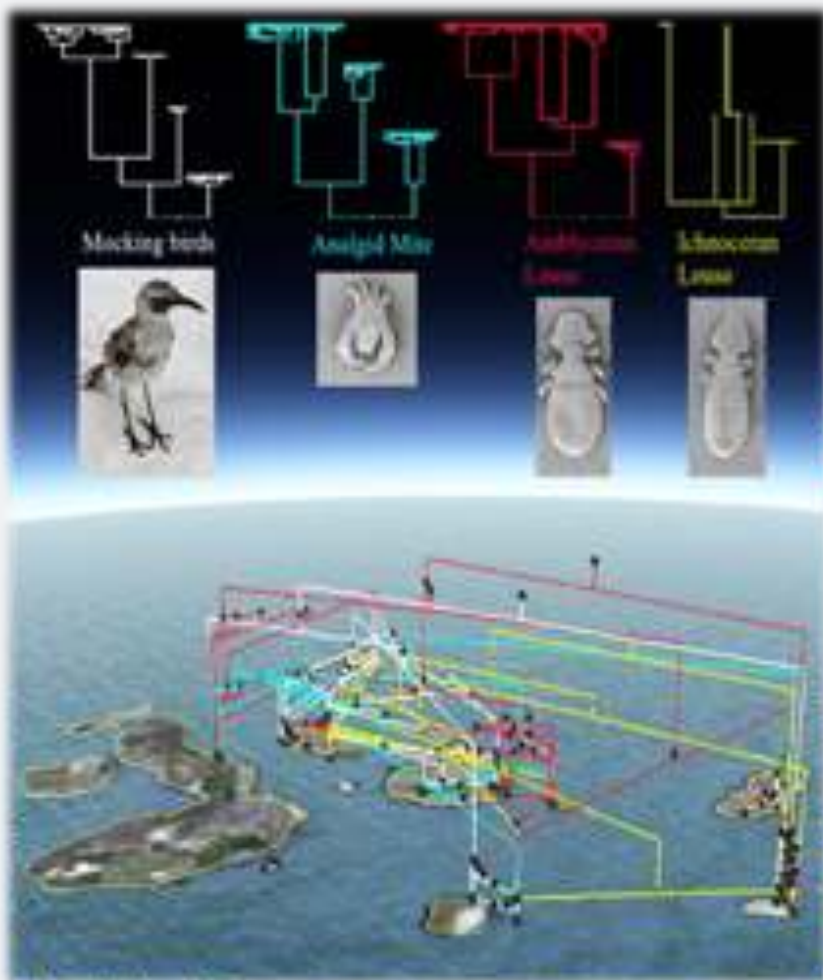
Current working title: Using biological invasions to
understand rapid adaptation to new environments: a
genomic reconstruction of the house sparrow global
spread



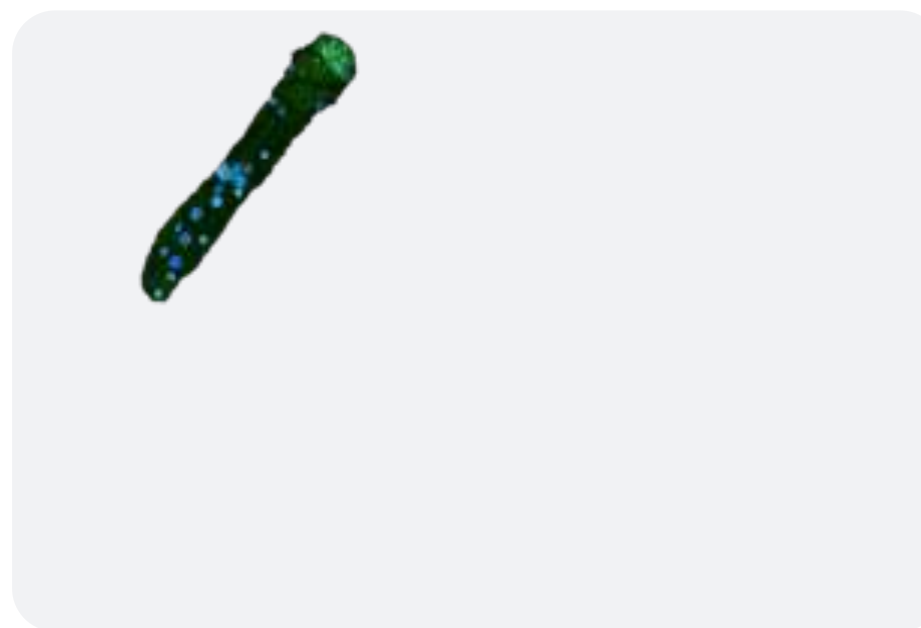
University of
Nottingham
UK | CHINA | MALAYSIA



Biotechnology and
Biological Sciences
Research Council



Population genetics/omics
of
host-parasite co-evolution



Who? Jeronimo Cid



Undergraduate in forestry engineering, U. P. Madrid.
MSc in Ecology, Evolution and Conservation, Imperial College.
PhD in Evolutionary Biology, Bangor University and Kew Gardens.

What?

Interested in Evolutionary and Biogeography of [plants](#).

Project on the evolution of the date palm's wild relatives (*Phoenix* sp.) and their adaptations to drought conditions.

Why?

Understanding how palms adapted to a wide range of arid conditions could help us predict which plants will adapt to climate change, and select adequate varieties for crop improvement.

How?

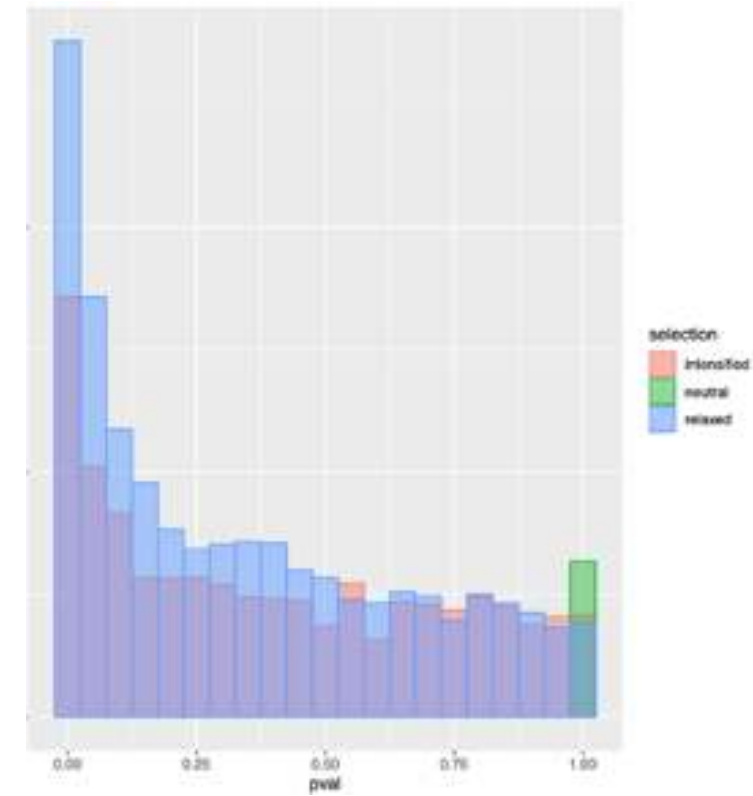
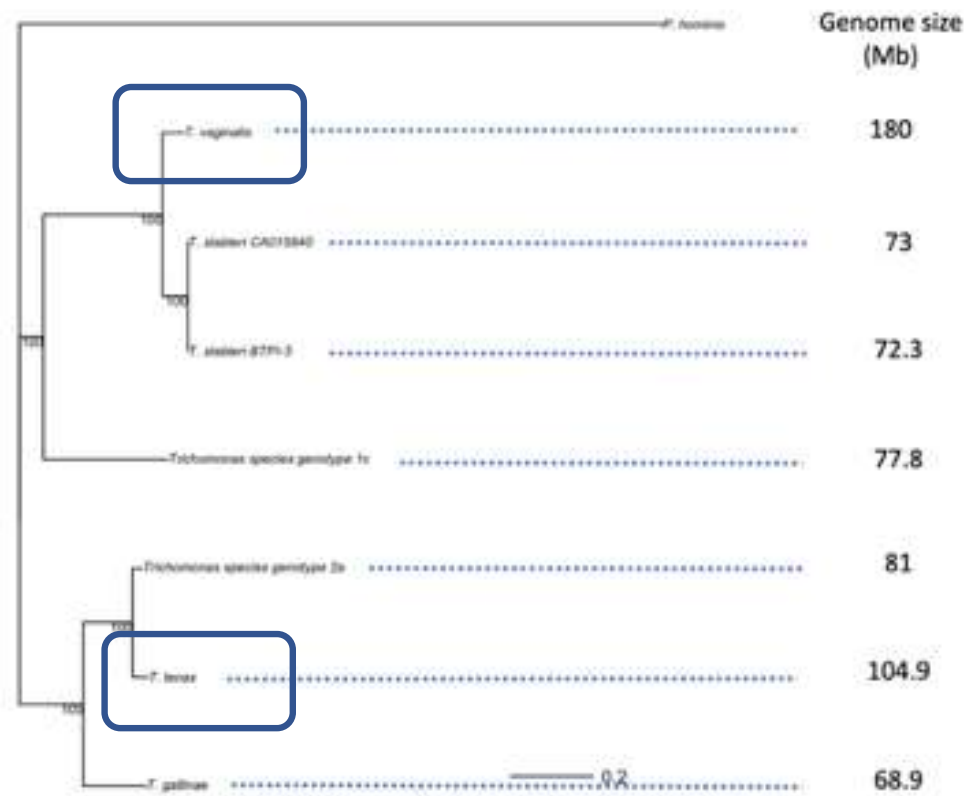
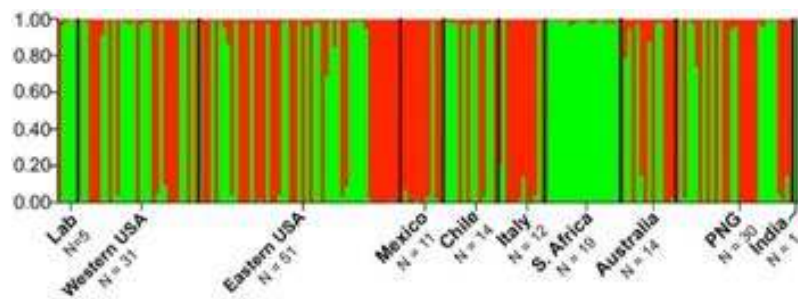
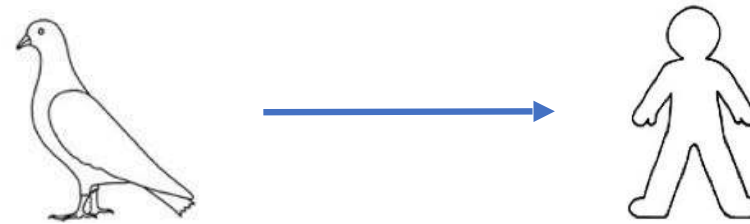
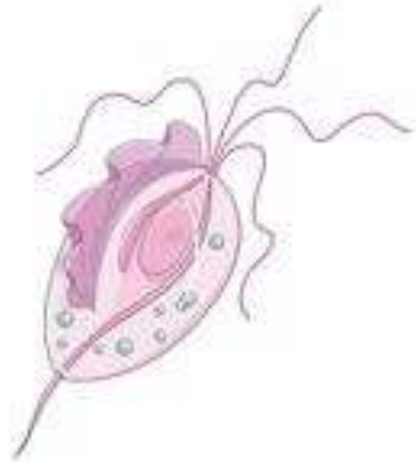
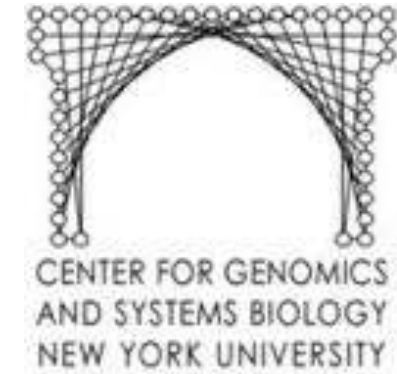
Bioinformatic pipelines including phylogenetics and population genetics, and spatially explicit modelling.





Trichomonas vaginalis

Jordan Orosco
Jane Carlton Lab



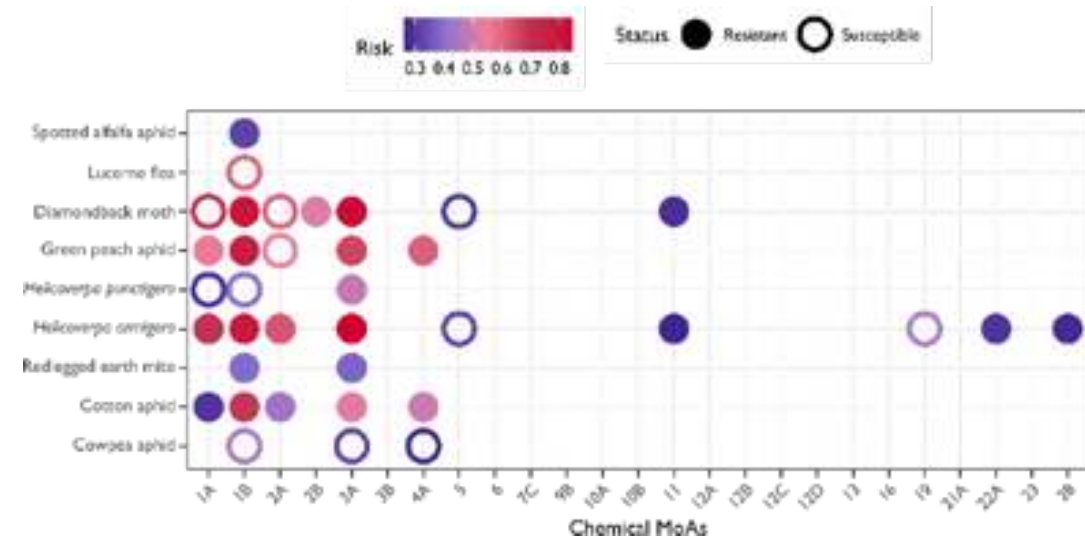
Joshua Thia



@joshua_thia



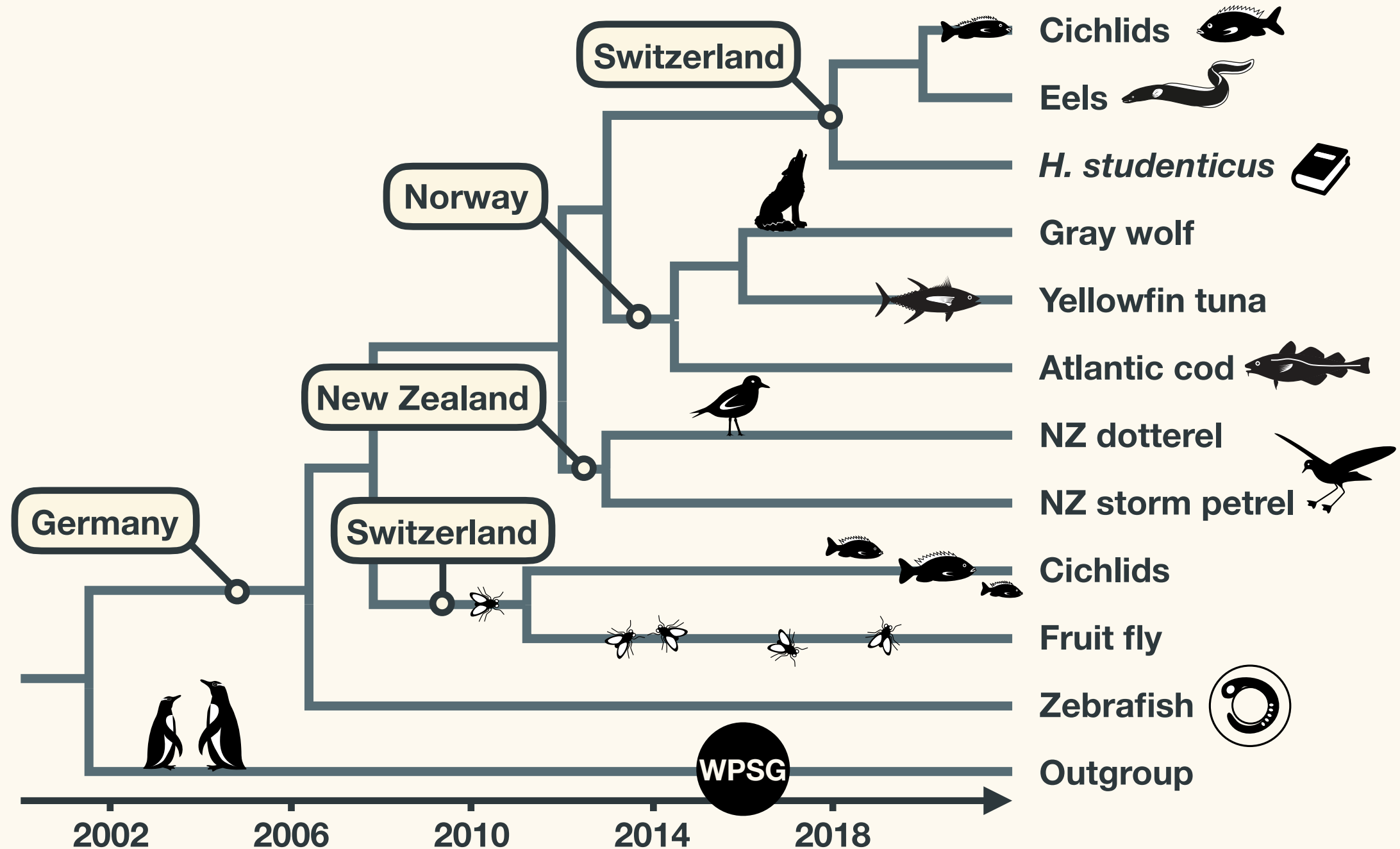
Pest and Environmental Adaptation Research Group (Hoffmann Lab)
School of BioSciences, University of Melbourne, Australia



Julia M.I. Barth

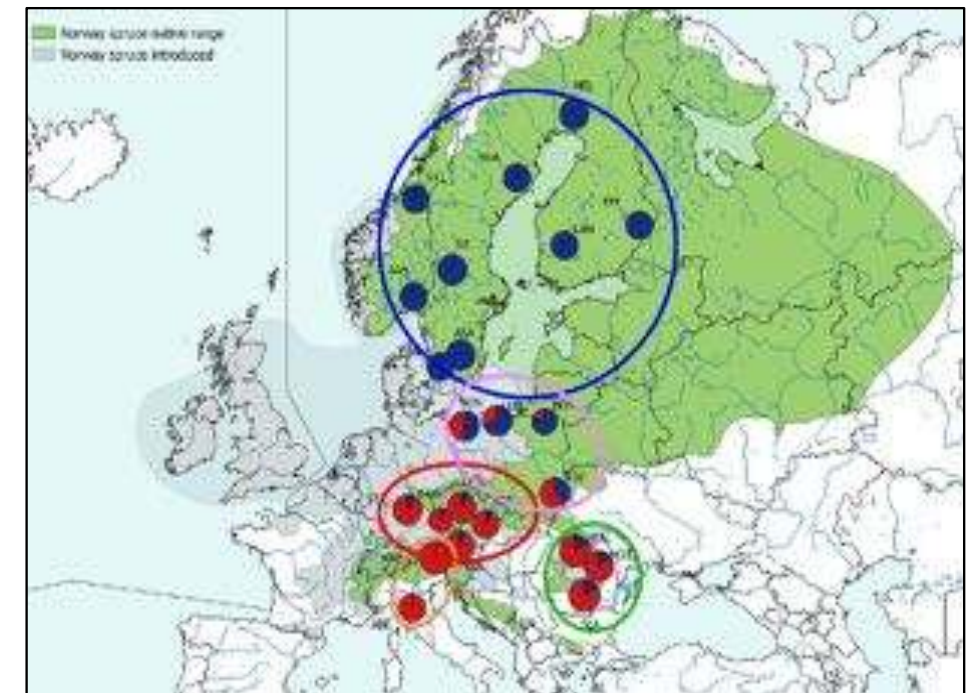
University of Basel, Switzerland

www.zebrafish.ch



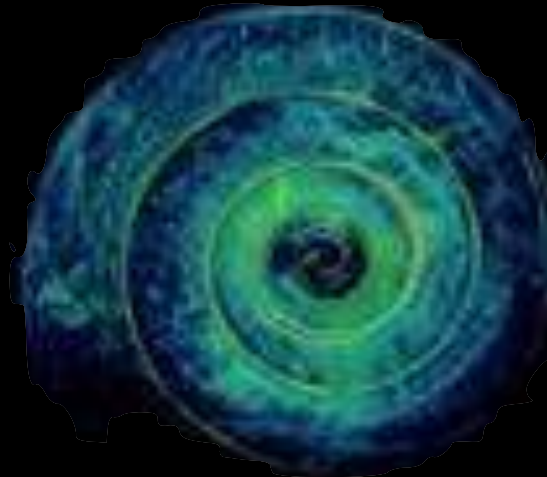


Julia Morales-García
Institute of Environmental Sciences
Jagiellonian University of Krakow (Poland)



Can planktonic snails adapt to an acidifying ocean?

- Evolutionary framework
- Phenotypic/ genomic variability
- Short-term responses to OA



Peijnenburg et al. (2020) *PNAS*



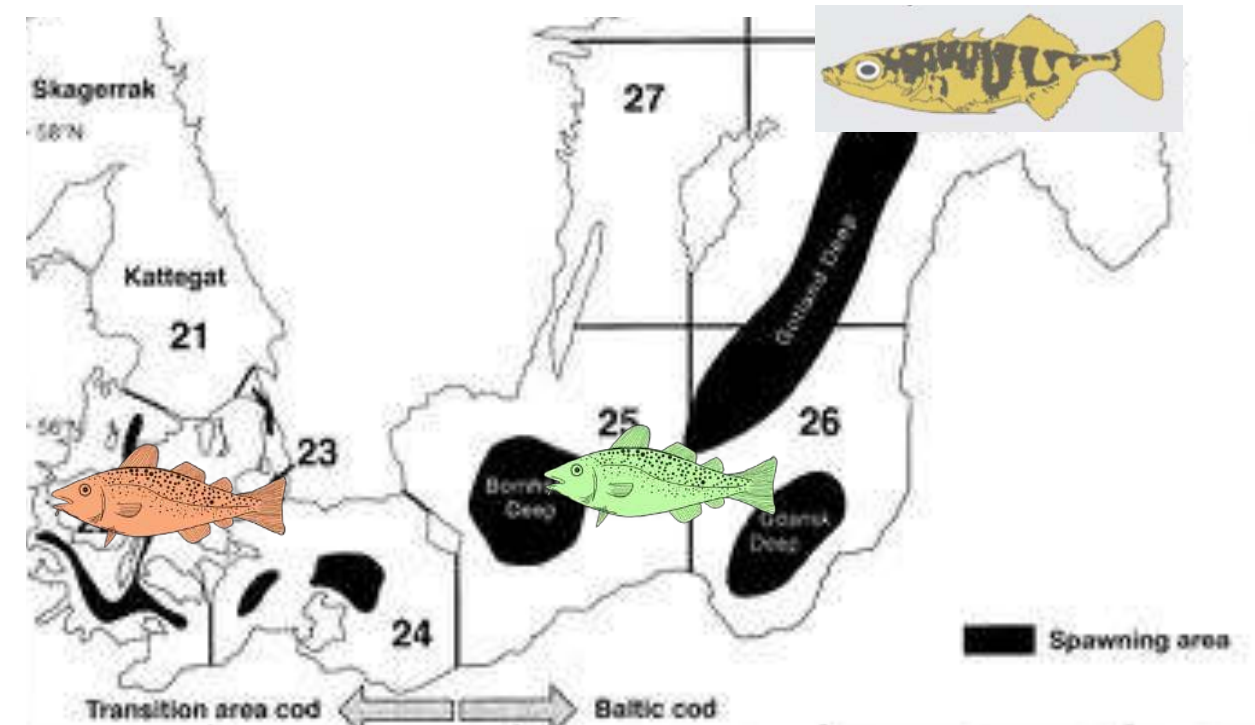
Katja T. C. A. Peijnenburg

peijnenburg@uva.nl - @katjaplankton

Plankton Diversity & Evolution research group

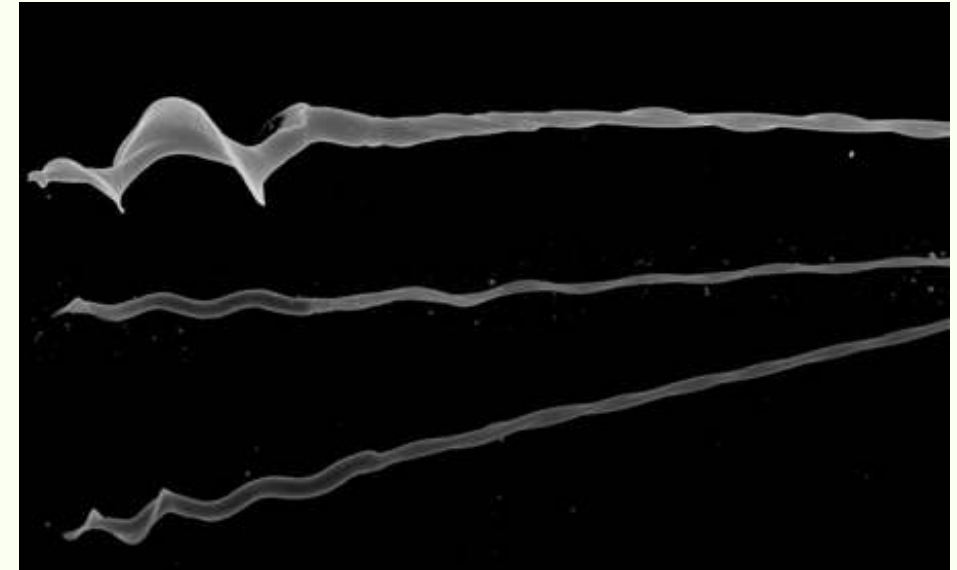


Kwi Young Han



- Cod Temporal Population (Fisheries induced evolution)
- Divergence of Eastern Baltic cod
- Adaptation of Baltic Three-spined Stickleback

LAIMA BAGDONAITĖ



MSc, 2019 Biodiversity and
Systematics
University of Gothenburg

Applications of Next-Generation Sequencing
Data for a Population Genomics Study of
Lesser Whitethroats

PhD student at Natural History
Museum, University of Oslo

Evolutionary Genomics of Avian Spermatozoa





LARISSA ARANTES



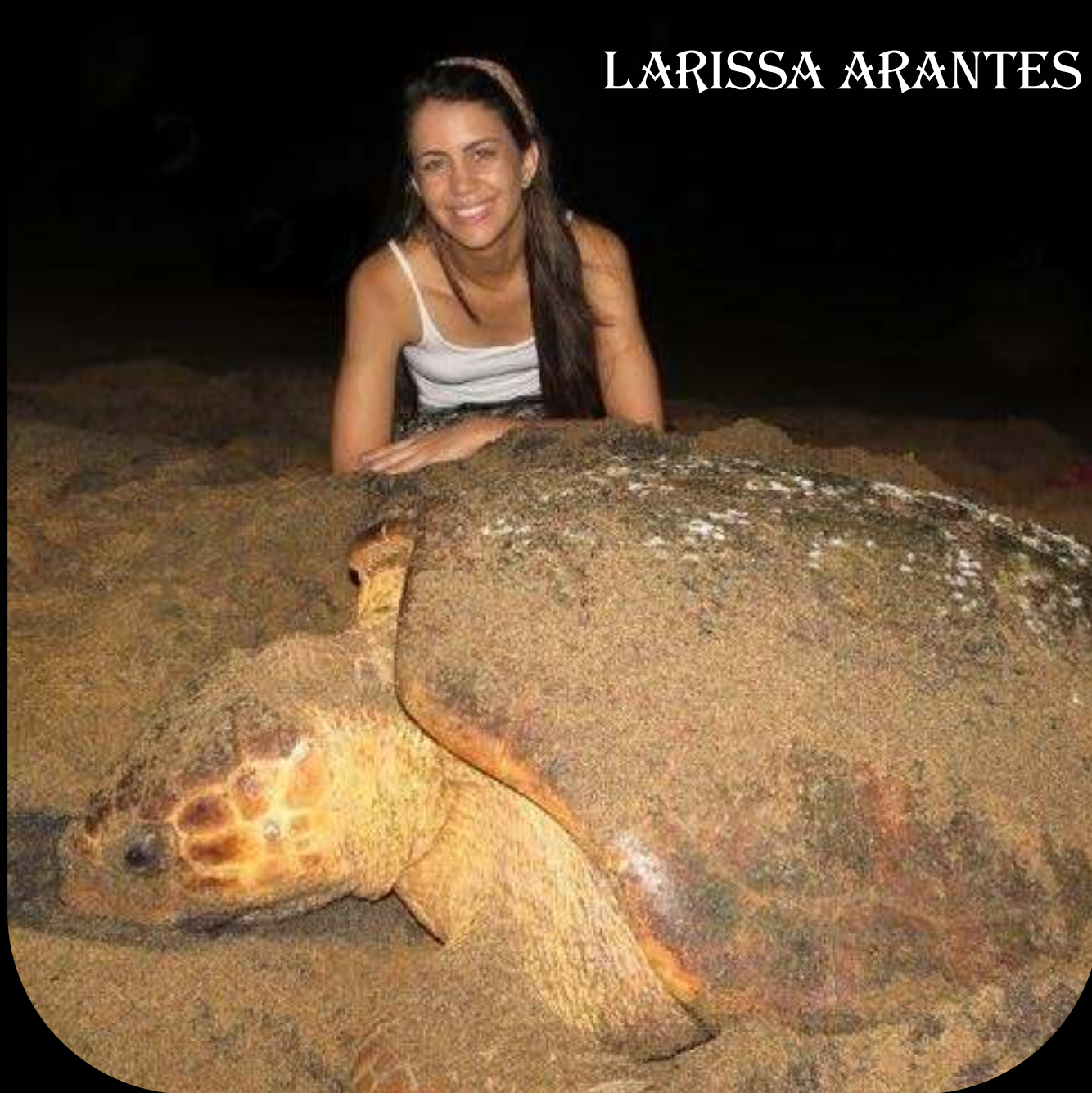
GENOMICS
CONSERVATION

PHYLOGENY

HYBRIDIZATION

ADAPTATION

RELATEDNESS





(Images: Darren Obbard)



(Images: Iris Peralta)

Leonie Moyle
lmoyle@indiana.edu



@SpeciationLab

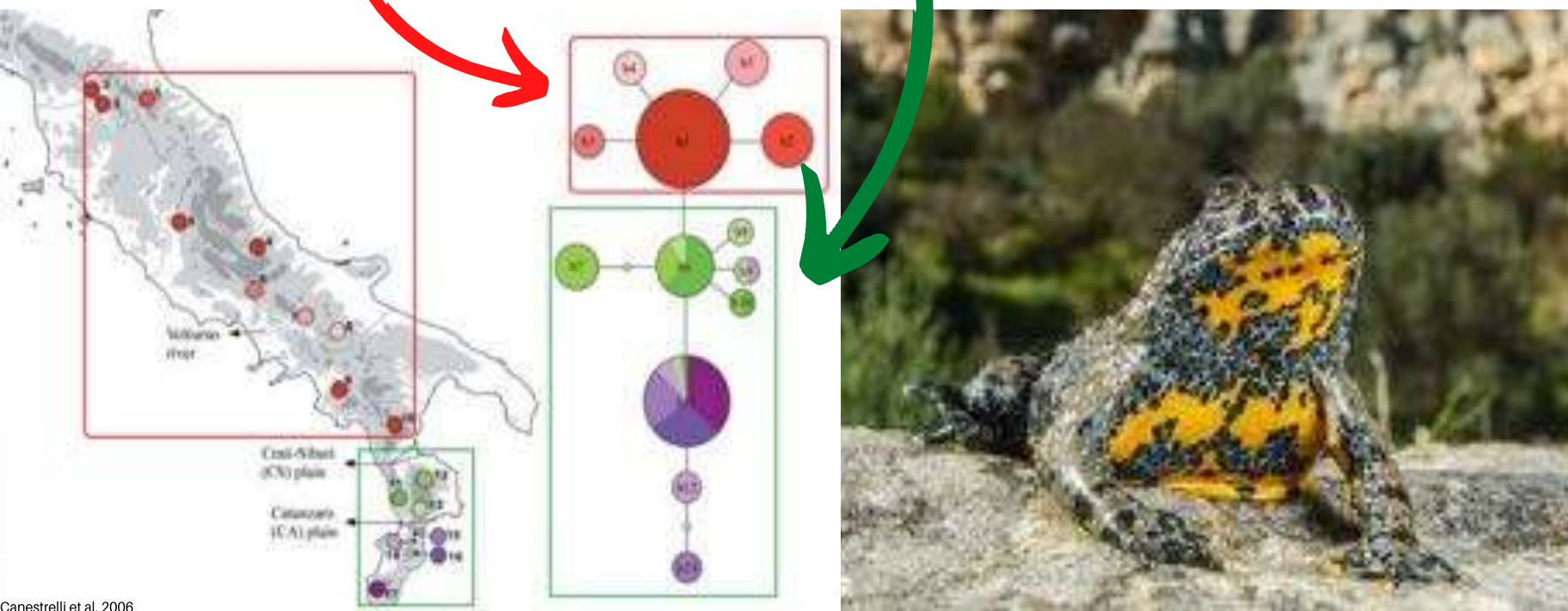
Indiana University,
Bloomington (USA)

Transposable elements dynamics in the genome of the endangered Apennine yellow-bellied toad (*Bombina pachypus*)

Small but with a huge genome (10 Gb)

Genetic pattern of "**southern richness** and
northern purity"

- Impact of TEs on the structural variation of a large genome
- Impact of selection on TE dynamics



Lorena Ancona, PhD Student

Supervisors: Emiliano Trucchi - Marco Barucca

Genomics Lab, Dept of Life and Environmental Sciences

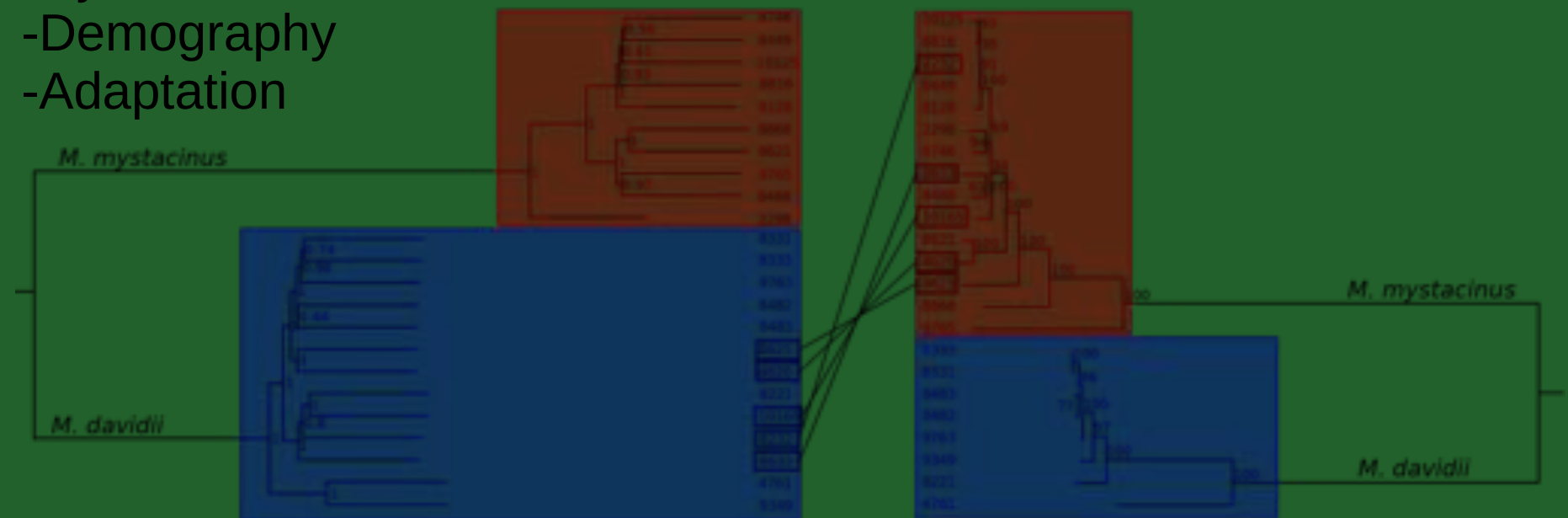
Polytechnic University of Marche, Italy

Evolutionary consequences of hybridization in insect-predatory bats in Western and Central Asia

Marie Gurke, PhD student



- Population structure
- Hybridization
- Demography
- Adaptation



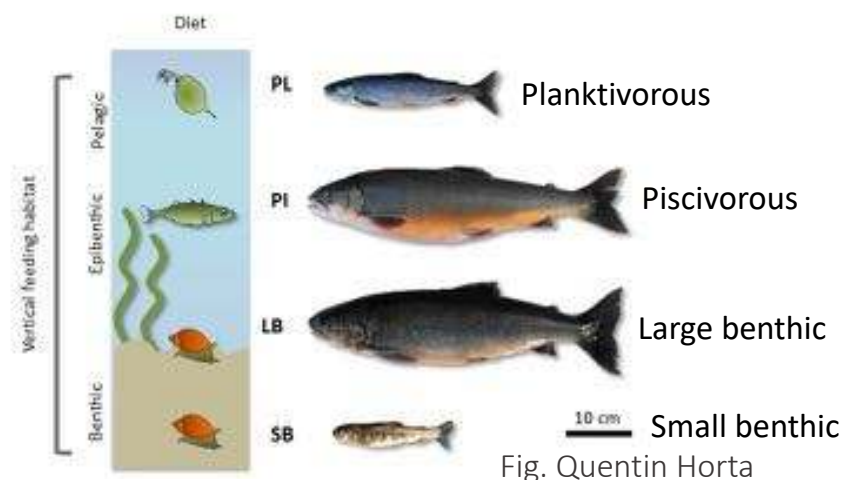
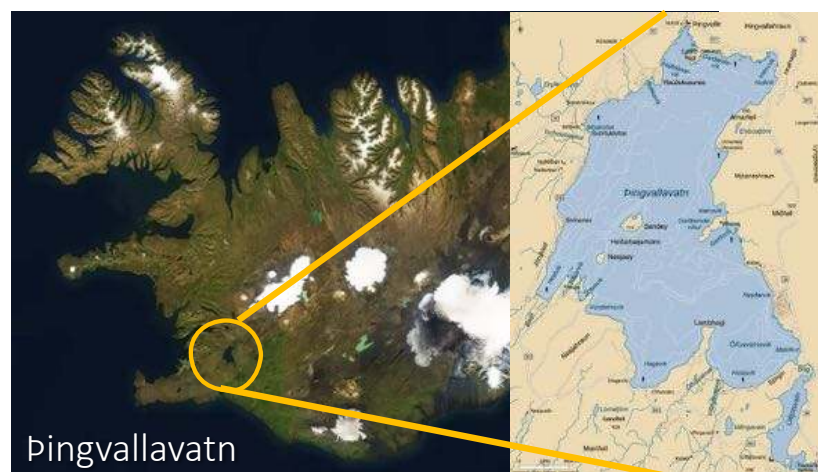


Marina de la Cámara
PhD student
University of Iceland

Kapralova, K.H.¹, Morrissey, M.B.²,
¹University of Iceland, ²University of St Andrews

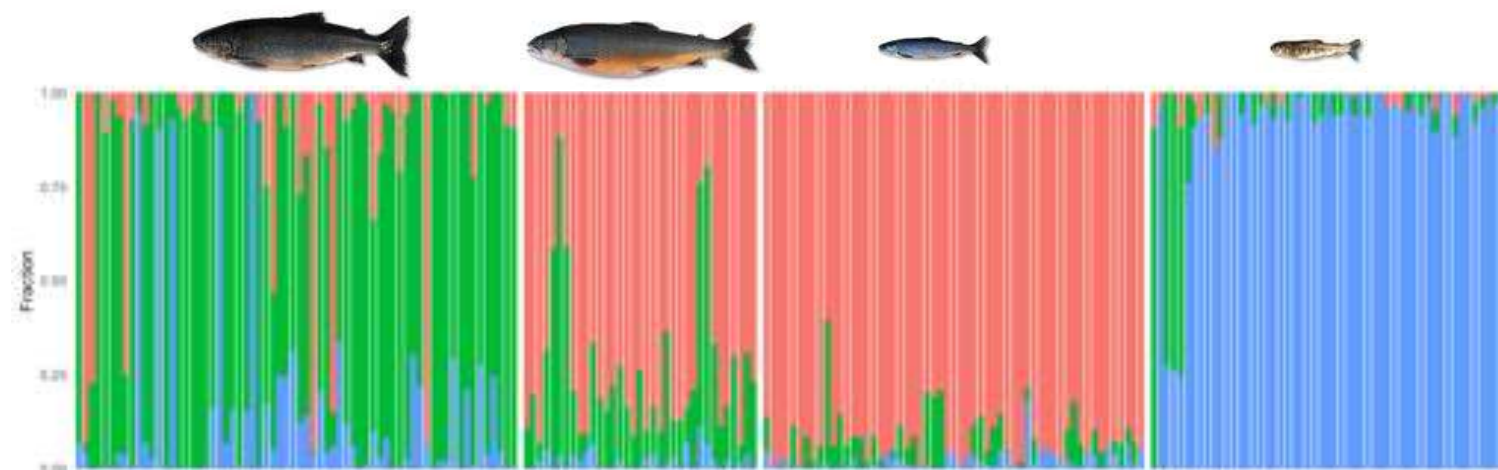


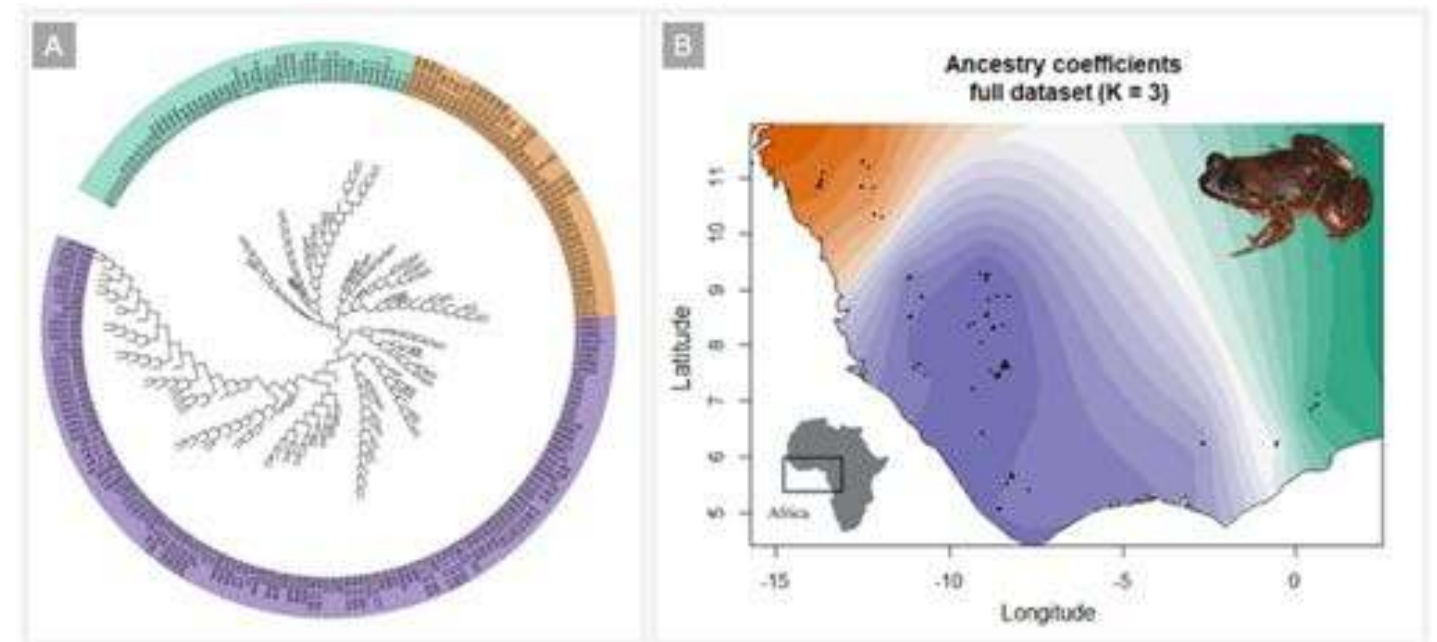
The genomic basis of adaptive differentiation between closely related morphs of Arctic charr



QTL mapping & Pop. Genomics & GWAS

Complex evolutionary history
Population subclustering
Highly introgressed ecomorphs





PhD Student

Mario Ernst

Dr. Mozes Blom

Dr. Mark-Oliver Rödel

Marion Talbi

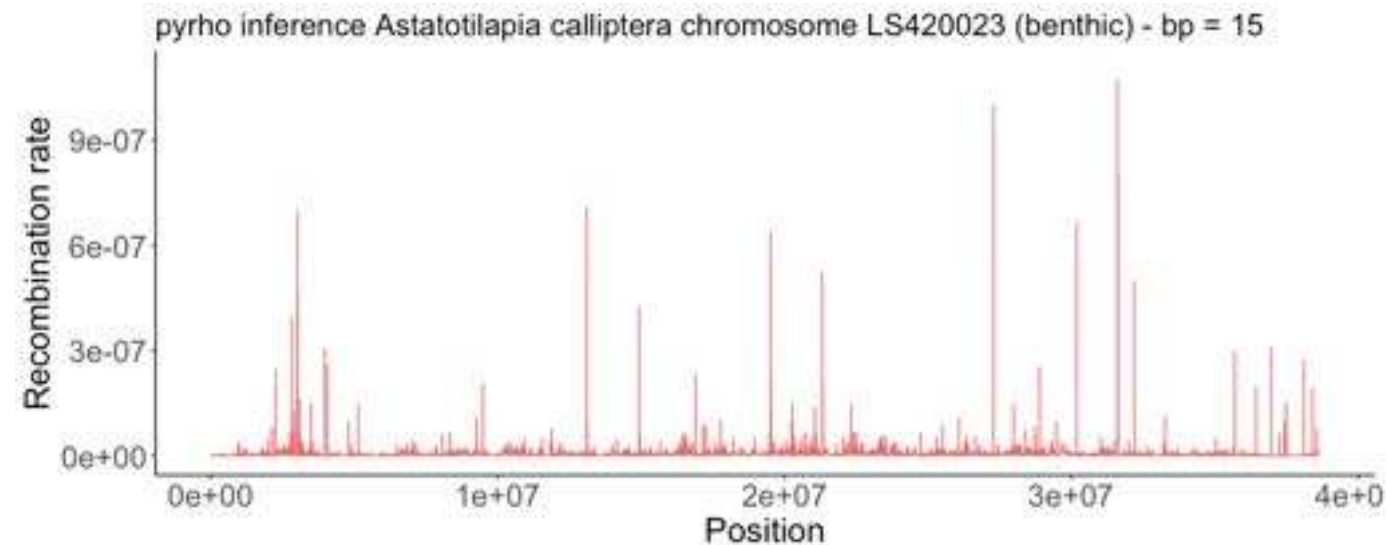
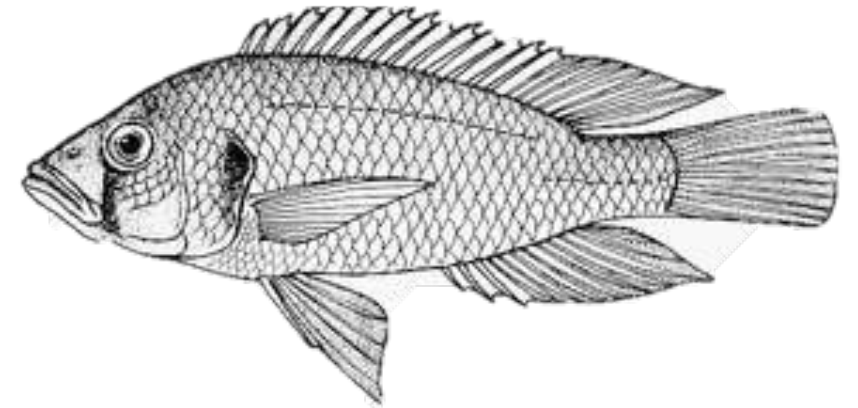
Msc in Ecology and Evolution

1st year PhD student

u^b

^b
**UNIVERSITÄT
BERN**

“Evolution of recombination landscapes
within percomorph fishes”





whole genome duplication (polyploidy)



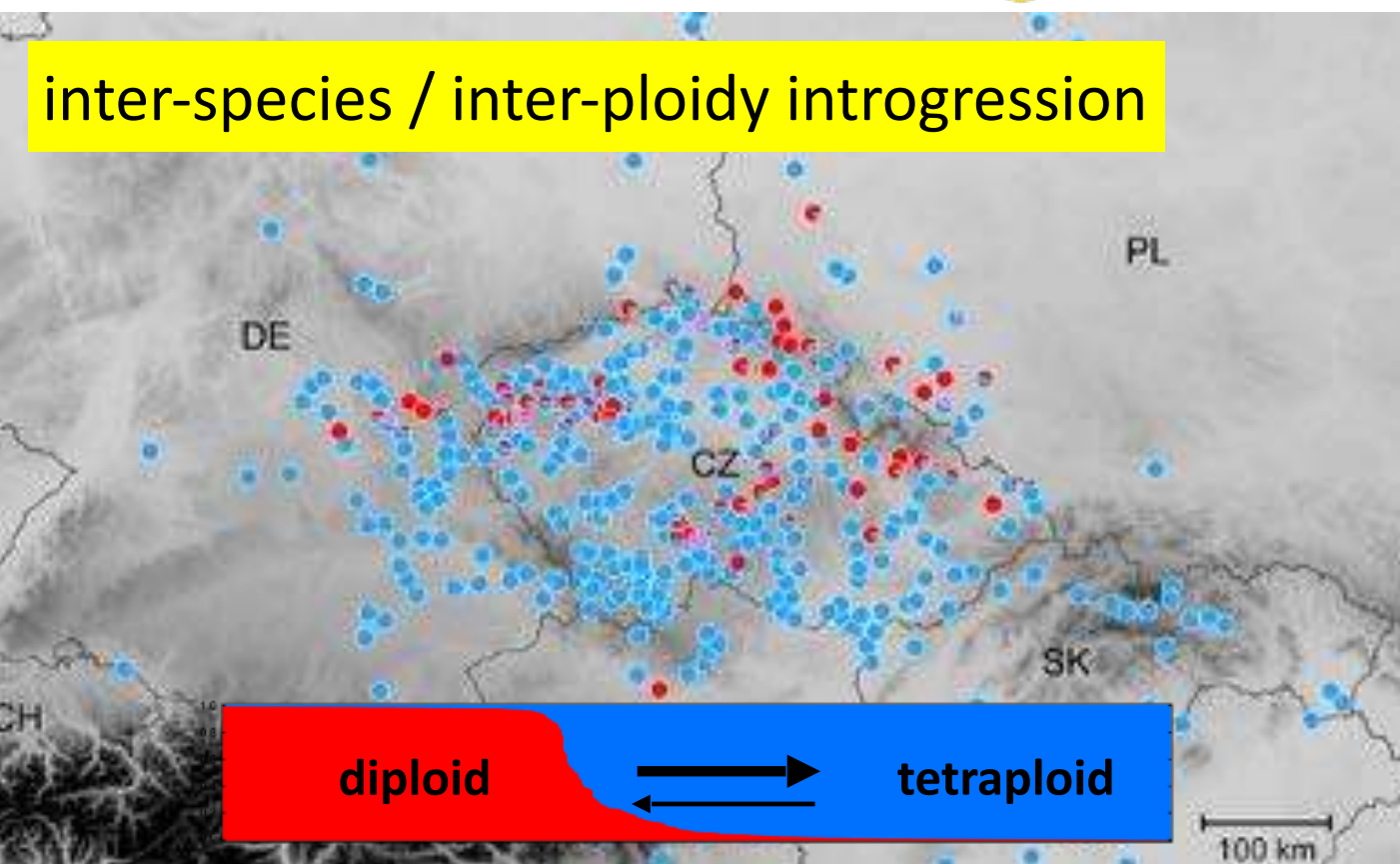
Martin Čertner



Dpt. of Biology, University of Fribourg
(Switzerland)

Dpt. of Botany, Charles University,
Prague (Czechia)

inter-species / inter-ploidy introgression



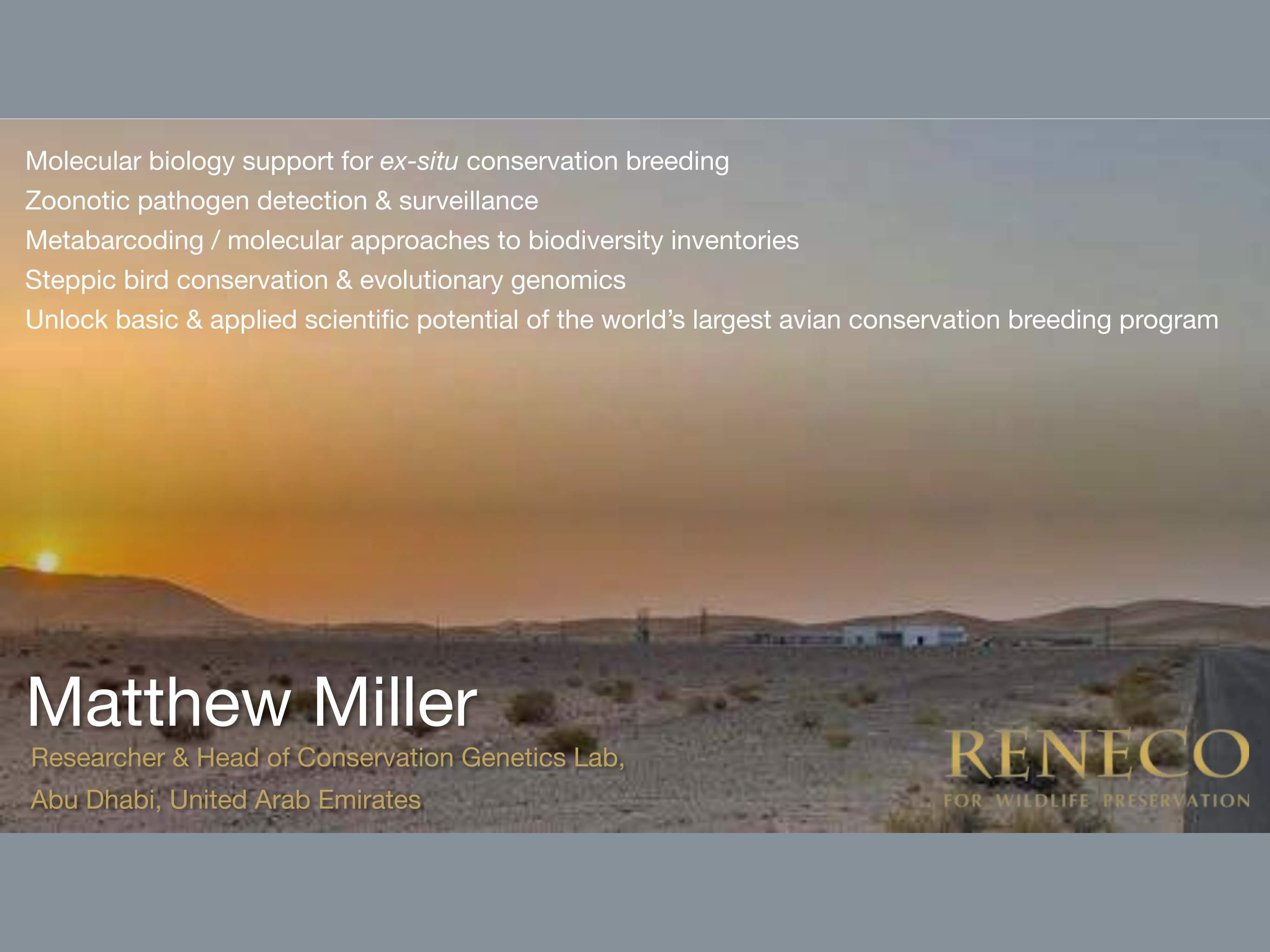
genomics of local adaptation





Matthew Hahn
mwh@indiana.edu
@3rdreviewer 



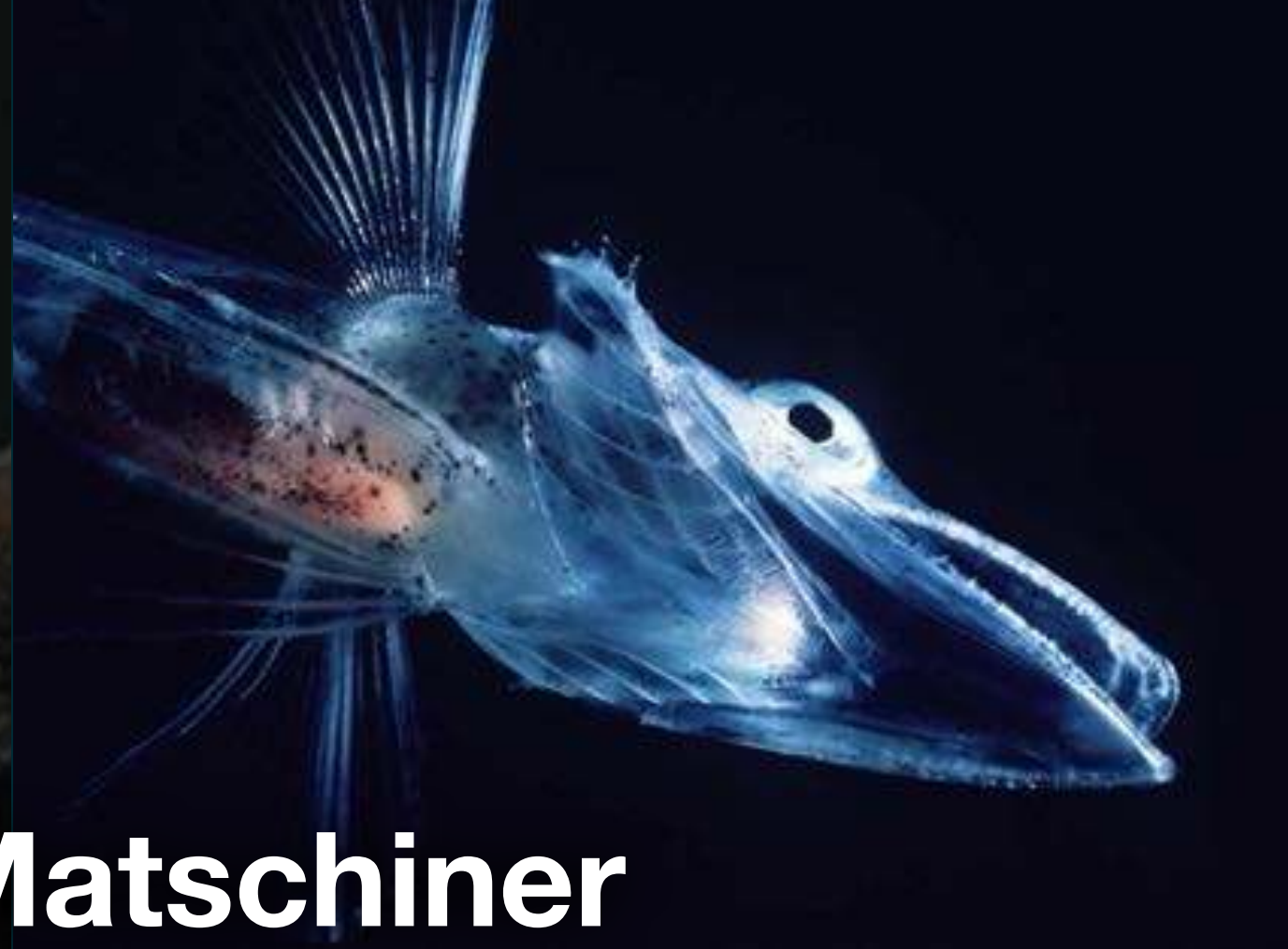


Molecular biology support for *ex-situ* conservation breeding
Zoonotic pathogen detection & surveillance
Metabarcoding / molecular approaches to biodiversity inventories
Steppic bird conservation & evolutionary genomics
Unlock basic & applied scientific potential of the world's largest avian conservation breeding program

Matthew Miller

Researcher & Head of Conservation Genetics Lab,
Abu Dhabi, United Arab Emirates

RENECO
FOR WILDLIFE PRESERVATION



Michael Matschiner

University of Oslo



Milan Malinsky

Short CV

2007-2010 BSc Computer Science, Birmingham, UK

2010-2011 Master in Computational Biology, Cambridge, UK

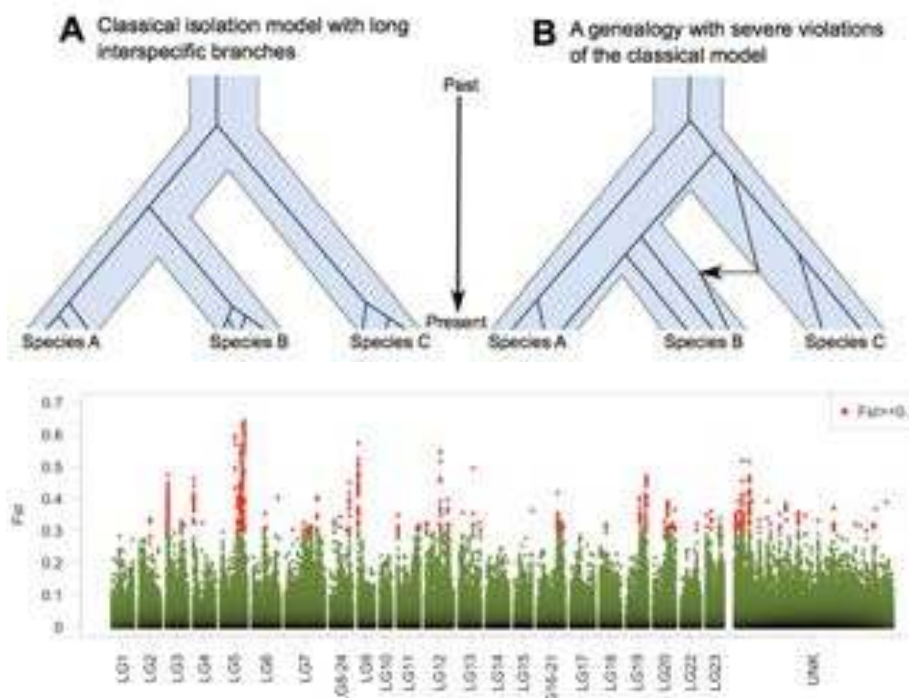
2011-2015 PhD in Evolutionary Genomics, Cambridge, UK

2016-2020 EMBO Fellowship + Postdoc, Basel, Switzerland

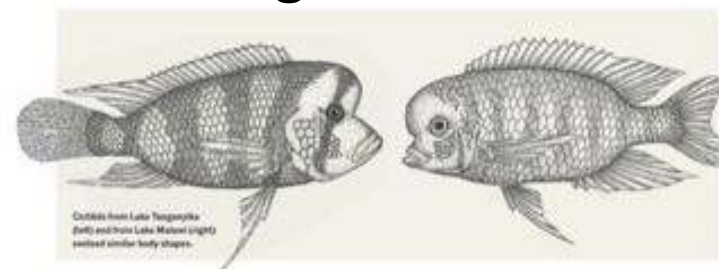
2021-now Junior PI, IEE, Bern, Switzerland

Biology:

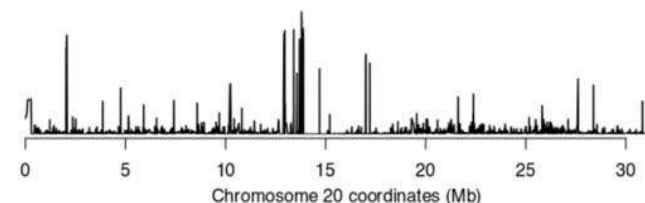
1. Genomics and speciation in cichlid fishes



2. Convergent evolution



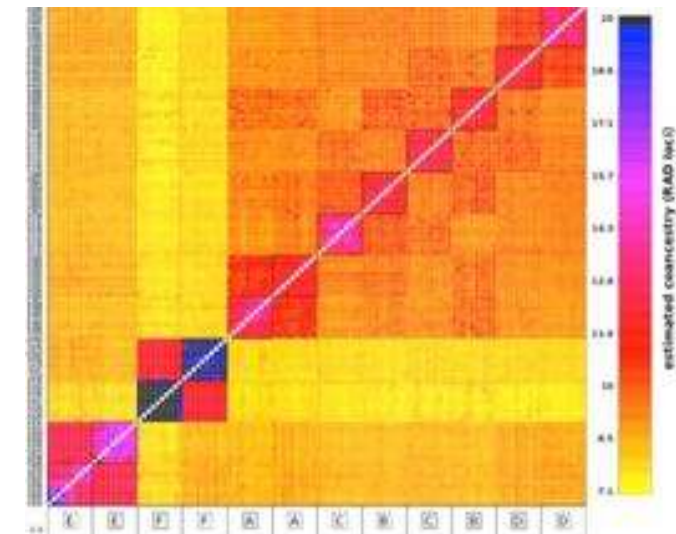
3. Recombination



Technical interests:

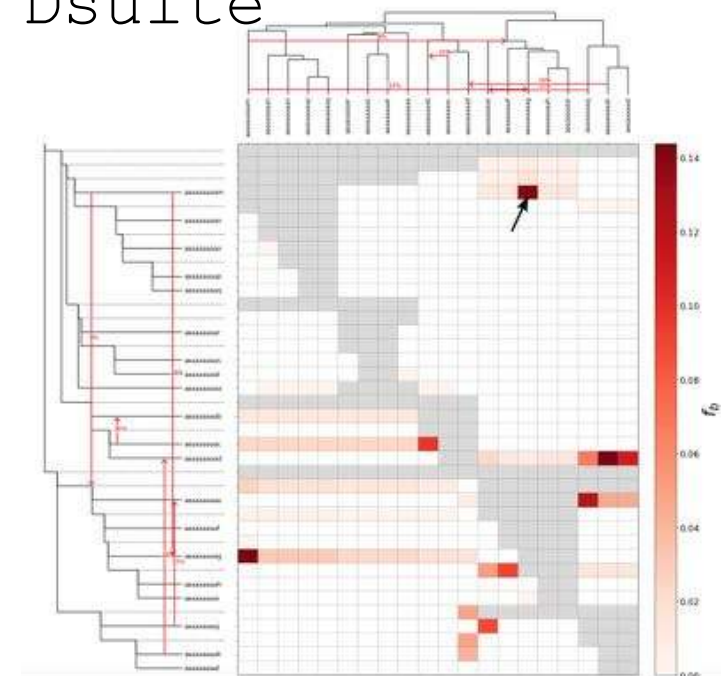
1. Population structure inference

→ fineRADpainter



2. Gene flow inference

→ Dsuite



3. *De novo* genome assembly

– including PacBio genomes

Mridula Nandakumar
PhD student
Lund University, Sweden

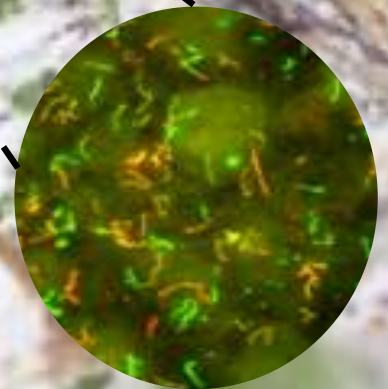


LUND
UNIVERSITY

- How does pathogen pressure affect genetic diversity and selection in immune genes?
- What functional effect do selected variants have?

Bank vole

Borrelia afzelii



Nélida Padilla
Postdoc researcher
Charles University of Prague

My journey studying plant evolution

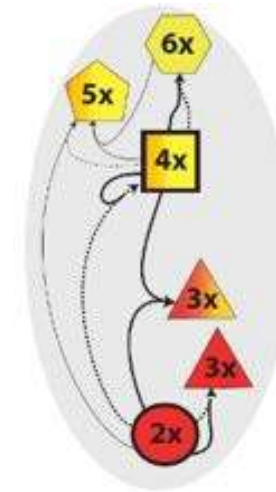


Adaptive value of evolutionary processes in natural populations, and their role in speciation



My main research projects

The role of interploidy gene flow in plant polyploid complexes

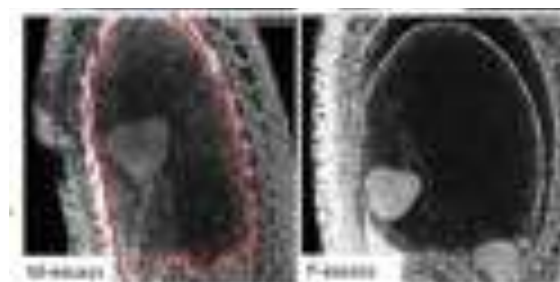


Polyploid

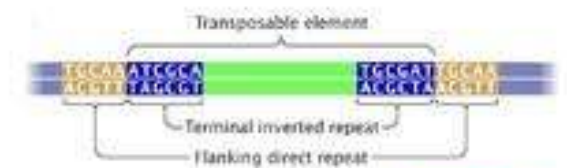


Diploid

The evolutionary significance of genomic imprinting itself in *Arabidopsis lyrata* and *A. arenosa*



Transposable Elements





Oliver Stuart

PhD Candidate

Research School of Biology



Australian
National
University

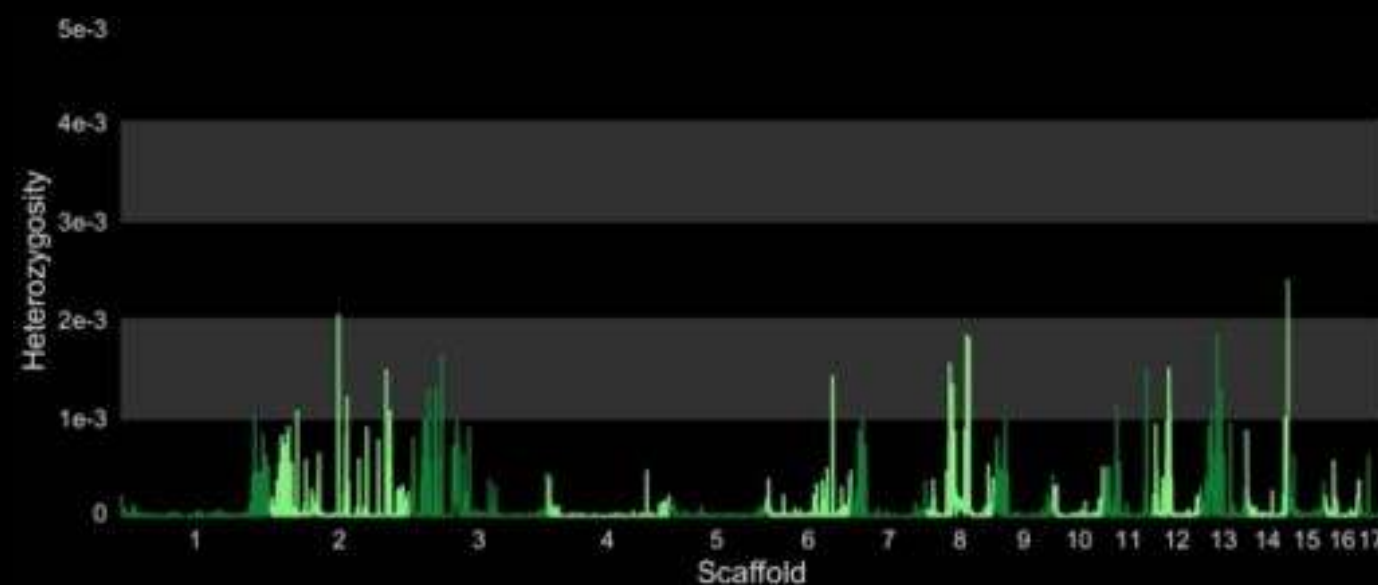
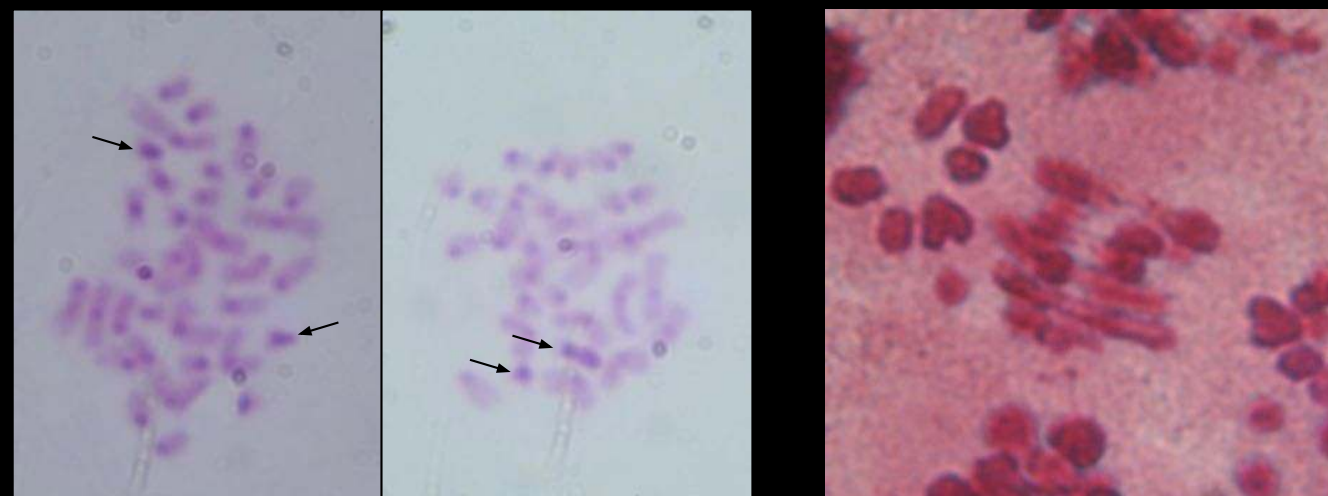


Photo credit: Rohan Cleave, Zoos Victoria

Genome structure, inheritance, and captive adaptation in the critically endangered the Lord Howe Island stick insect (*Dryococelus australis*)



Photo credit: Rohan Cleave, Zoos Victoria



Ondřej Balvín

Department of Ecology
Faculty of Environmental Sciences
Czech University of Life Sciences
Prague
o.balvin@centrum.cz



Phaneroptera nana in Prague since 2014



Bedbugs (Heteroptera: Cimicidae)
bloodfeeding; live in host 's shelters
passive dispersal by host (humans, bats, birds)
small (N=1) propagules, rapid local extinctions



bedbugs.fzp.czu.cz



Social Genes

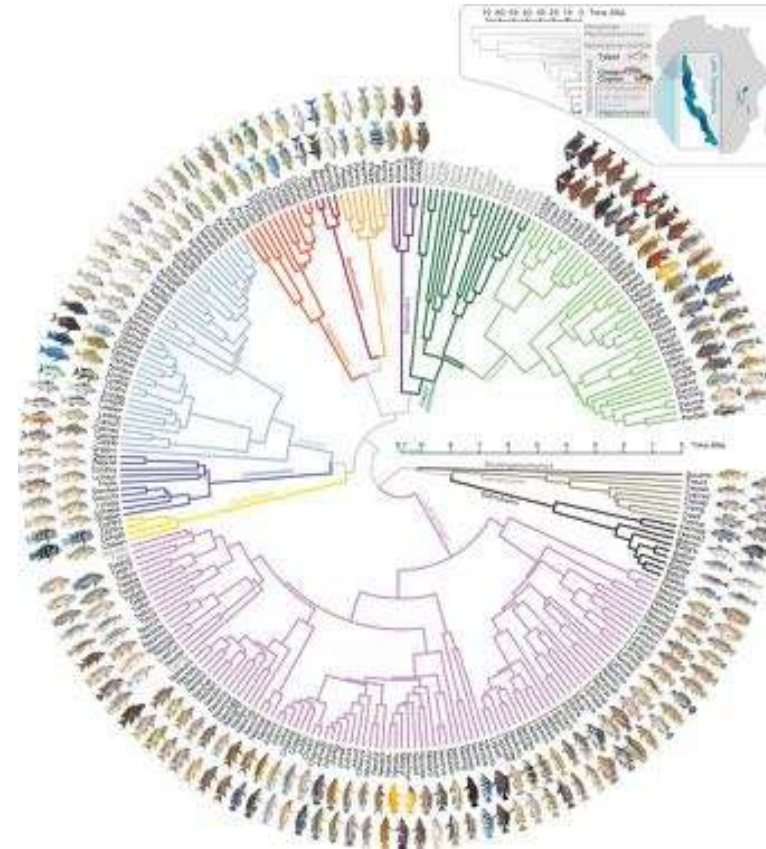
Pol Sorigué

Integrative Behavioural Biology

Rui Oliveira's lab



www.seaframes.com; Angel M. Fitor



Ronco et al., 2021 Nature



Nile tilapia (*Oreochromis niloticus*)

Reference genome

22 chromosomes

1Gbp

42,6k genes

30k protein-coding

MA Conte et al. (2017)



www.pecesdeacuario.net

INSTITUTO
GULBENKIAN
DE CIÊNCIA

Ispa

Robert Lehmann

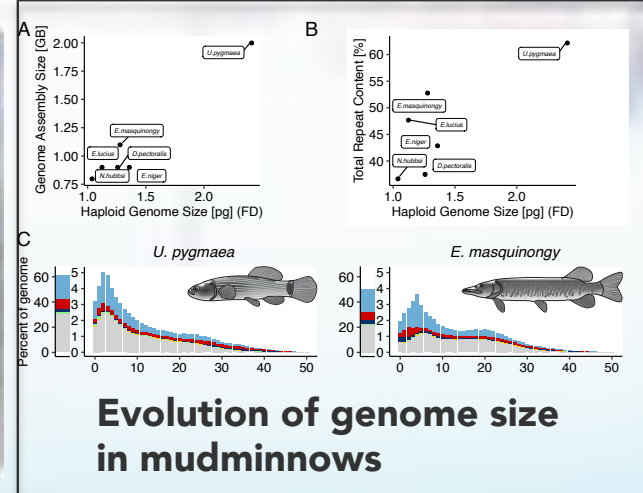
Research scientist

Living systems lab @KAUST

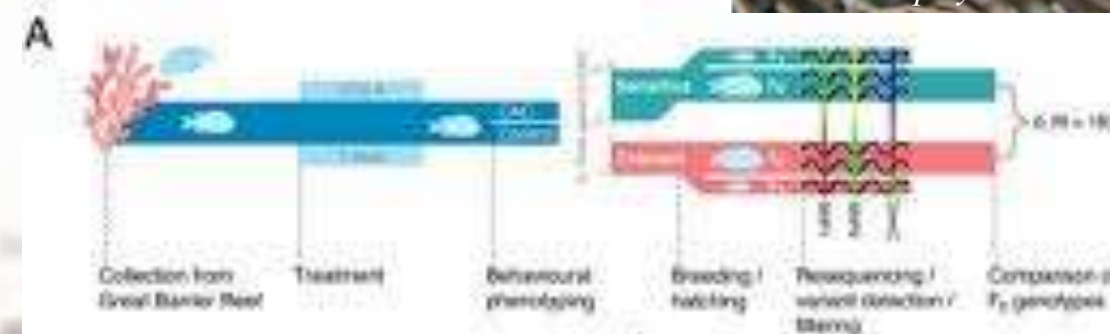
Genome assembly

Comparative genomics

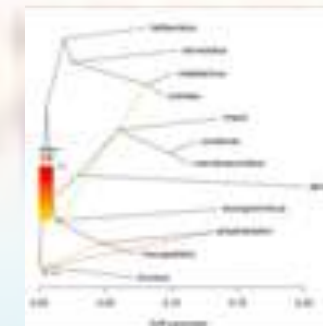
Speciation + Population genetics



Behavioural genetics of ocean acidification



Genetics of Humpback Grouper morphology

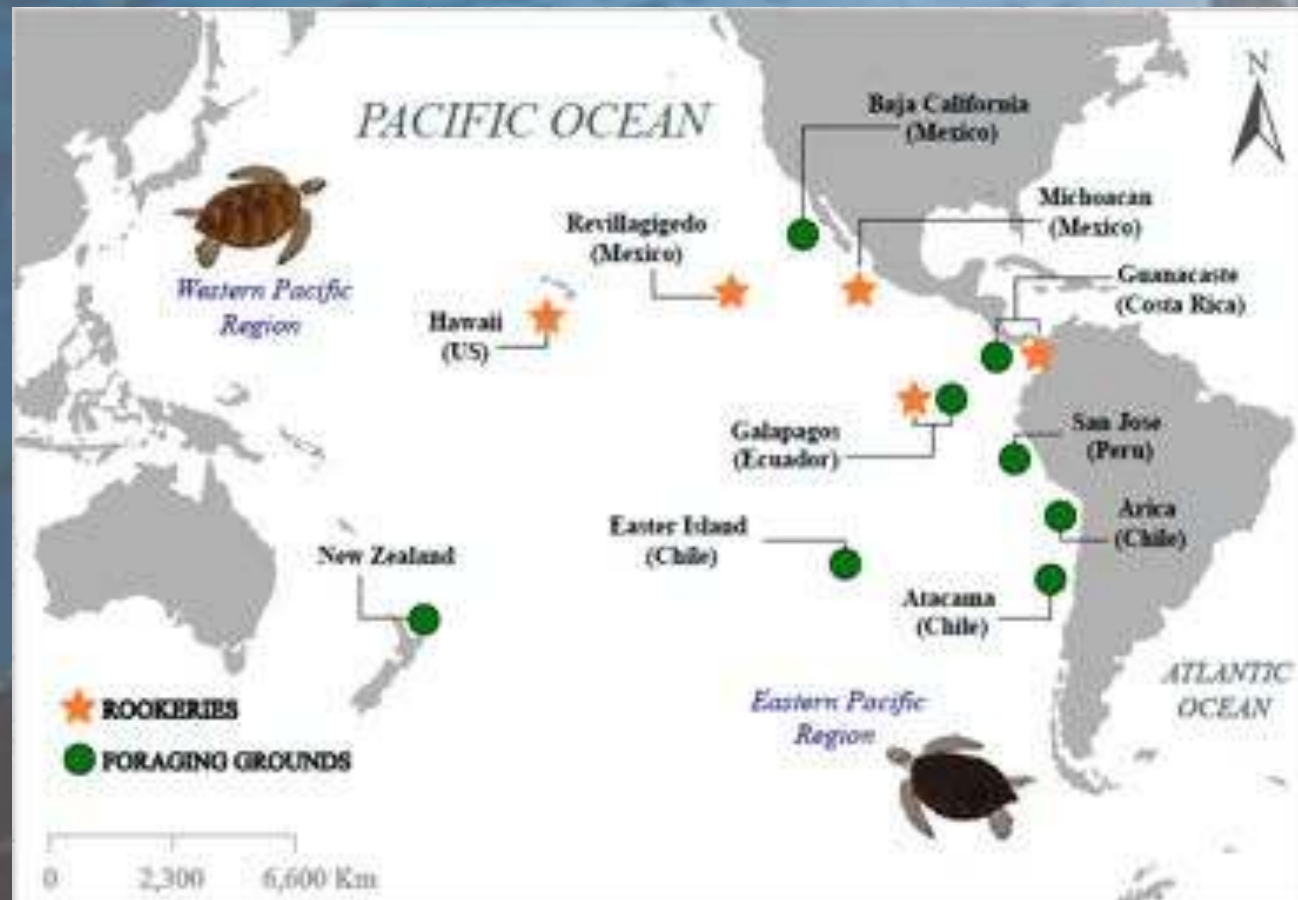


Rocío Álvarez Varas

Postdoctoral Researcher

Universidad Católica del Norte

Coquimbo, Chile

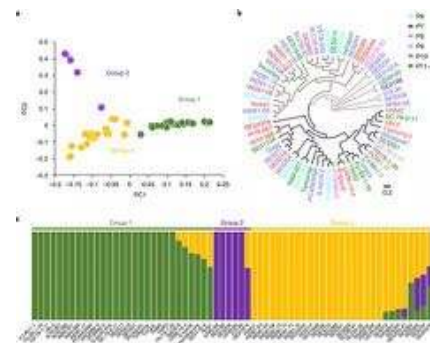


Phylogeography
Ecology & Evolution
Population genomics
Adaptation
Sea Turtles
Network/Collaboration

Sandra Ramirez-Calero, M.Sc.



PhD student at Institut de Ciències del Mar (CSIC)



Dr. Joaquim Garrabou Dr. Jean-Baptiste Ledoux

 @SandraR_C / @Med_Recover

2022 Workshop on Population and Speciation Genomics, Cesky Krumlov

Introduction: Sarah Coates



PRIFYSGOL
BANGOR
UNIVERSITY

Envision
Developing next generation
leaders in environmental science

Royal Botanic Gardens
Kew



What?

- **Past:** Bsc in Evolutionary Biology at the University of Edinburgh (2019). Msc in Ecological and Evolutionary Genomics at Queen Mary University of London (2020).
- **Present:** 2nd year PhD student at Bangor University, North Wales. Studying adaptation to heavy metals and adaptive introgression in *Silene uniflora* (Sea Campion).



Why?

- I find it fascinating how evolutionary forces have shaped every organism on the planet to generate the diversity we see today.
- I want to know how genetic diversity in natural populations can determine how plants adapt to stressful environments



Really?

- I saw orangutans during a field course to Borneo
- I own at least ten potted plants
- I play several musical instruments



Sarah du Plessis

**Eurasian
otter** in UK, and
across Eurasian
range using whole
genome
sequencing

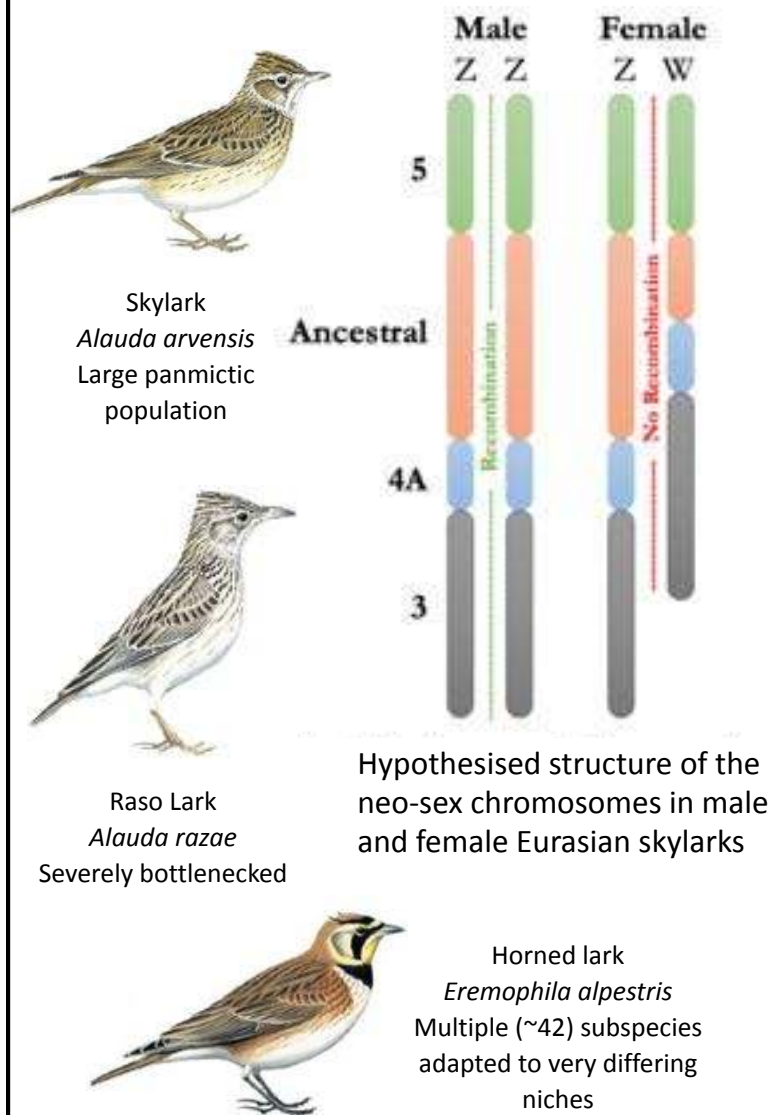


- 3rd year PhD student
- Cardiff University – Molecular Ecology and Otter Project Groups
- Supervisors – Frank Hailer, Liz Chadwick and Klaus-Peter Koepfli



Evolutionary and ecological consequences of genetic sex determination

Neo-sex chromosomes in larks



Research questions:

- How are genes linked to sex determination shaped by selection and drift?
- How do these genes affect the populations in which they occur?

Genes of interest:

- Sex-linked vs. autosomal
- Recombining Z vs. non-recombining W
- Time since sex-linkage (different strata of neo-sex chromosomes)
- *csd* and flanking genes in bumblebees

Ecological aspects:

- Demography
- Sexual selection
- Environmental adaption
- Habitat fragmentation

Genomic data:

- WGS individuals
- WGS PoolSeq
- (Amplicon?)
- (Expression?)



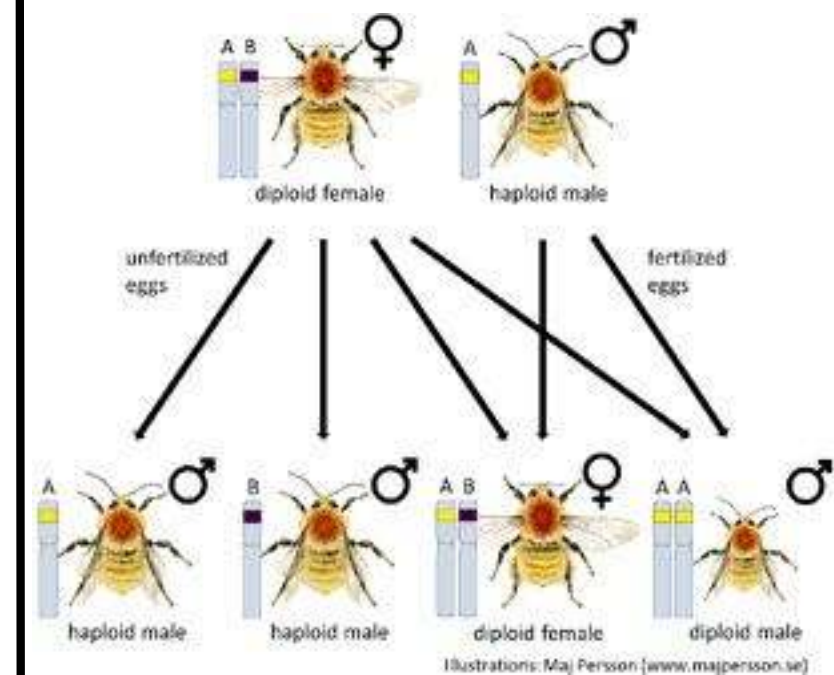
Simon Jacobsen Ellerstrand
Doctoral student

Molecular Ecology, Microbial Ecology and Evolutionary Genetics
Department of Biology, Lund University
simon.jacobsen_ellerstrand@biol.lu.se



Haplodiploid bumblebees

(single locus complementary sex determination)



Common carder bee
Bombus pascuorum
Increasing



Shrill carder bee
Bombus sylvarum
Declining



Moss carder bee
Bombus muscorum
Declining, red listed as vulnerable

Suvratha Jayaprasad

Masters in Bioinformatics &
Applied Biotechnology

PhD student at FSU Jena,
Germany

Working on neo-sex
chromosome evolution in
grasshoppers



Worked mostly on genomic
data across plants and insects

Fluent in English, Shell, R &
Python

Part time musician, baker and
photographer

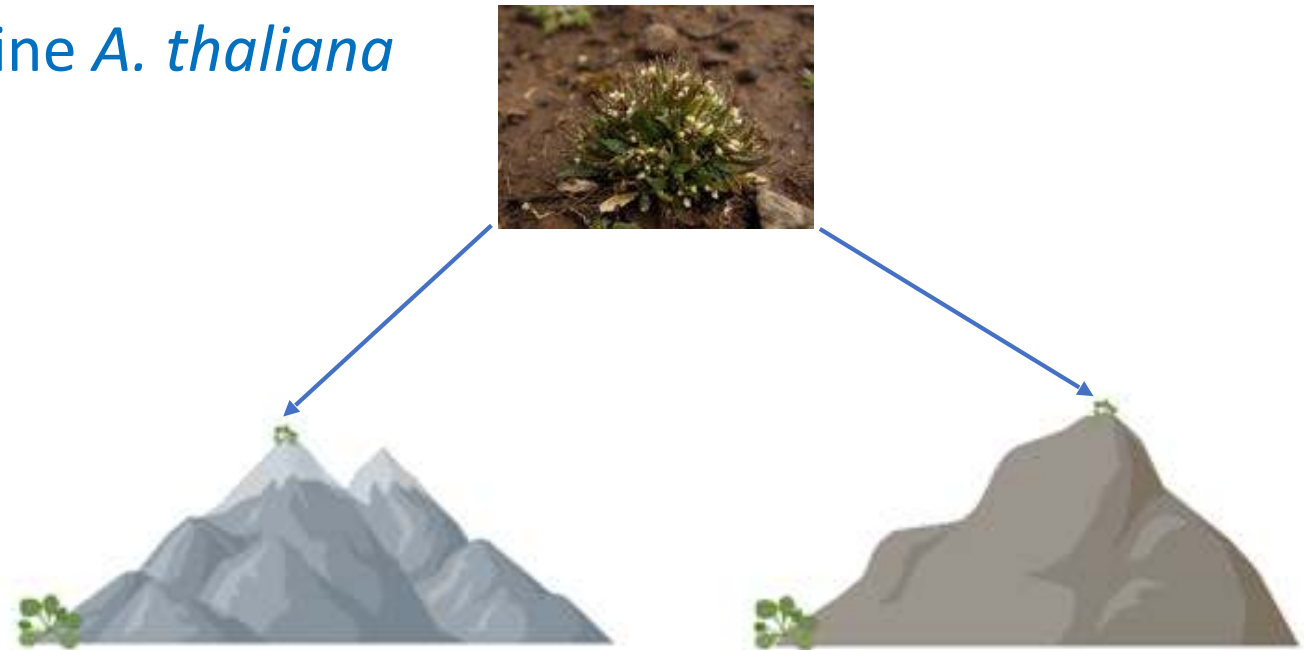


suvratha.jayaprasad@uni-jena.de

Afroalpine *A. thaliana*



EA samples ○
Elevation (m)
0
4050
8424



What is the genetic basis of local adaptation to altitudinal gradients?

Is there evidence of parallel adaptation?

Sofía Rodríguez Pacheco

PhD student - Max Planck Institute for Plant Breeding Research

Supervisor: Angela Hancock





Peregrine falcon
(*Falco peregrinus*)



Saker falcon
(*Falco cherrug*)



Gyr falcon
(*Falco rusticolus*)



Lanner falcon
(*Falco biarmicus*)



Houbara bustards
(*Chlamydotis spp.*)

Thierry Hoareau

thoareau@reneco.org





Herpetology



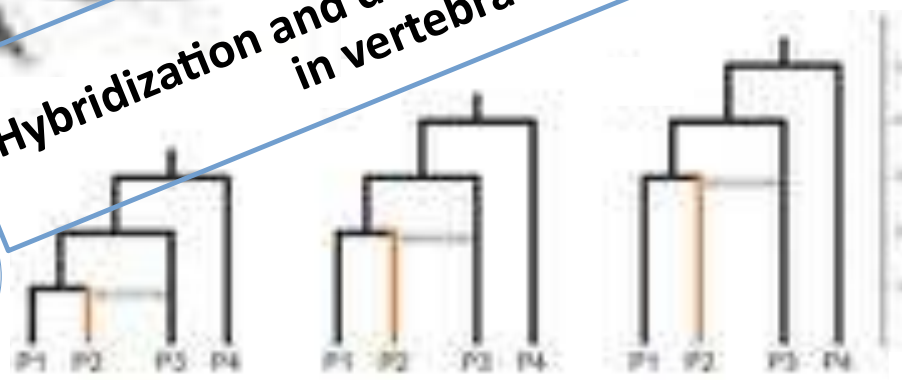
Taxonomy



UiO : Naturhistorisk museum



PhD project:
Hybridization and diversification dynamics
in vertebrates



Morphology



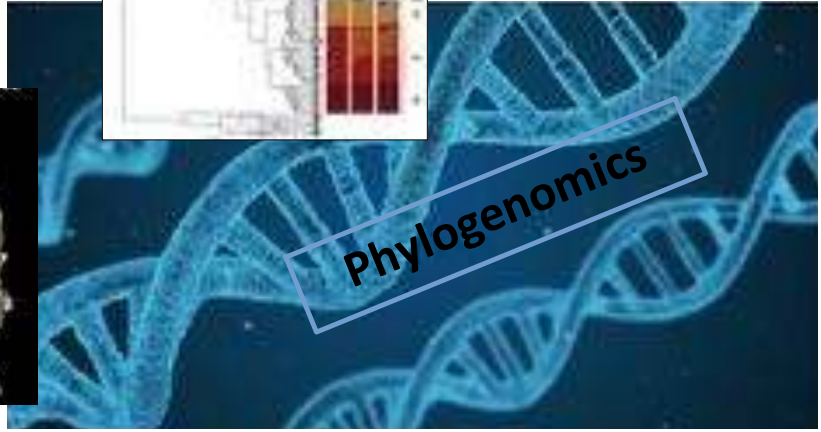
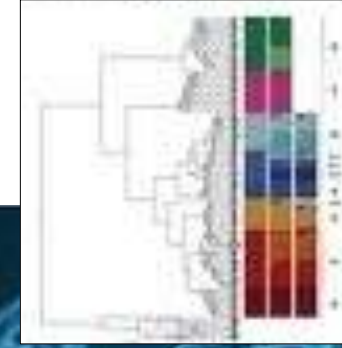
Field work



Thore Koppetsch
Natural History Museum Oslo

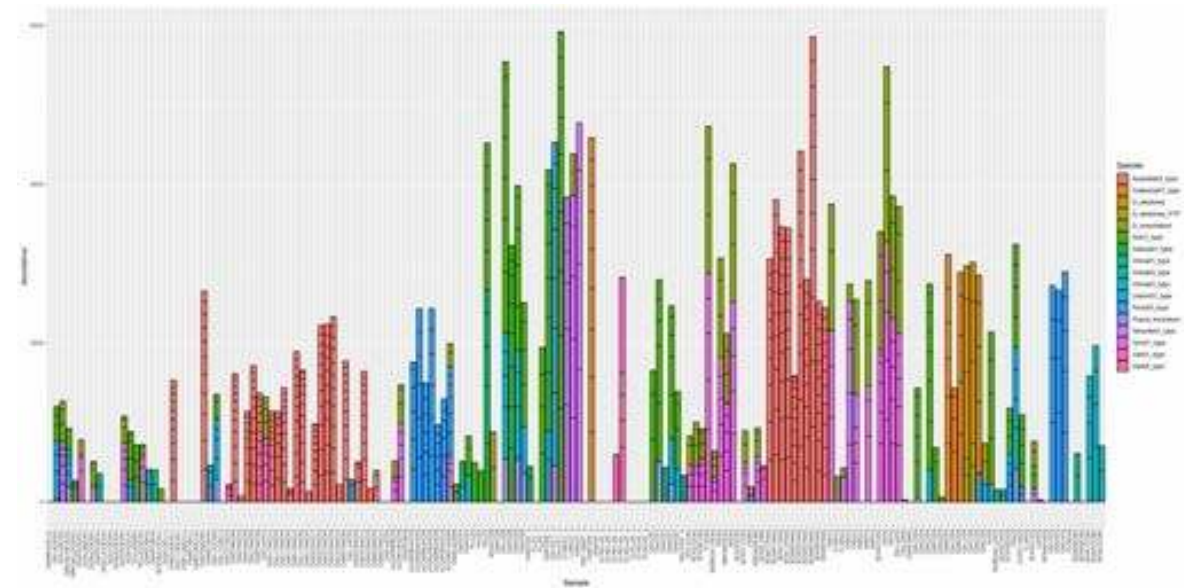
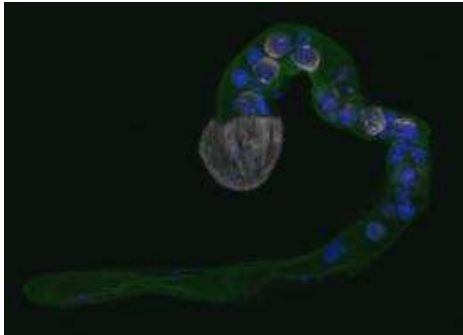


Evolutionary biology

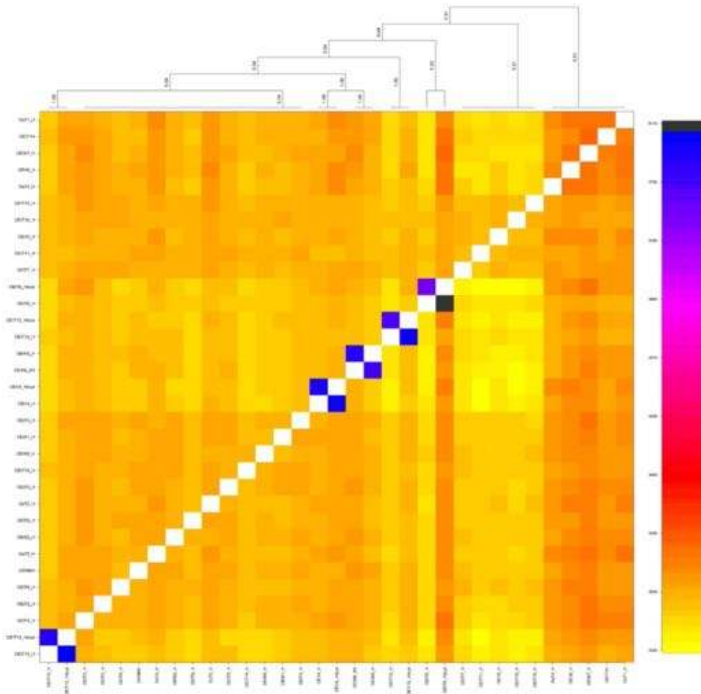
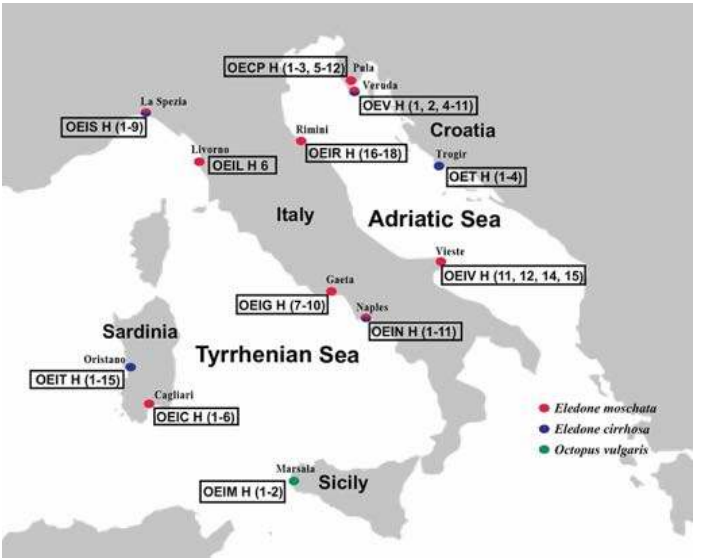
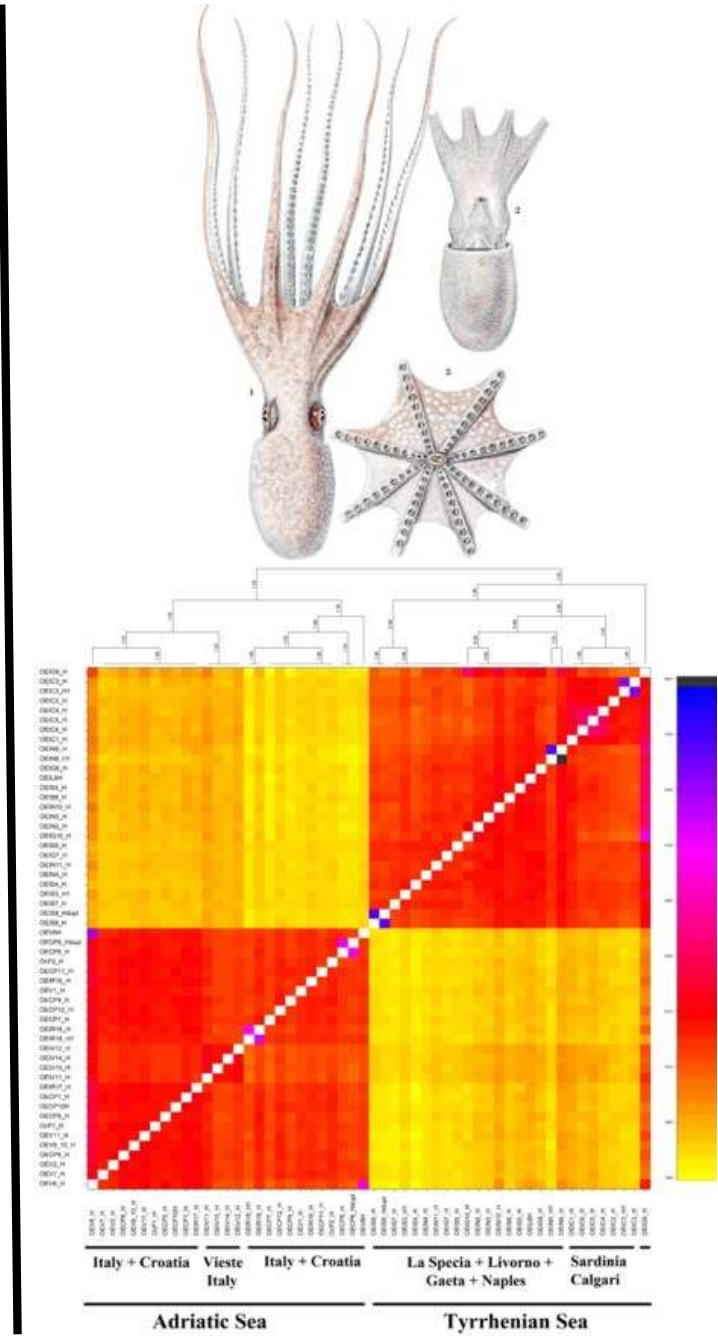


Phylogenomics

Using genomics in population studies of marine cephalopods



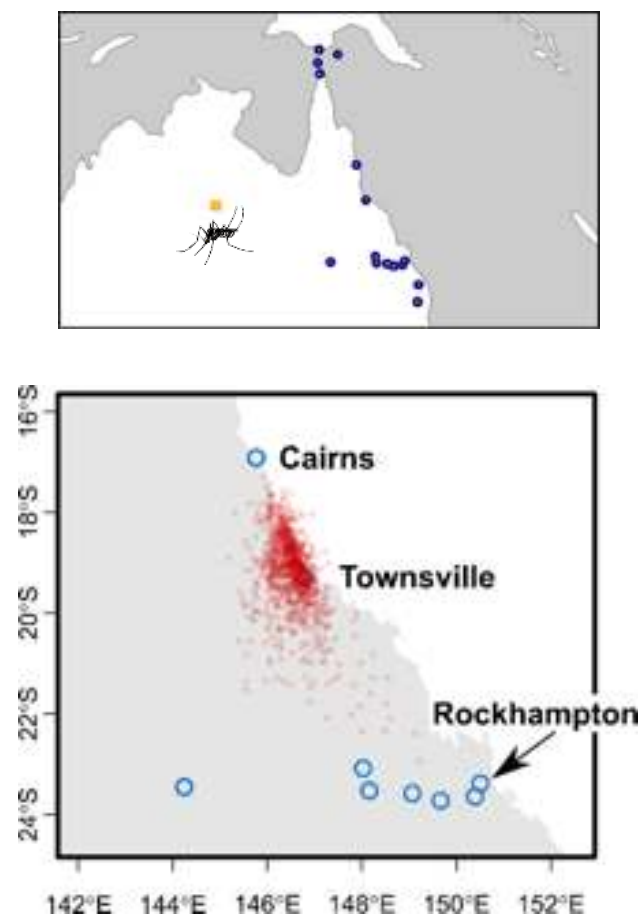
Tijana Cvetković



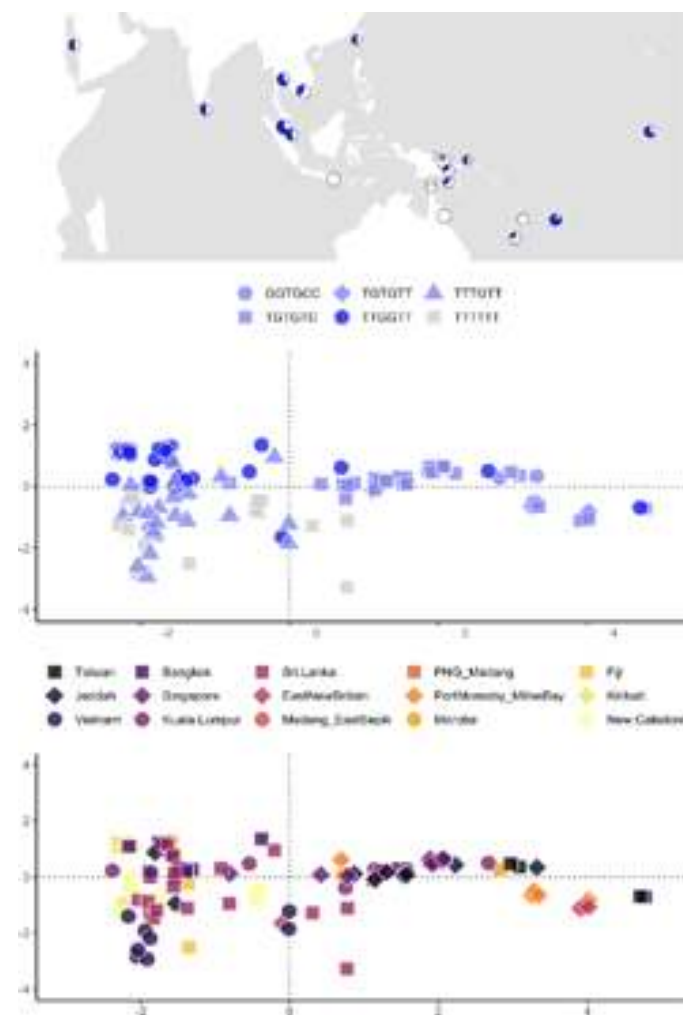
Invasion genomics

Tom Schmidt | University of Melbourne

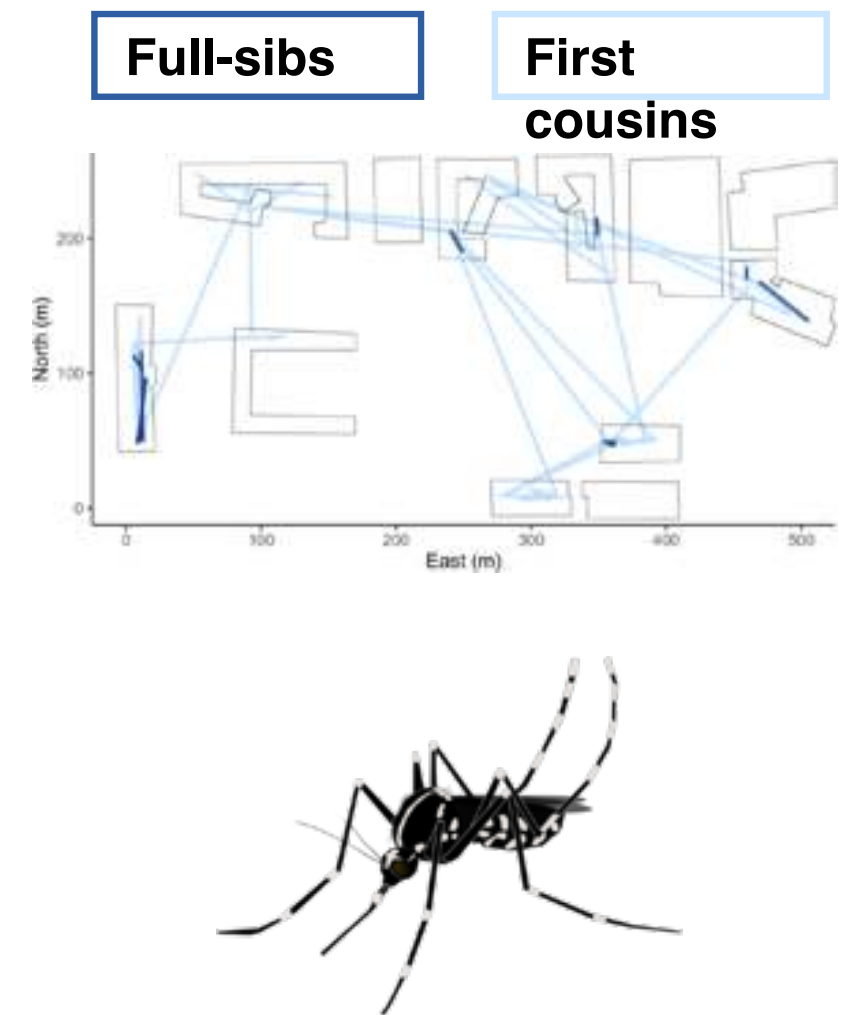
1. Tracing incursions



2. Post-invasion evolution



3. *Wolbachia* invasions



Ulises Balza, PhD Universidad de Buenos Aires

Centro Austral de Investigaciones Científicas (CADIC-CONICET)

Ushuaia, Argentina



This is me!



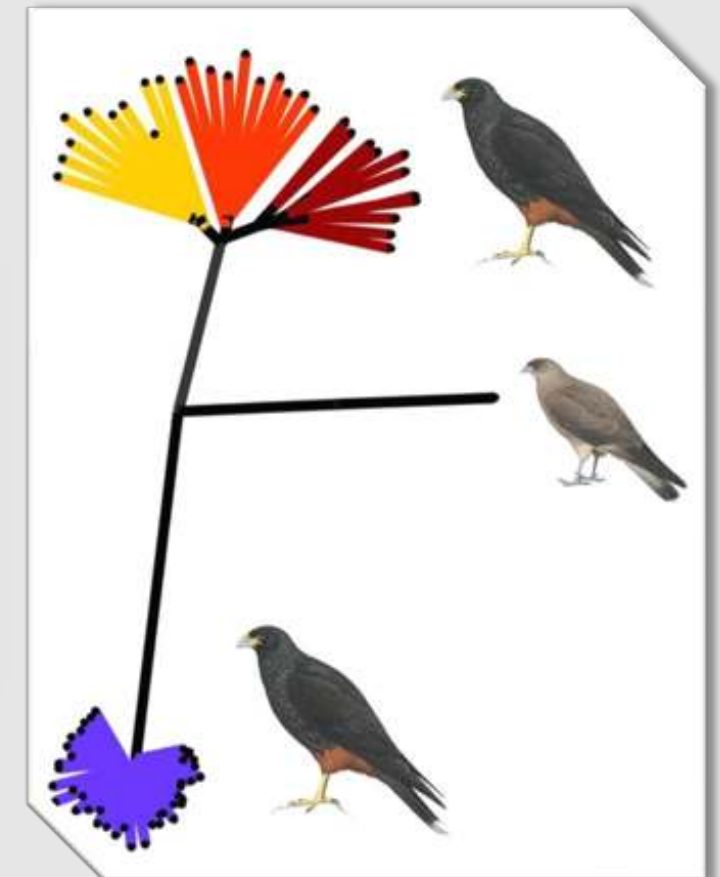
This is where I came from!



What I'd like to do next

- To built connectivity hypothesis using past landscape and distribution modelling
- To link dispersal in ecological-contemporary scales with historical connectivity
- To add more study cases, especially associated with Andean ecosystems

**What I did so far (just 1/4th of my thesis!
Need to learn more- here I am)**



Looking forward to collaborate with you!

  **@UlisesBalza**
ulisesbalza@gmail.com

Valentina Peona

Uppsala University
Postdoc

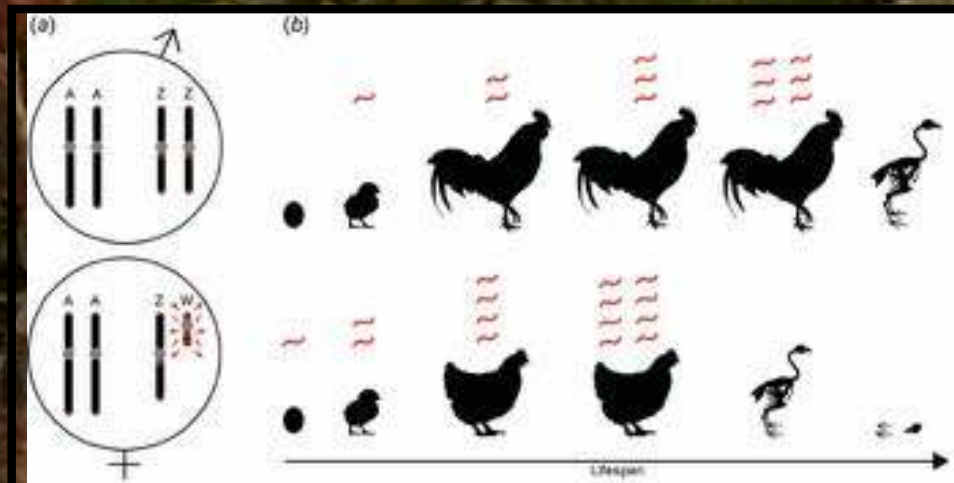
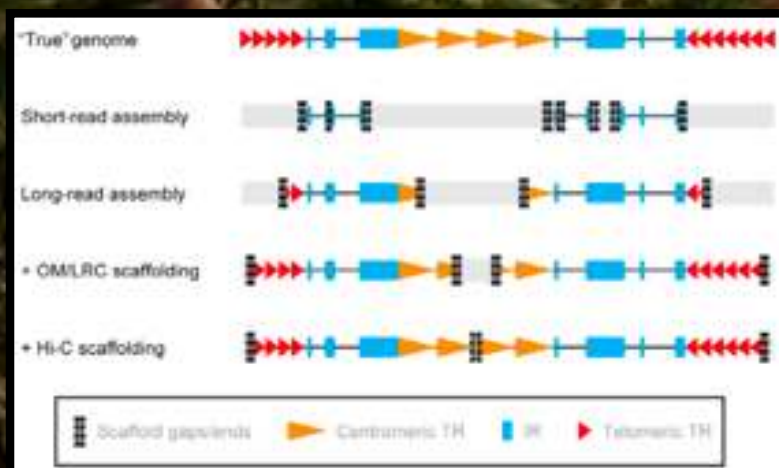


Alexander Suh

The exploration and evolution of the avian genomic dark matter

Genome assemblies

Sex chromosomes and transposable elements



Structural variants

Centromere composition

Saxifraga oppositifolia - untangling relationship between diploids and tetraploids in Svalbard

Separate lineages?

New polyploidization events?

Hybridization between ploidies?

Viktorie Brožová



Přírodovědecká
fakulta
Faculty
of Science

Jihočeská univerzita
v Českých Budějovicích
University of South Bohemia
in České Budějovice



Bioinformatics and Population genomics

Interaction of gene flow and natural selection

Development of methods to detect and quantify:

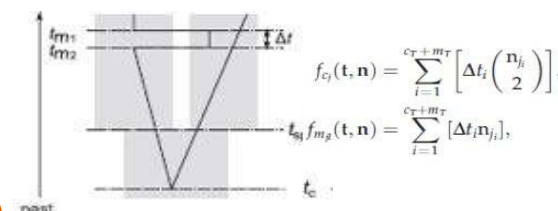
Demographic history of populations

Gene flow and divergent selection

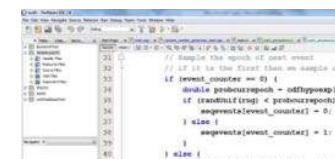
Effect of deleterious mutations (background selection)

Analysis of data from **experimental evolution** and **natural populations**

Population Genetics theory

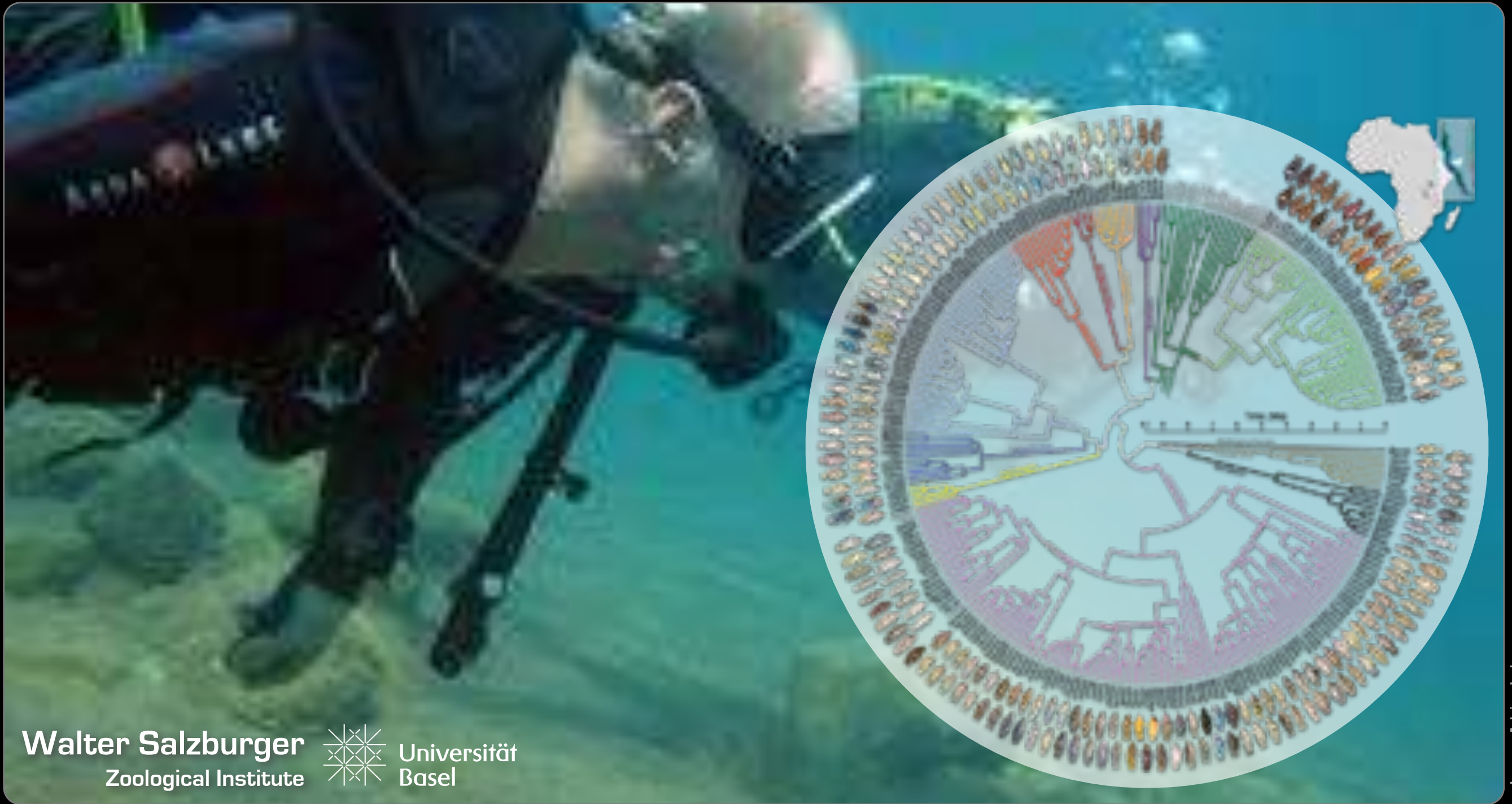


Computational methods



Modeling and data analysis of genomic data





Walter Salzburger
Zoological Institute



Universität
Basel



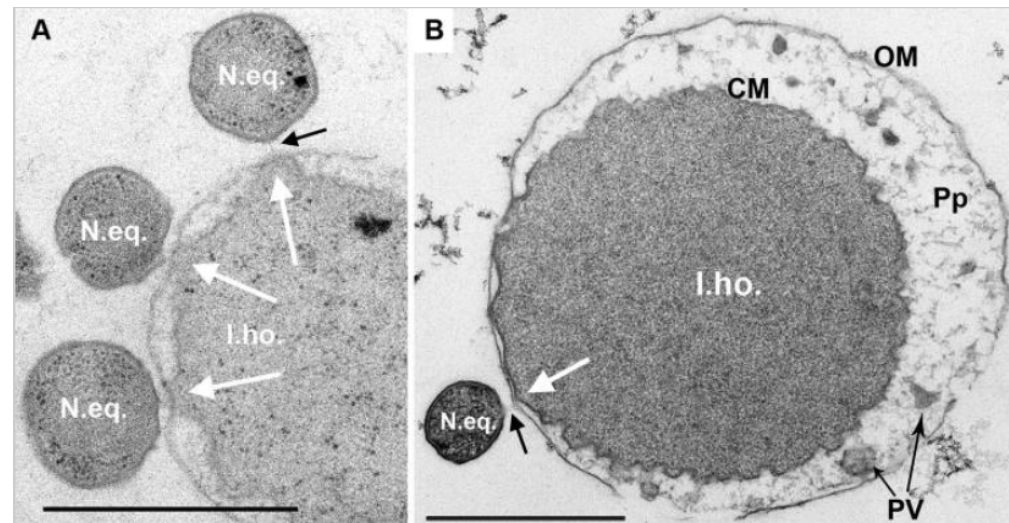
Royal Netherlands Institute
for Sea Research



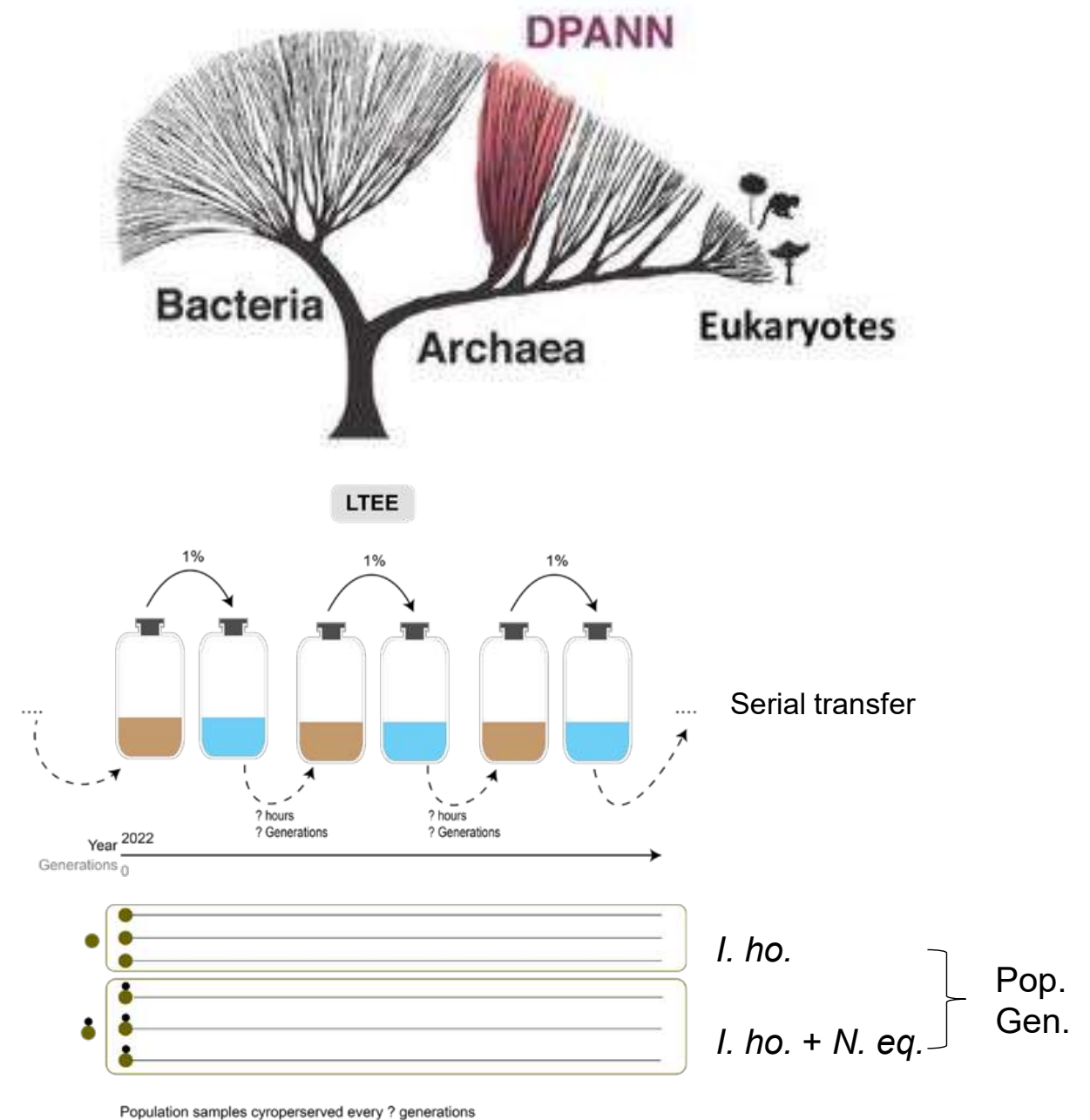
UNIVERSITY OF AMSTERDAM

Wen-Cong Huang

PhD student supervised by Dr. Anja Spang
Archaeal symbiosis, evolution of **DPANN**
archaea

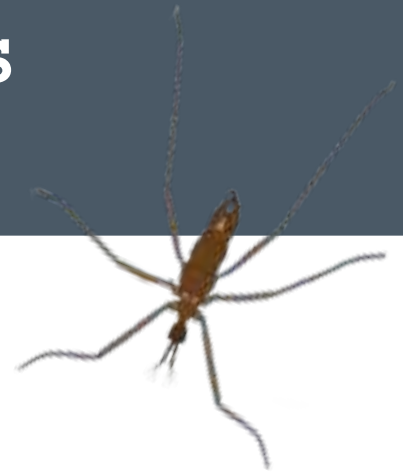


Jahn et al. 2008



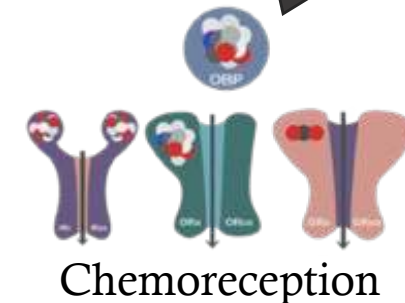
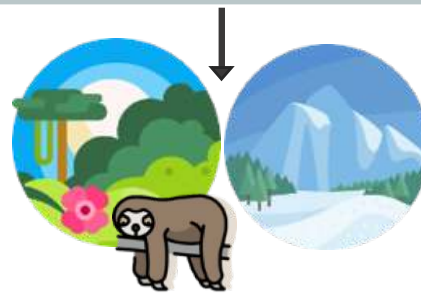
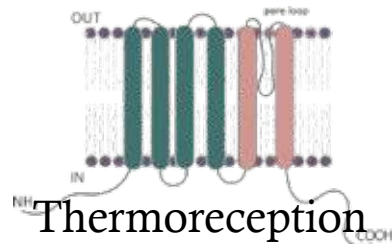
Sensory adaptations to specialized lifestyles

Zaide Montes, Jadranka Rota, Niklas Wahlberg, Christer Löfstedt, Bill S. Hansson & Marcus Stensmyr



What are the adaptations involved in **survival** and **reproduction** in **specialized niches**?

To provide insights into **adaptations** enabling insects to succeed in highly **specialized niches**



Genome annotation

Ortholog inference

Comparative genomics

Expression & Behavioral experiments

Thanks!

Workshop on Population and Speciation Genomics

Country:

Shandong province, China

Education:

2017.9-2020.12 Master of Science in Evolutionary Biology, Xishuangbanna
Tropical Botanical Garden, Chinese Academy of Sciences

2022.1-present PhD Fellow, the Department of Plant and Environmental Science,
Copenhagen University

PhD Project:

Local adaptation and evolution of weediness in *Alopecurus myosuroides* (blackgrass)

Research interests:

Population genetics, quantitative genetics and population genomics/genomics



Quanjing Zheng (Jing)

Thanks!