Participant introduction

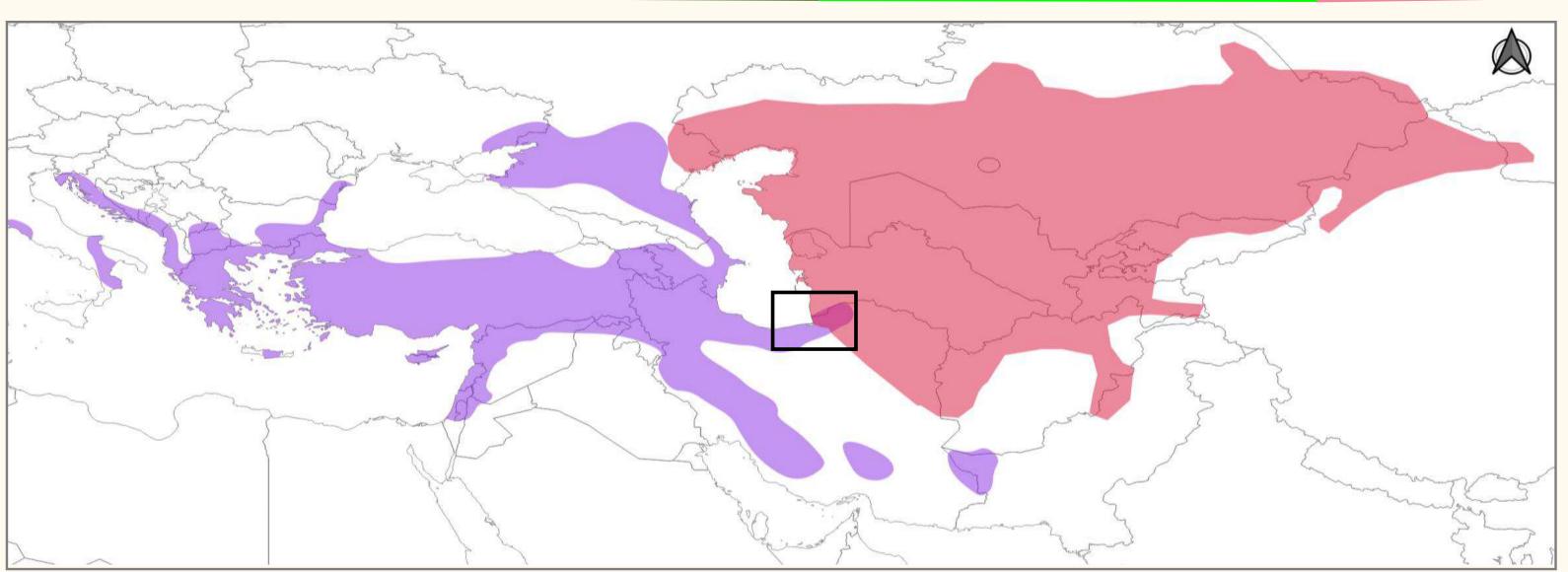
Niloofar Alaei

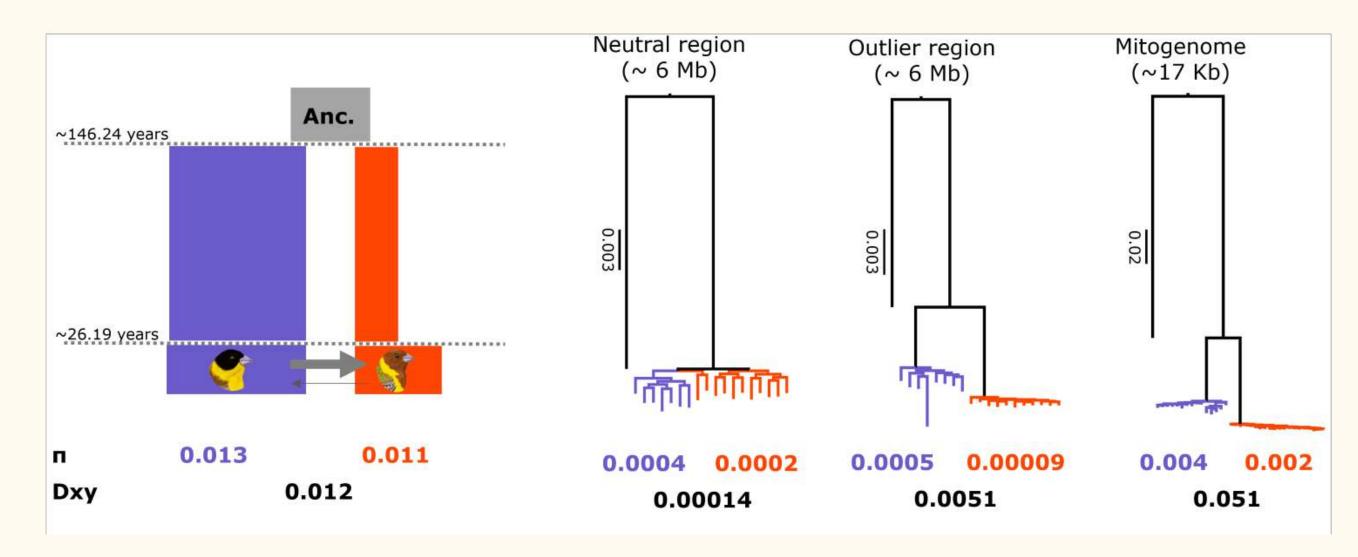
Transgressive phenotype

Intermediates phenotype

N A T U R K U N D E M U S E U M S T U T T G A R T









Hannah Augustijnen

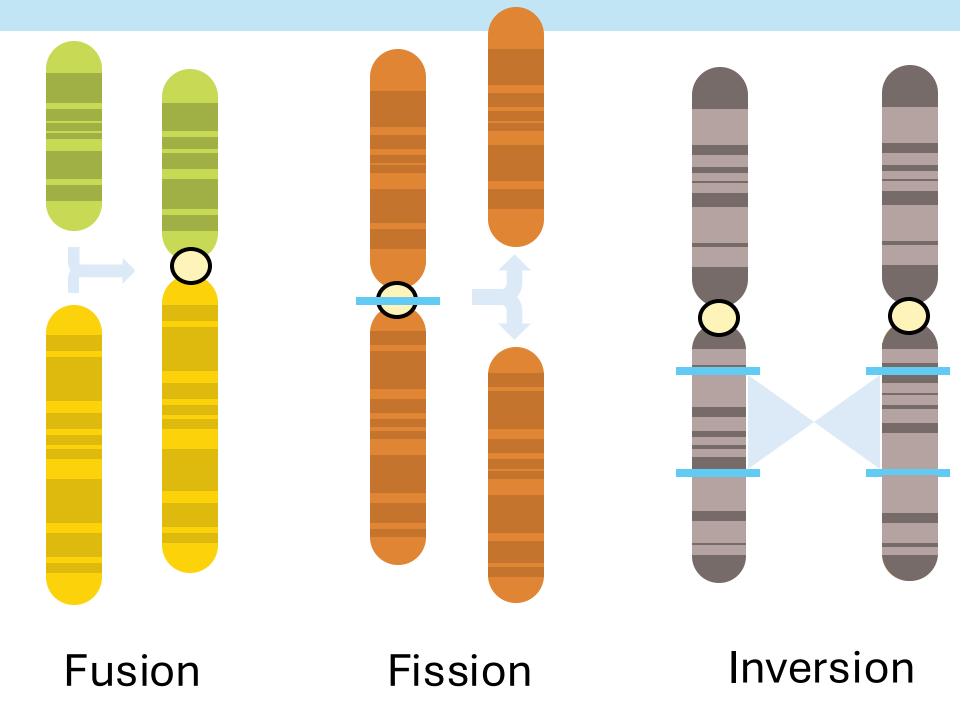
Postdoc, Flatt Lab, University of Fribourg, Switzerland Evolutionary biologist

PhD (University of Basel):

- Speciation in *Erebia* butterflies.
- Focus on chromosomal rearrangements (fusions and fissions).

Current research:

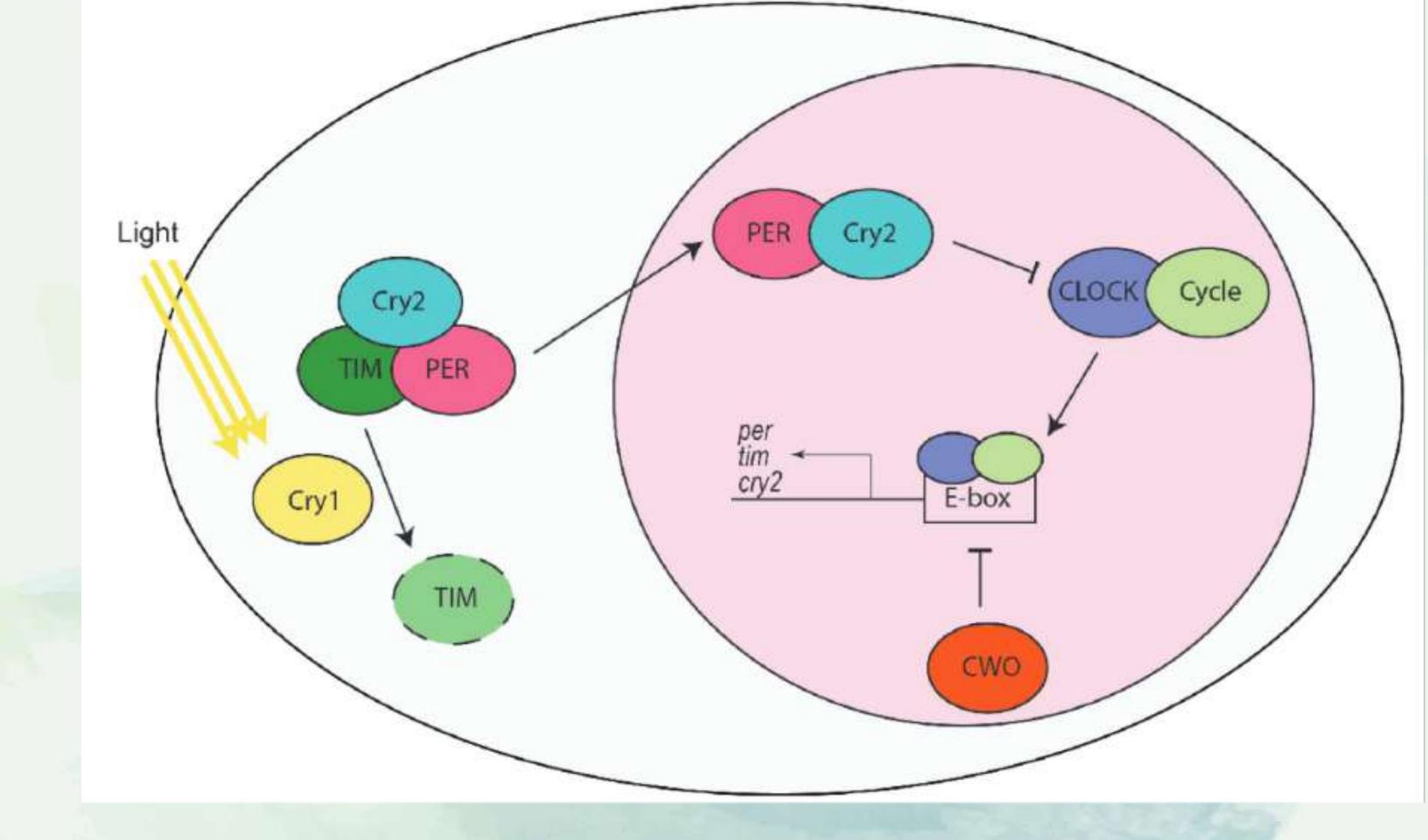
 Investigating adaptive inversion polymorphisms in the ancestral range of the fruit fly *Drosophila* melanogaster in Africa.



What is the adaptive nature of inversion polymorphisms and what are the mechanisms of (balancing) selection that maintain them?

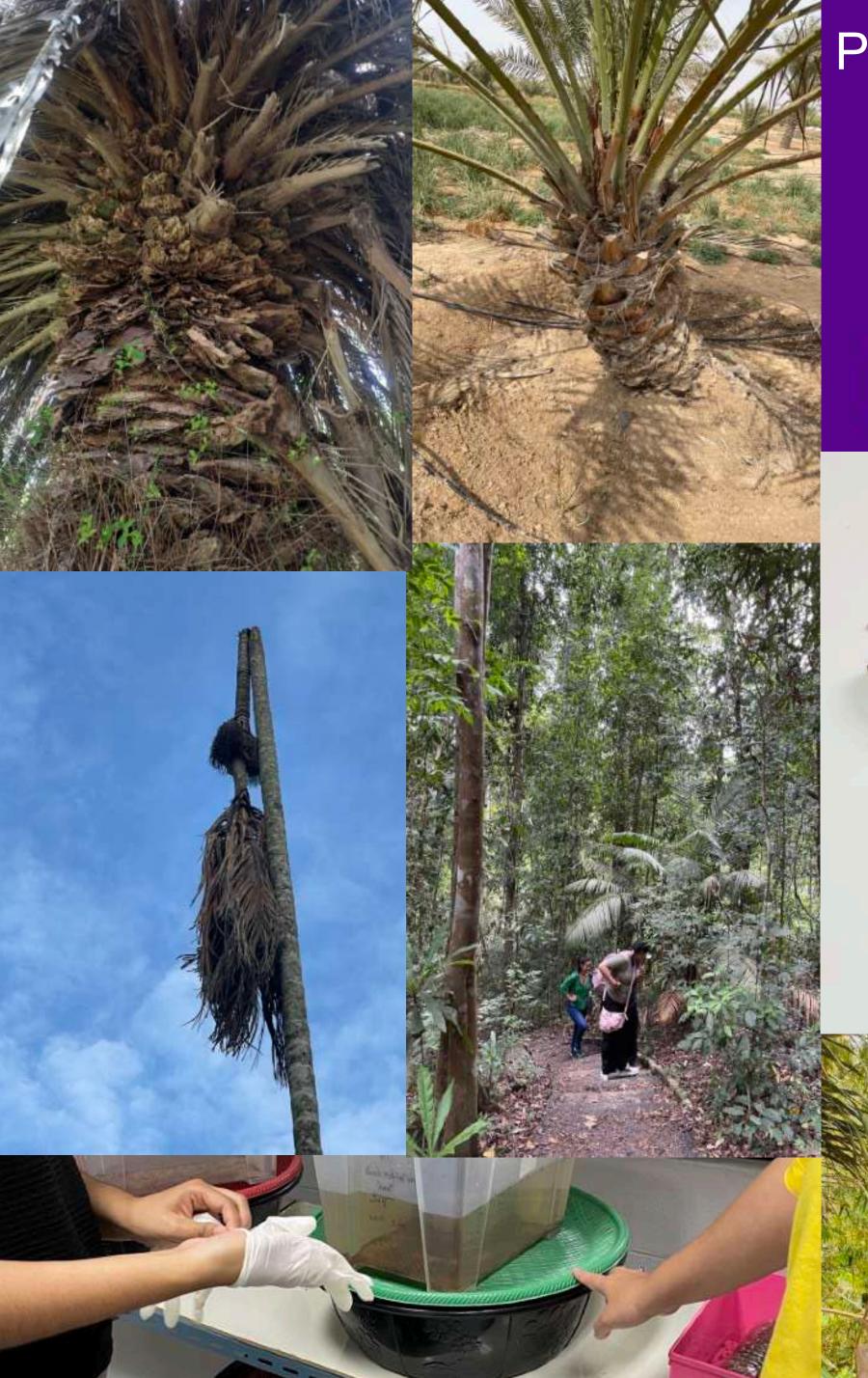






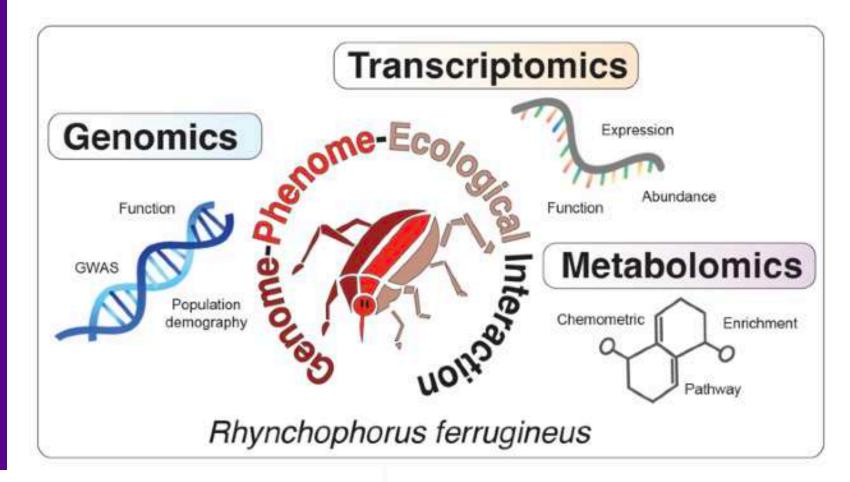
- Saurav Baral
- Postdoc, Stockholm University
- Evolution of Clock genes in Butterflies

Julia M.I. Barth University of Basel, Switzerland Cichlids Cichlids **Switzerland** Eels H. studenticus Norway Gray wolf Yellowfin tuna Atlantic cod New Zealand NZ dotterel NZ storm petrel Germany **Switzerland** Permum of Cichlids Fruit fly Zebrafish LY J **WPSG** Outgroup 2022 2010 2014 2018 2006 2002



Population Multi-omics exploration with Red Palm Weevil

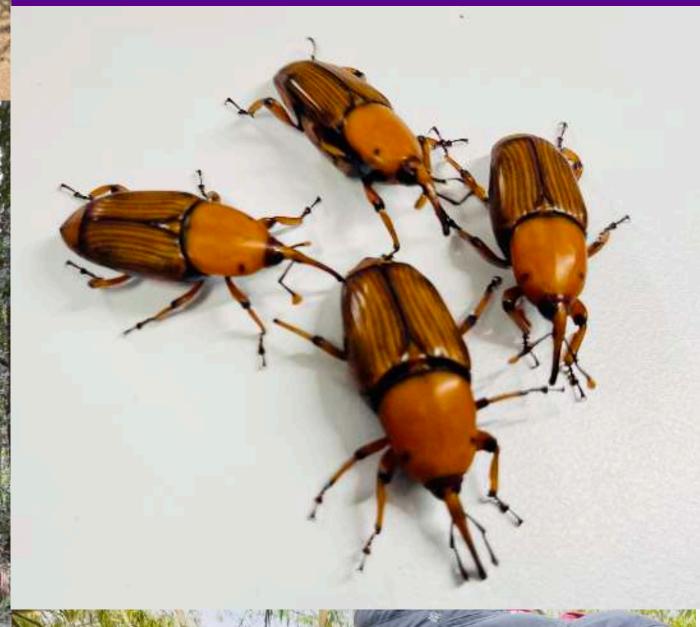
جامعة نيويورك ابوظي NYU ABU DHABI Dr. Neelu Begum (Post Doc) Human Microbiome South London Bred



Insectide-pesticide

resistome

Functional /



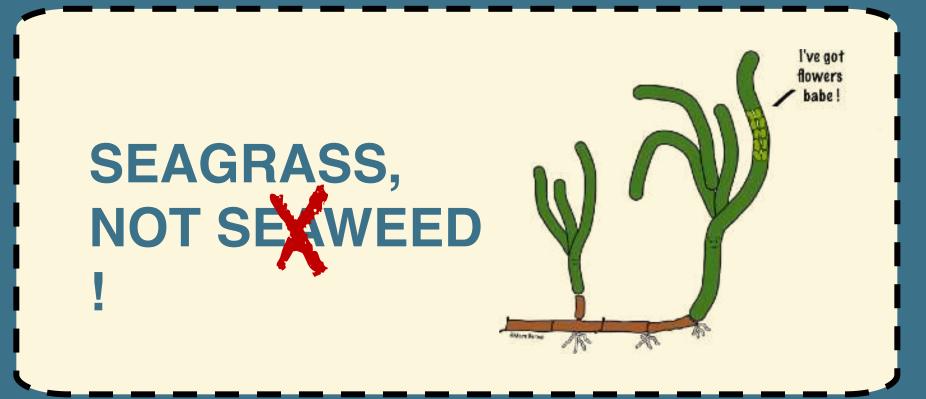




Scaling up eelgrass restoration for coastal biodiversity: A framework for climate-adaptive management



My research focuses on evaluating genomic tools and developing frameworks to enhance seagrass resilience to climate change.



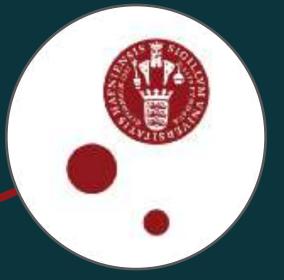


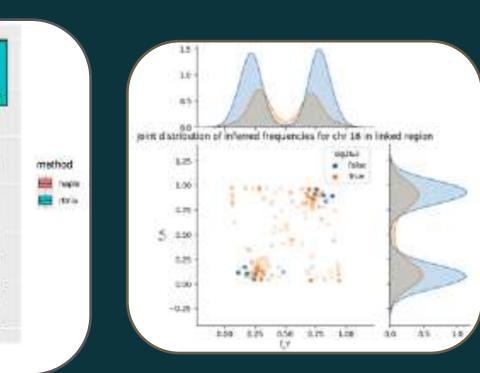
Maru Bernal - University of Gothenburg maru.bernal@gu.se

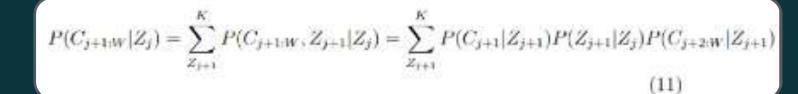


Thomas Bøggild -Research assistant @ University of Copenhagen





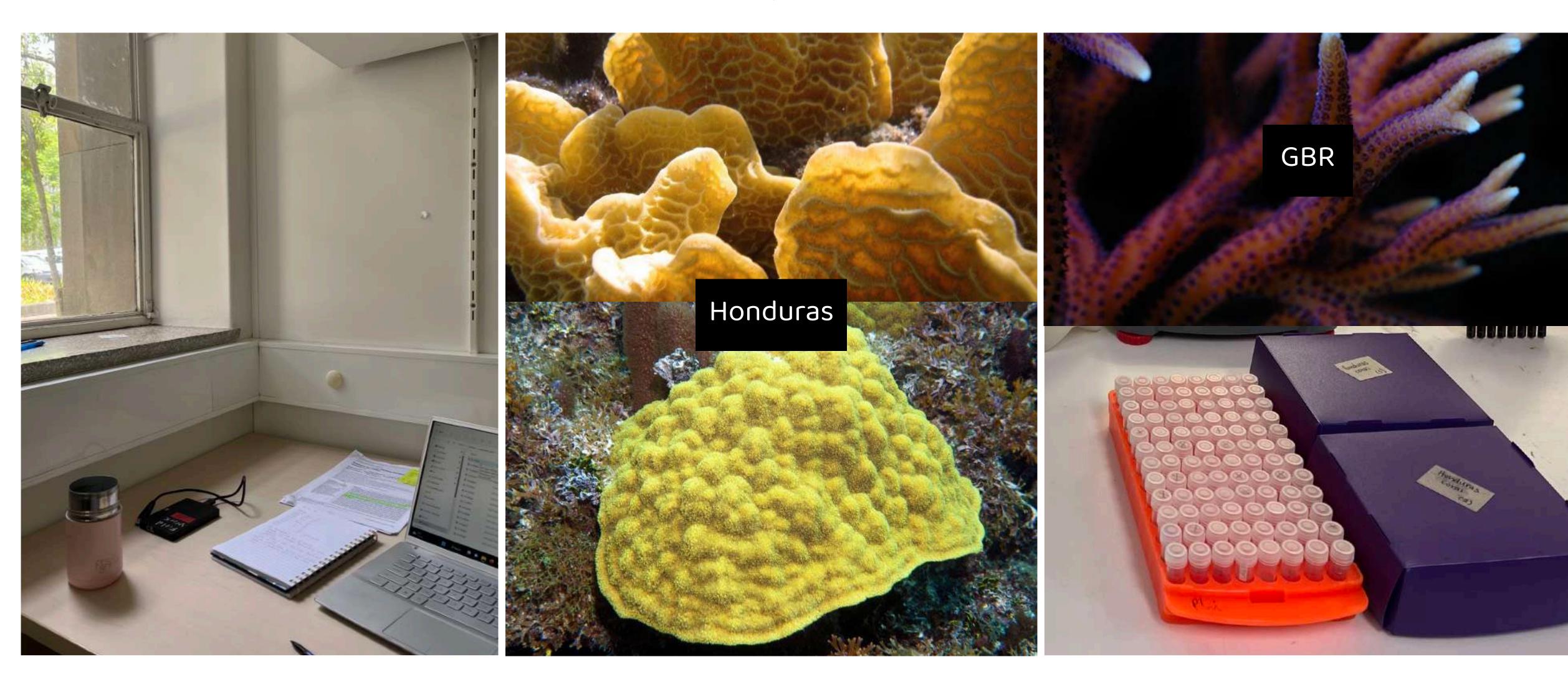






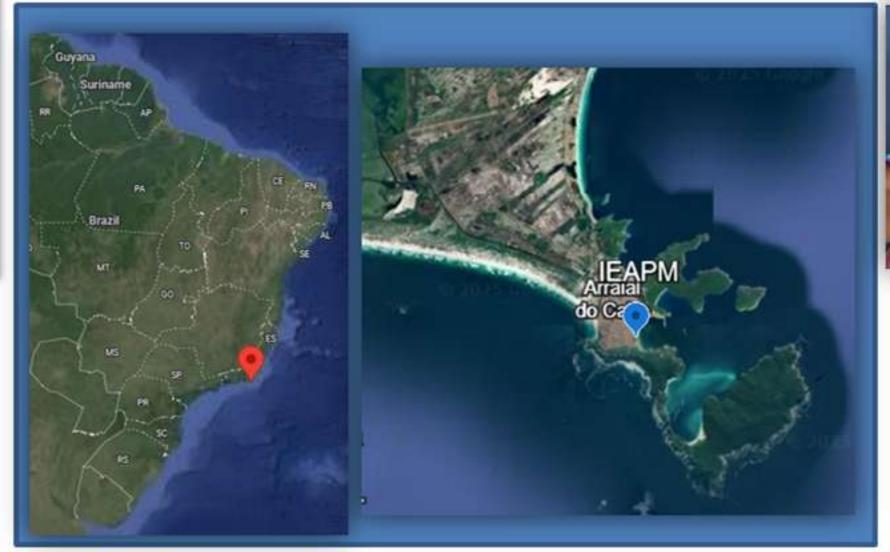
Ilha Byrne

The University of Queensland



IEAPM Brazil Field:

Dr. Sávio Calazans saviocalazans@gmail.com







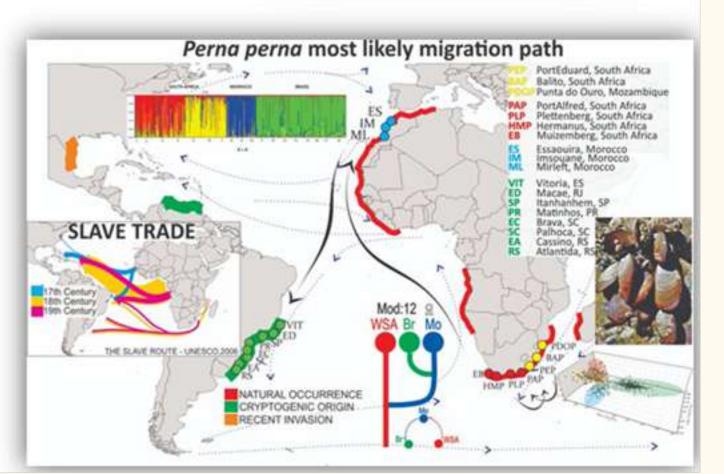
Marine Biology / Bioinvasion / Phylogeography







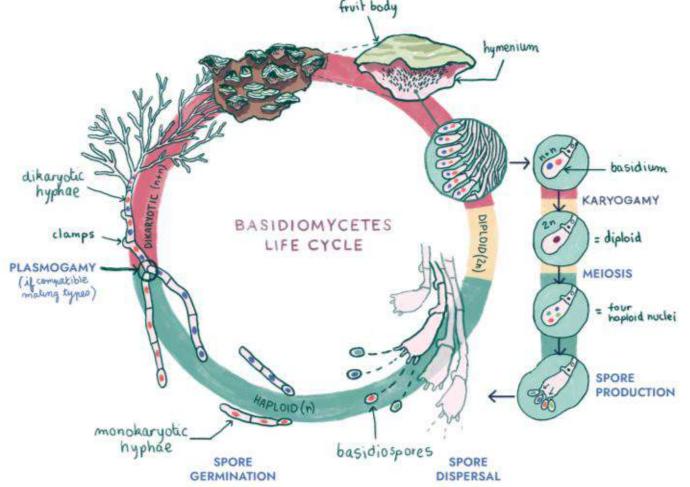




Michelle Vera Castellanos

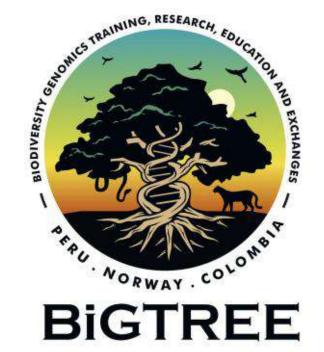
MsC in Ecology and Evolution. Universitetet I Oslo.





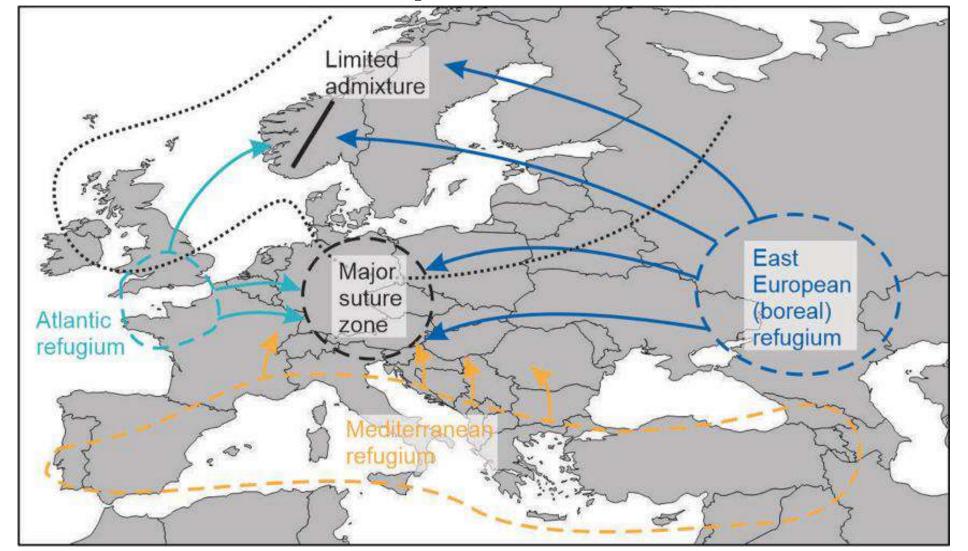






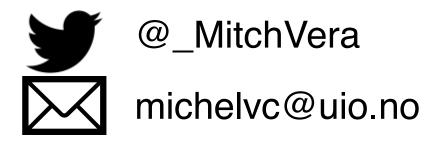


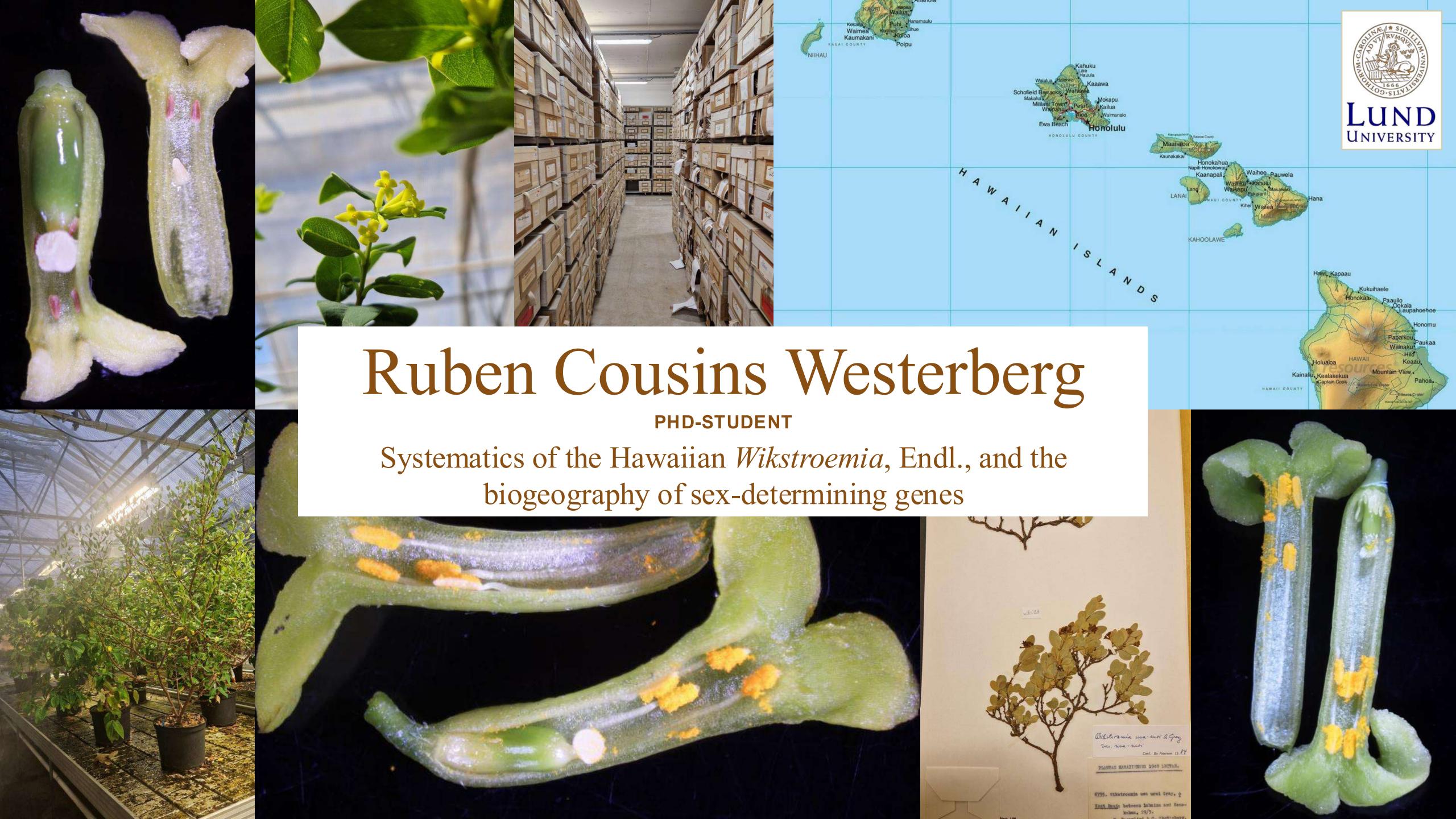
Trichaptum abietinum



Interest

- Population genomics
- Biogeography
- Phylogenomics
- Hibridization and speciation in fungi
- Genomic incompatibilities and mating barriers in fungi





PhD topic: Phylogeography, evolutionary history and taxonomy of frogs from the





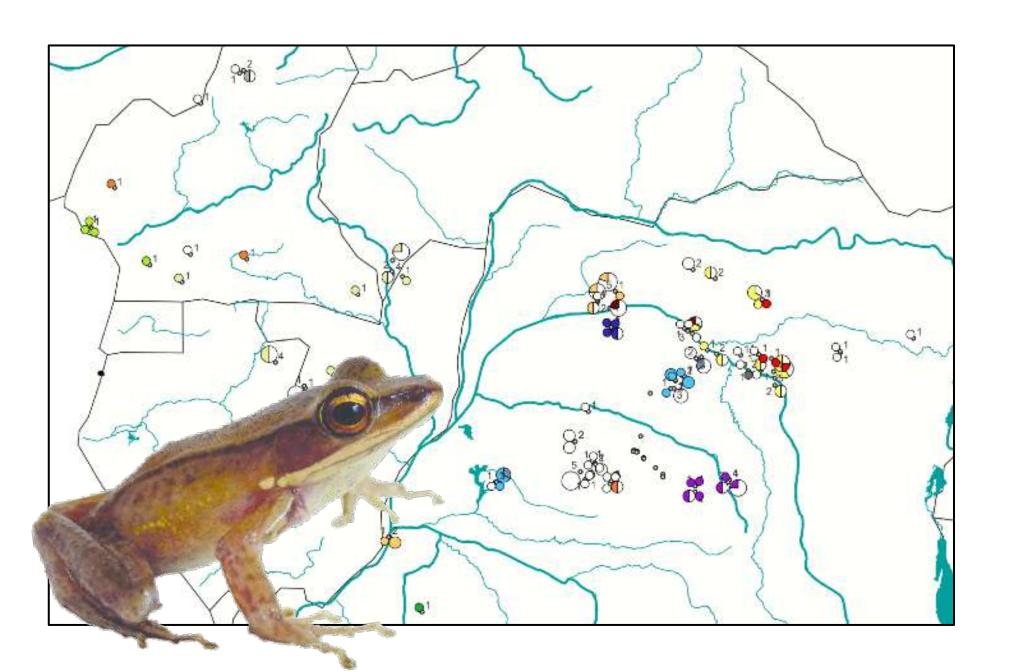


Janis Czurda^{1,2}

Supervisor: Václav Gvoždík

¹Institute of Vertebrate Biology (CAS)

²Masaryk University







Nauras Daraghmeh PhD student University of Gothenburg, Sweden



University of Gothenburg
Sweden

University of Bremen Germany





University of Technology Dresden Germany



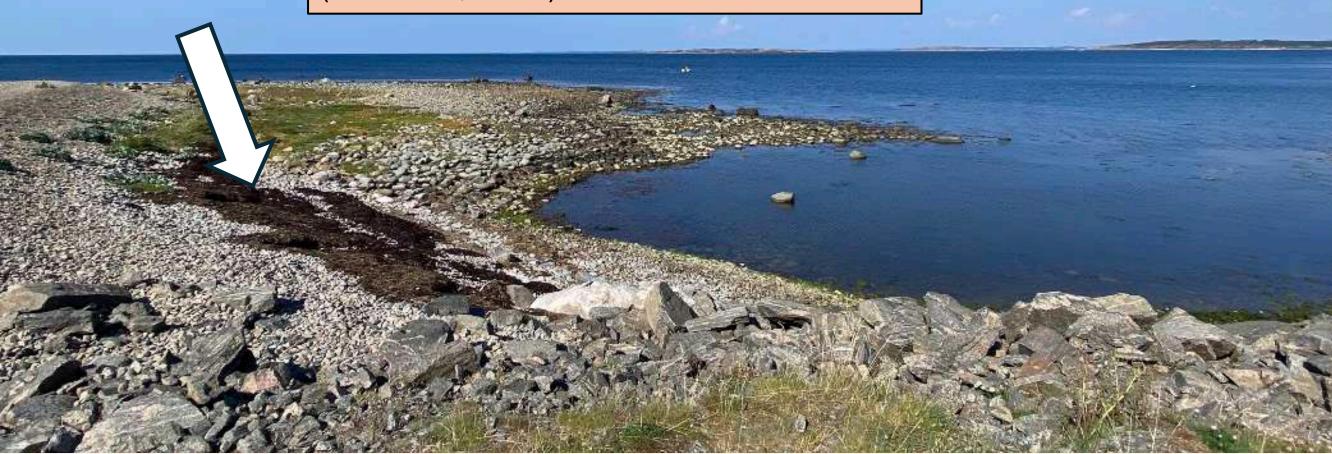
Berdan et al., 2018, Evol. Ecol.

Chromosomal inversions in seaweed flies

Seaweed (or kelp) fly

Coelopa (Fucomyia) frigida

(Fabricius, 1805)





KAUST Saudi Arabia







Frasella De Martino Fonseca

MSc. Student, University of Oslo, Norway

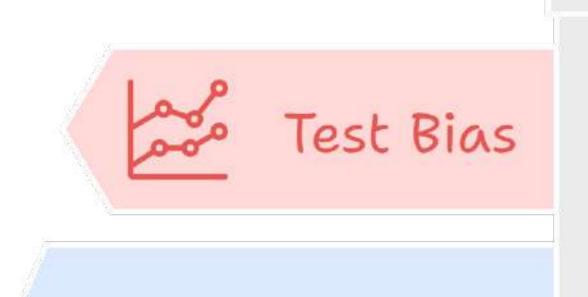








How do bottlenecks and sample size affect hybridization tests??

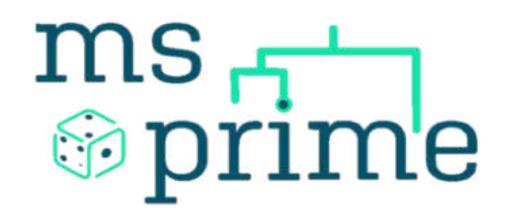


Sample Size

Impact

Detect
introgression







I AM VIOLET, LIKE THE BACKGROUND BUT WITH DOUBLE T VIOLETTE

PhD

Forest Ecology

Population genetics



Montpellier, FRANCE

Gene duplication

Comparative genetics









Doublet Violette

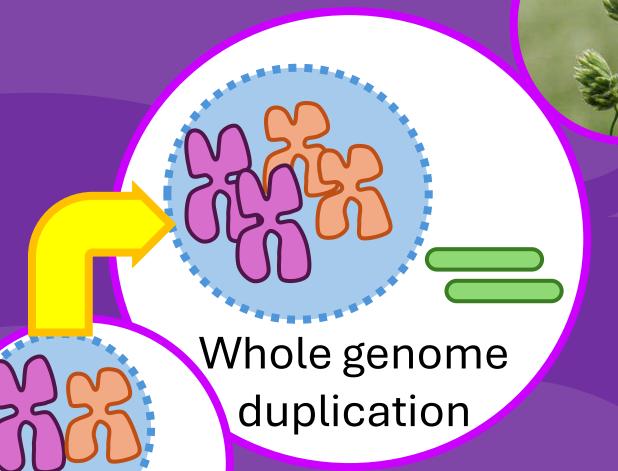
Kolář lab - Plant ecological genomics

Charles University, Prague CZECHIA



Genome duplication

Comparative genetics



Adaptation Convergence





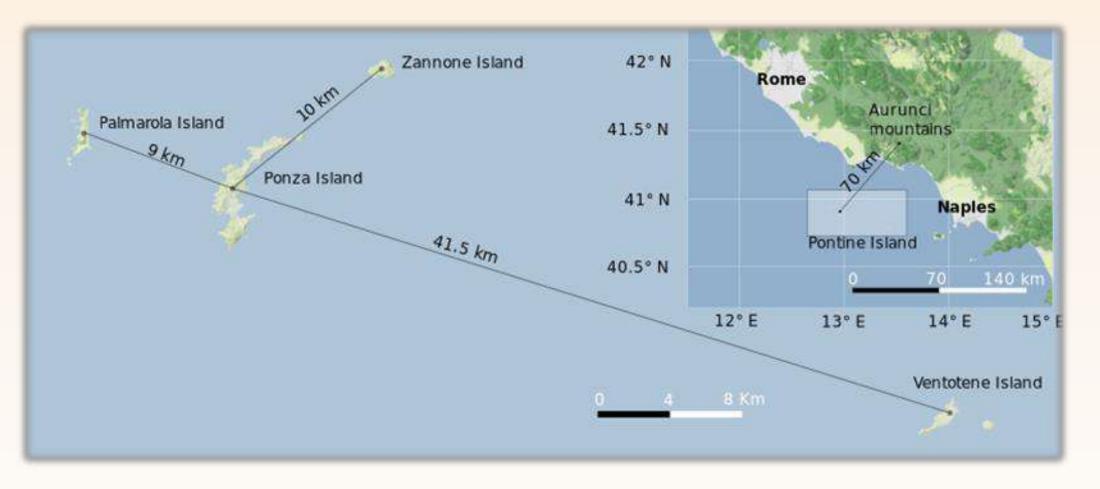
Sebastiano Fava

sebastiano.fava@iusspavia.it

Department of Life and Environmental Sciences, Polytechnic University of Marche, Italy

Unveiling the genomic drivers of postglacial range expansion dynamics and evolutionary adaptations in the Italian endemic amphibian, *Bombina pachypus*





PhD Project:

Side project:

Explore the genomic insights into the population dynamics and genetic load of the endemic butterfly, *Hipparchia sbordonii*,









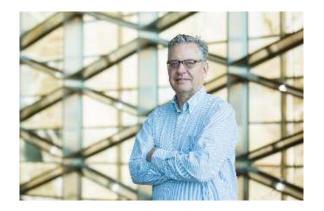
Alice Fornasiero







PhD at the University of Udine (Prof. Michele Morgante)





Postdoc in the Prof. Rod Wing Lab



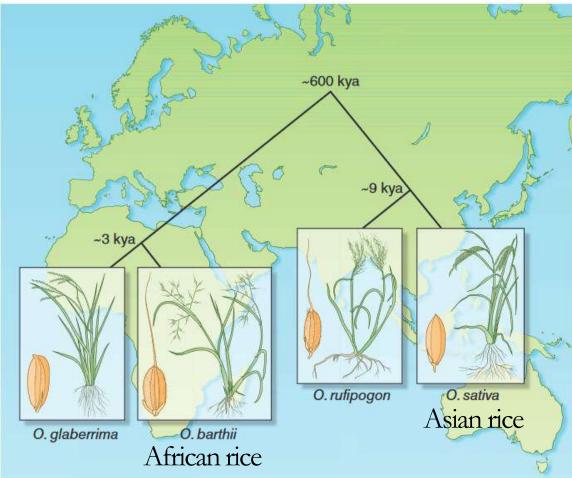
Dolomites, Italy

Edge of the World, Riyadh

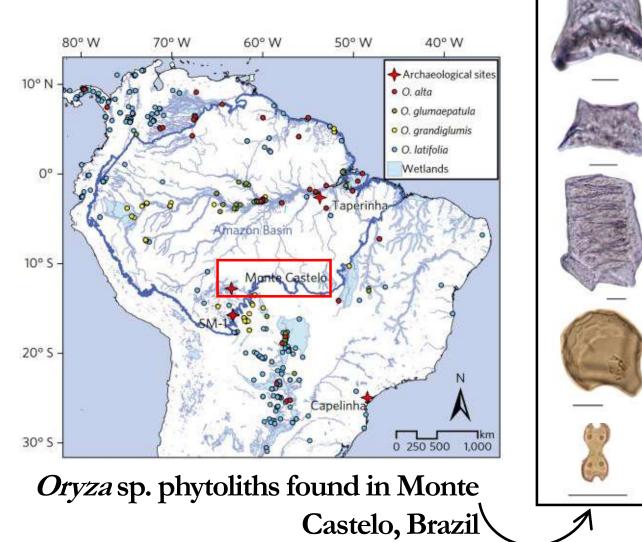


Was there a third cradle of rice (Oryza sp.) domestication in

the Americas?



Purugganan MD. *Nat Genet*. 2014



Hilbert L et al. *Nat Ecol Evol.* 2017



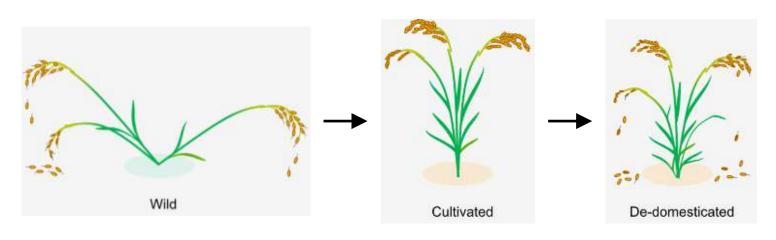
O. glumipatula type specimen
Collected by FW Hostmann in 1840
Described as cultivated in Surinam

Is O. glumipatula a recent escape from an introduced rice?



b-womeninamericanhistory19.blogspot.com

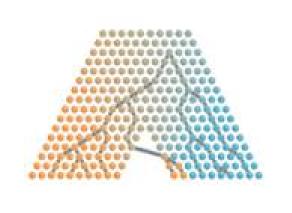
Rice cultivation in the Americas by enslaved Africans (16th - 19th century)



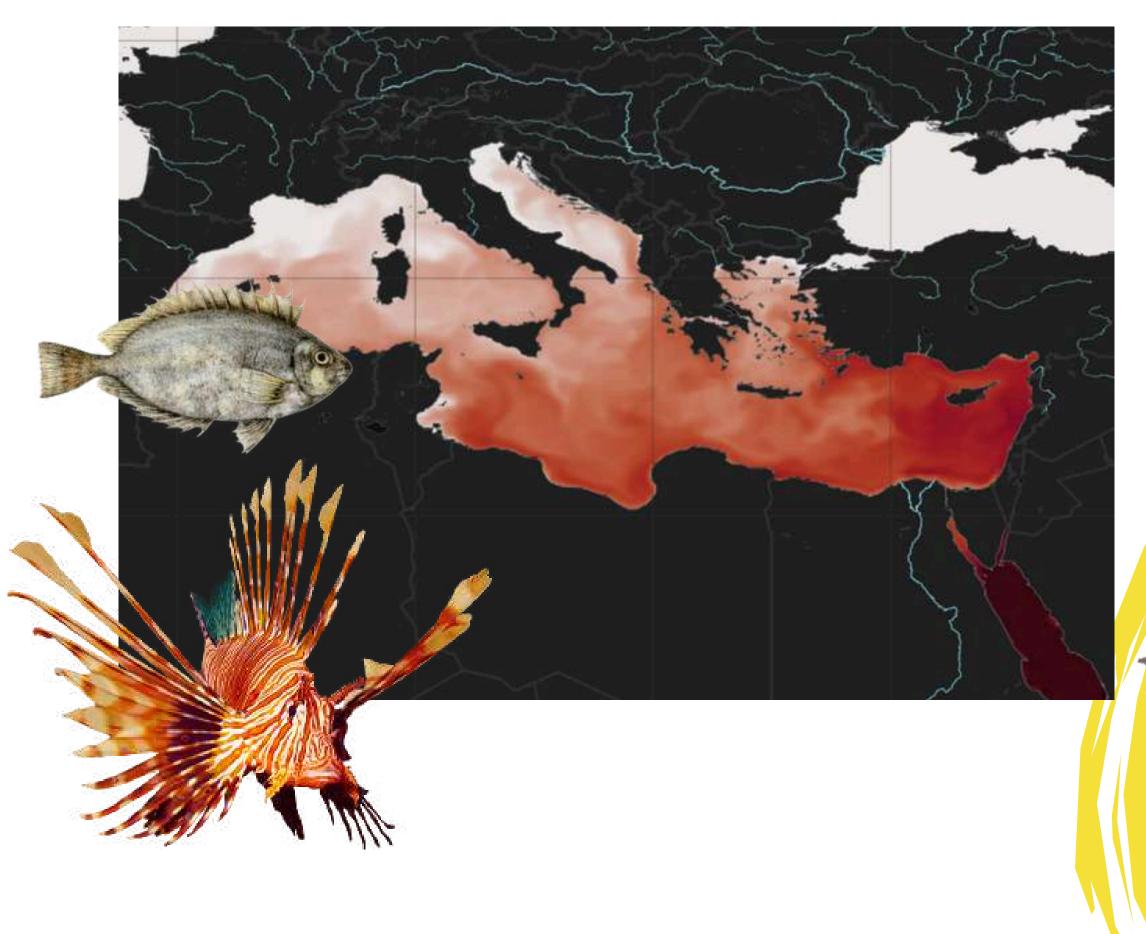
Wu D, Lao S, Fan L. Trends Plant Sci. 2021.

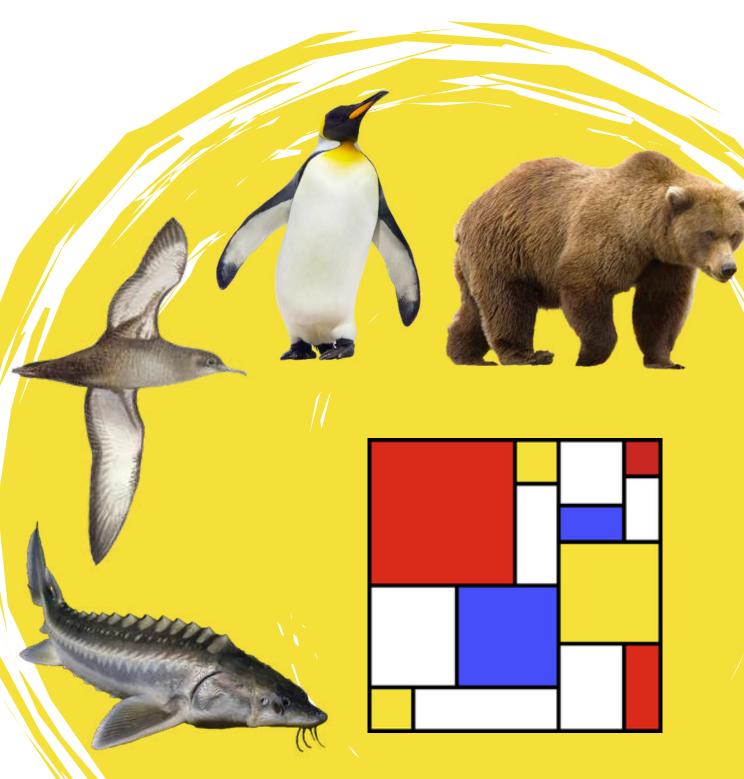
Francesco Giannelli

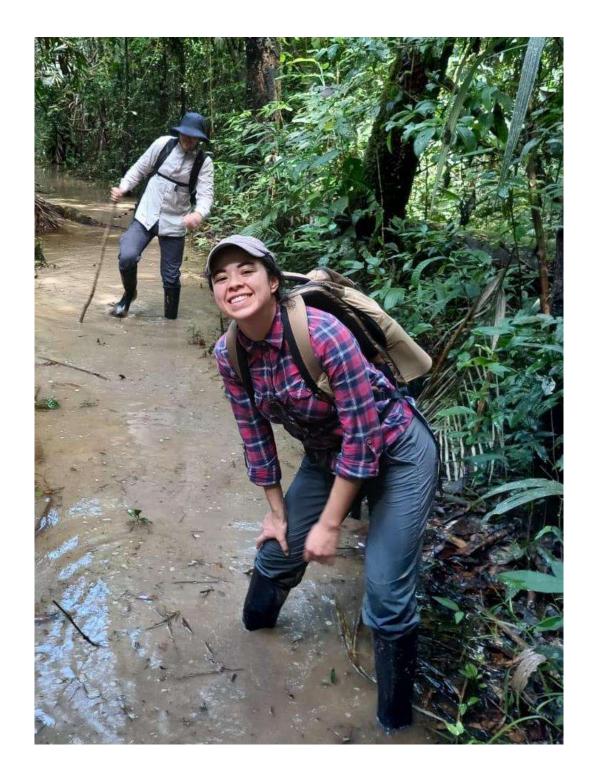
PhD student - Marche Polytecnic University











Diana C. González

PhD student

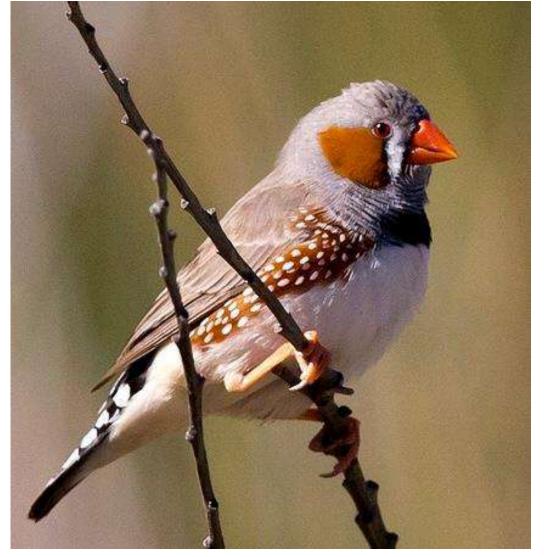
Molecular Biodiversity research group

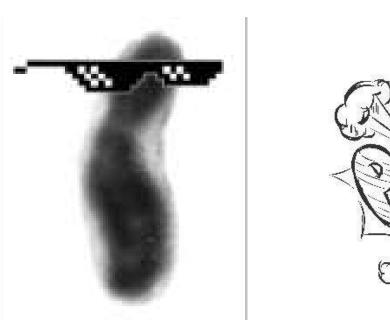
email: d.gonzalez@leibniz-lib.de

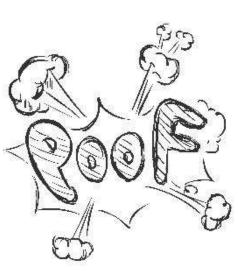
The Population Genetics and Short-Term Evolution of the Zebra Finch Germline-Restricted Chromosome (GRC)



Taeniopygia guttata















Carlota Gracia Sancha PhD student

Museo Nacional de Ciencias Naturales



OBJECTIVES

- Genetic diversity and connectivity
- Migration patterns
- Adaptative potential
 - Environmental factors
 - Microbiome
- Protected area design and management

Research group

Department of Biodiversity and Evolutionary Biology

Riesgo & Taboada Lab



Integrating genetic connectivity and adaptation in deep-sea Atlanto-Mediterranean benthic invertebrates for conservation purposes

Porifera and Annelida



Pachastrella

ovisternata

Phakellia

Phakellia robusta

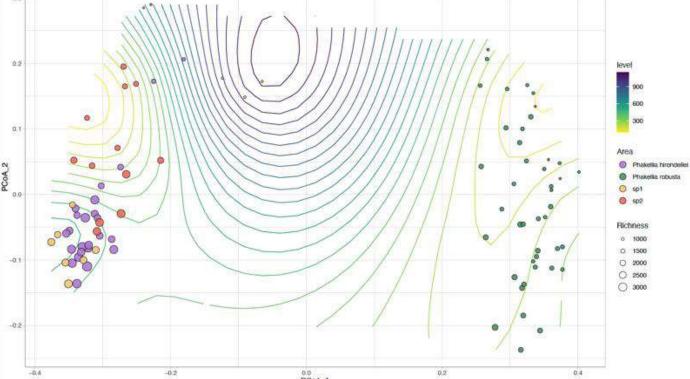


Eunice norvegica

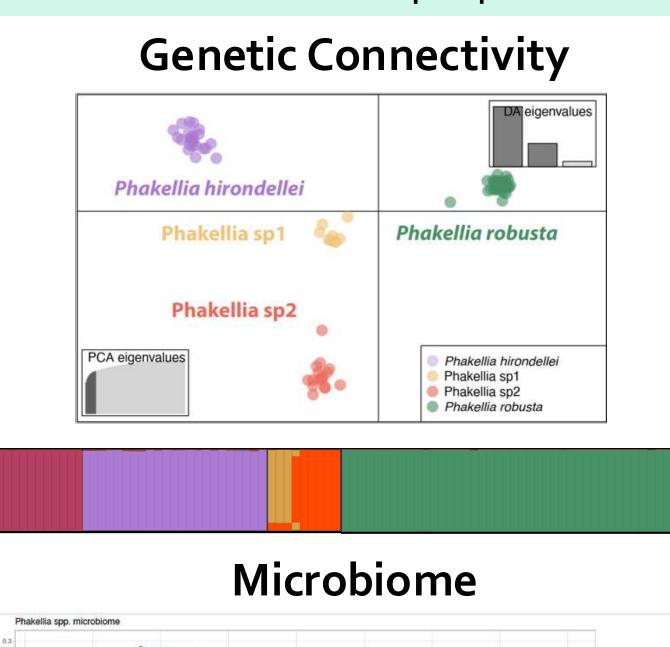












SASKATCHEWAN ONTARIO NOVA SCC MAINE Ottawa NORTH DAKOTA MINNESOTA WASHINGTON MONTANA OREGON WYOMING NEBRASKA \ NEVADA United States MISSOURI KENTUCKY CAROLINA UTAH COLORADO San Francisco TENNESSEE SOUTH CAROLINA CALIFORNIA OLas Vegas OKLAHOMA Los Angeles ARIZONA NEW MEXICO Gulf of Mexico

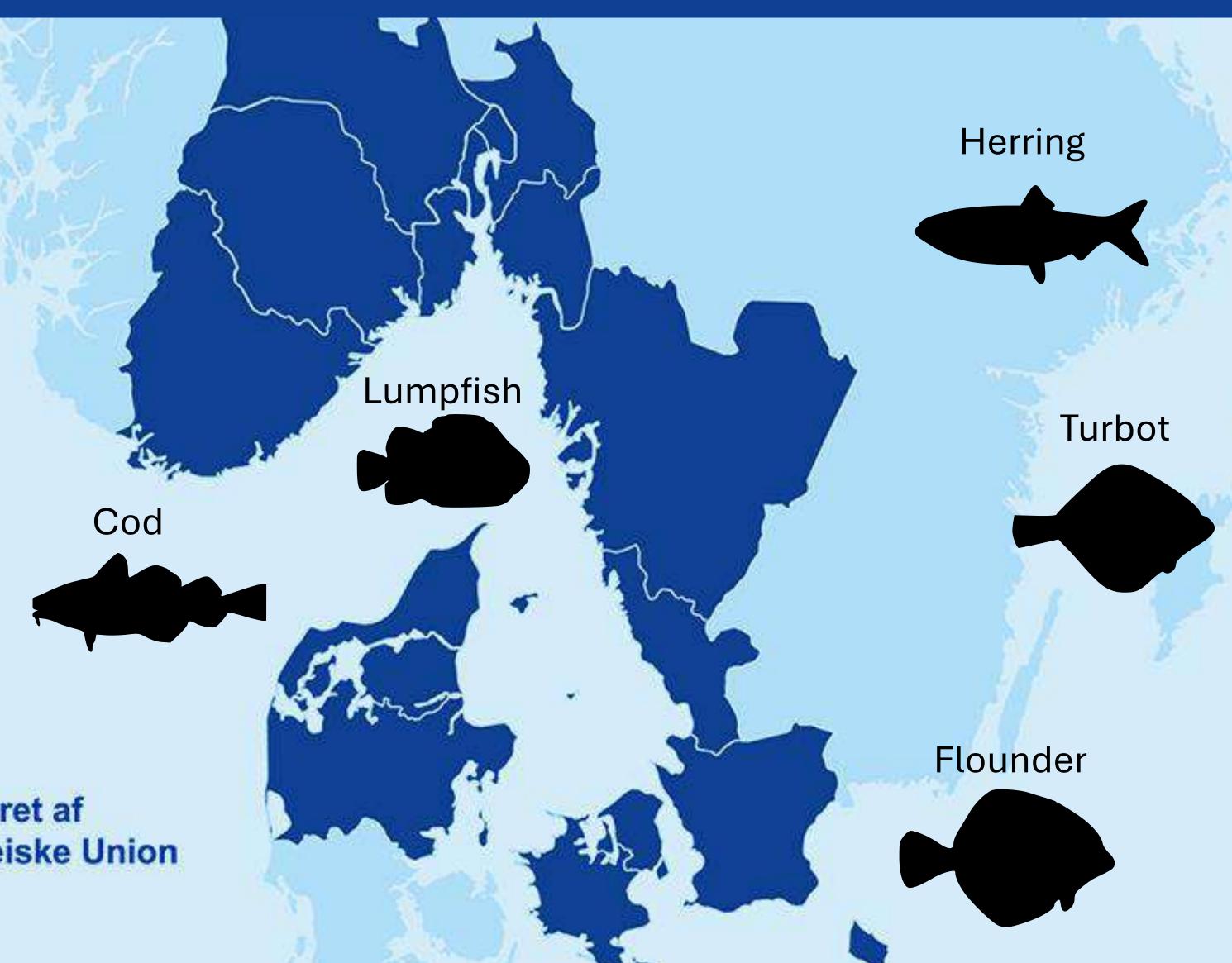
Matthew Hahn mwh@iu.edu @3rdreviewer



Climate Change Population Genomics Danny Hancock, PhD Student



- Evaluating vulnerability to climate change in marine species in the North Sea Baltic Sea transition zone
 - Steep salinity gradient
- Genetically Informed Ecological Niche Modelling (gENM)
 - Population specific responses
- Genetic Vulnerability
 - Diversity, inbreeding, genetic load, genetic offsets
- Comparative Population Genomics
 - Structural variation, parallel adaptation







Medfinansieret af Den Europæiske Union

Öresund-Kattegat-Skagerrak





- Repeatability of natural selection
- Sustainability
 Education



MK Hickox

PhD Candidate McGill University, Montreal, Canada PI: Dr. Rowan Barrett + Dr. Andrew Hendry





Sophia Hurtado-Solano

Student of MSc. Biosciences – Ecology & Evolution
University of Oslo, Norway
sophiahs@uio.no

Masters thesis: Epigenetic potential and distribution propensity in Eurasian Passer sparrows





PhD

Phylogeography of allopolyploid wild wheats and of their transposable elements

- phylogeny
- comparative genomics
- niche modeling

Postdoc

Role of domestication as barrier to gene flow

- comparative genomics
- structural variants
- genetic load



seníor PI?

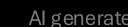






2021







2014



Once upon a

tíme...

Postdoc

Conservation genomics of endangered birds

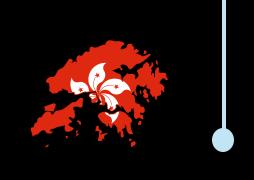
- demographic modeling
- inbreeding, genetic load
- metabarcoding

Postdoc

Early adaptation to polyploidy perse

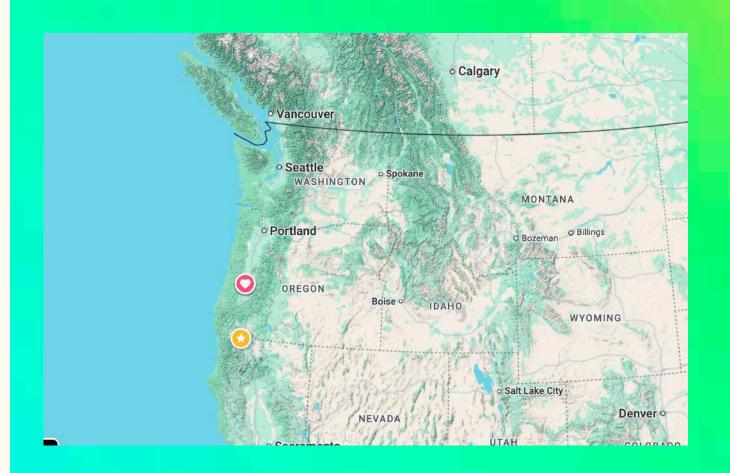


- pangenomics
- selection scans
- role of meiosis

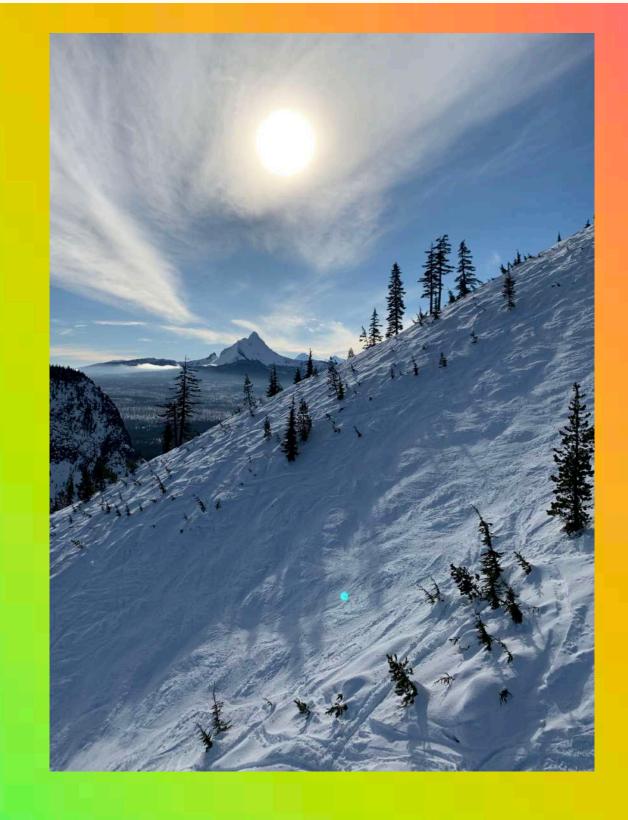












ANDYKERN

UNIVERSITY OF OREGON





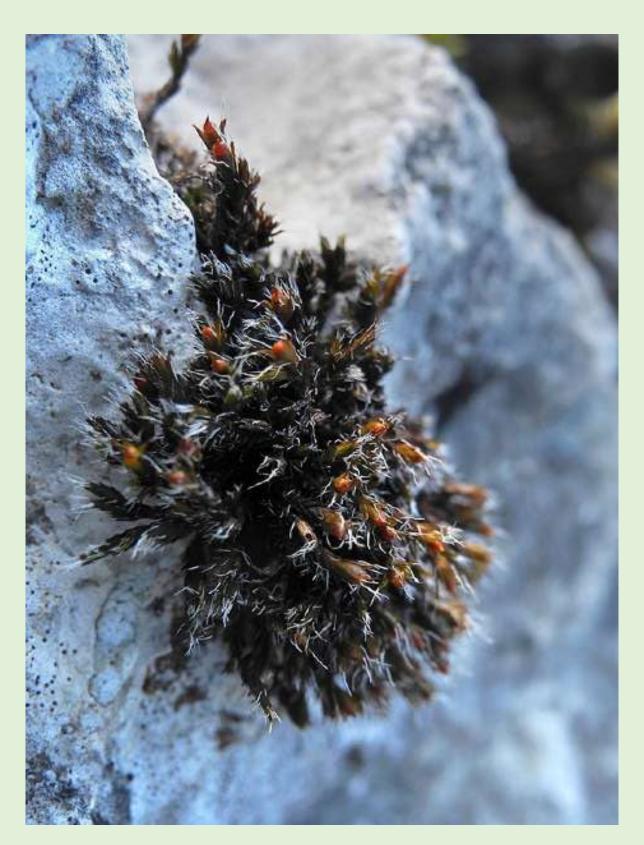


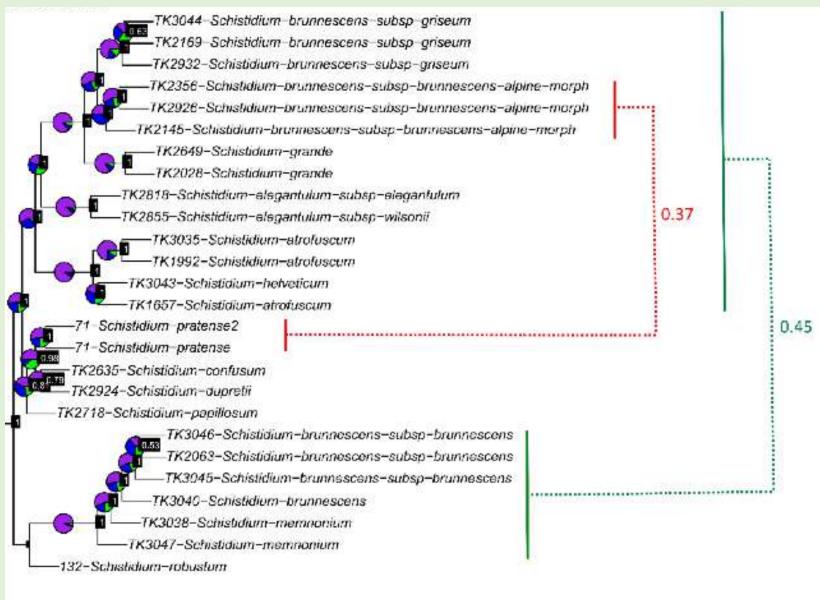
THOMAS KIEBACHER



Germany, Switzerland, Austria, Italy

Diversity and evolution in the pioneer plant genus Schistidium







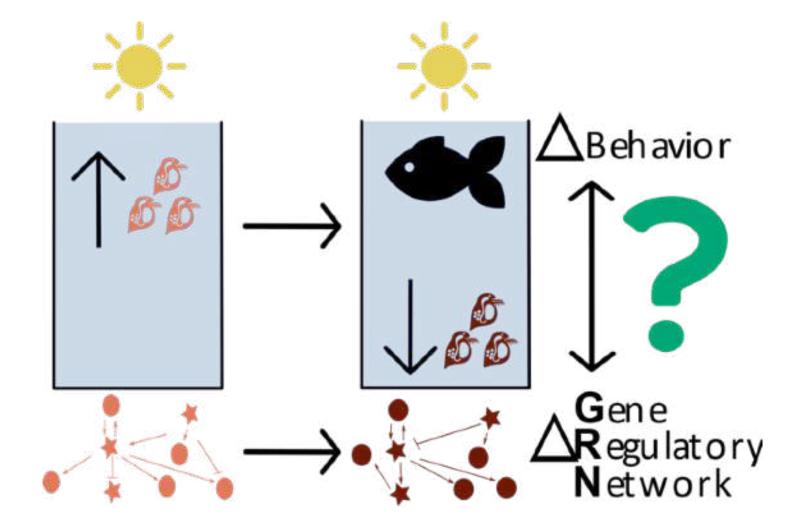


-> Hybridisation, Adaptation

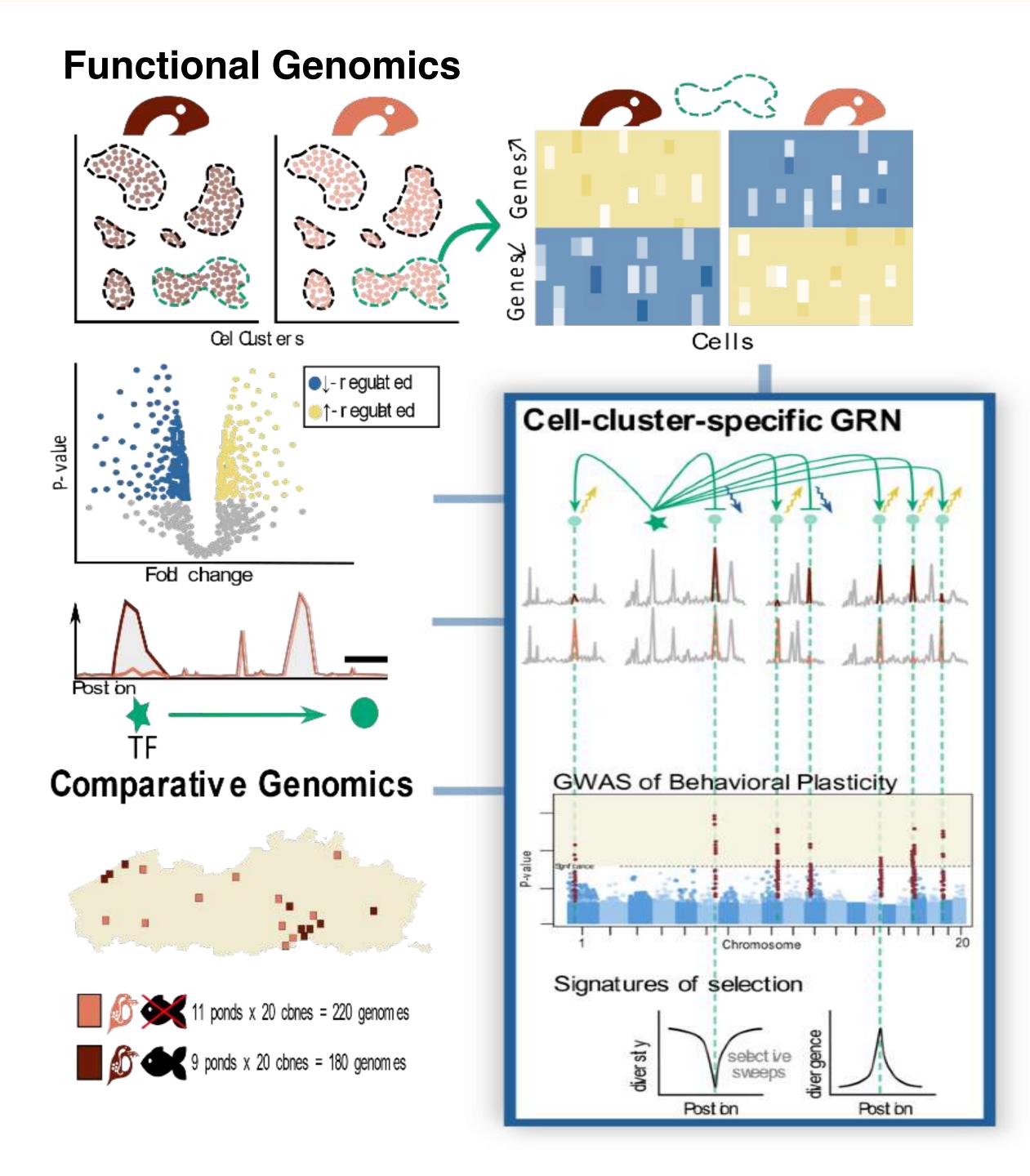
Target capture, WGS, ddRAD

Investigating the Gene Regulatory Networks (GRN) of Behavioral Plasticity in *Daphnia magna*

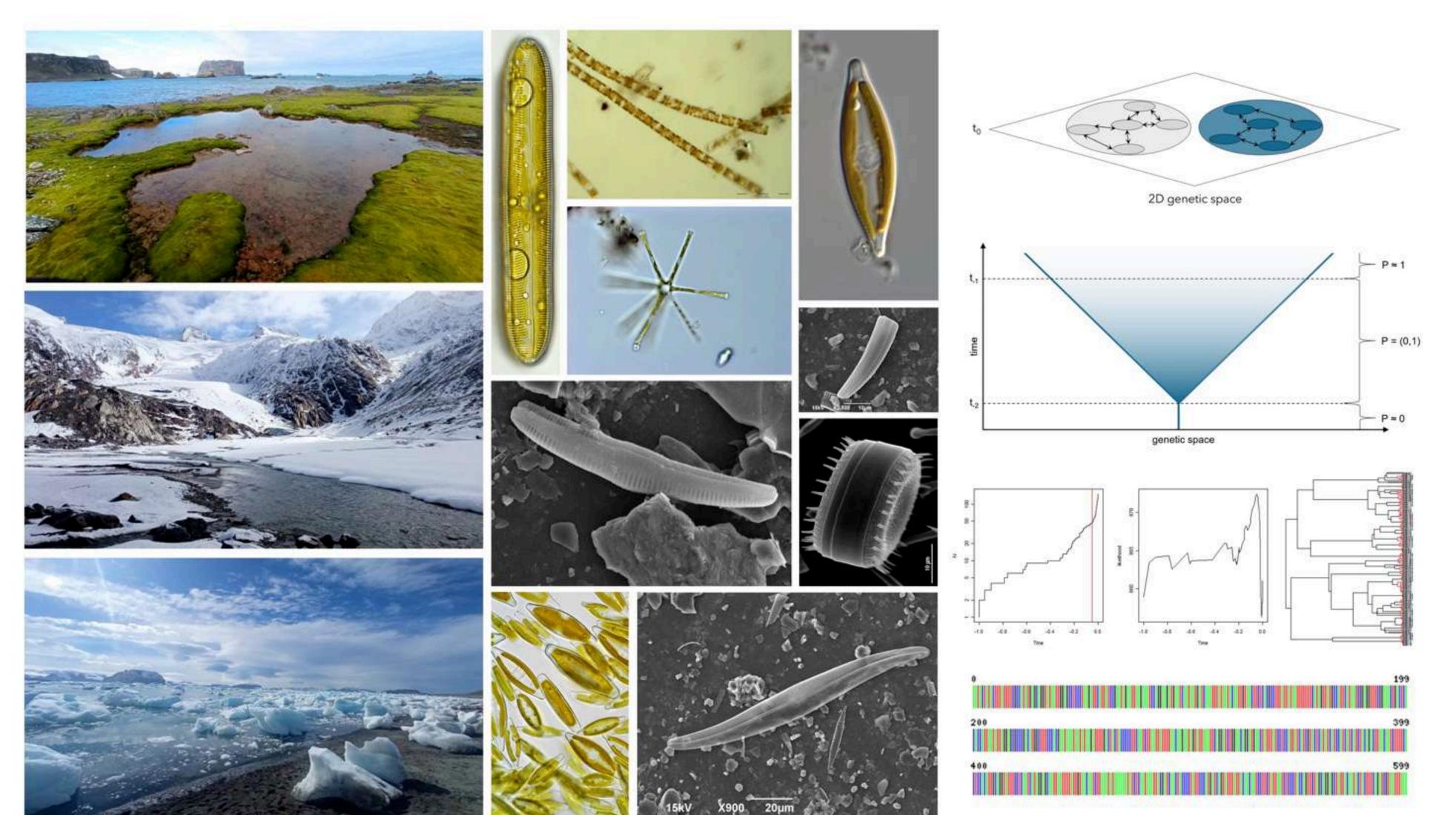
Aaron Kiggen KU Leuven Belgium



- How do environmental cues, such as fish kairomones, drive changes in GRNs, leading to behavioral plasticity?
- How do these GRNs vary between genotypes of varying behavioral responses i.e. what is the regulatory variation behind phenotypic variation?
- Are the genes and genomic regions involved in behavioral plasticity also **evolving**, and what are the mechanisms driving this evolution?









Tyler J. Kohler group leader



Katerina Kopalová group leader



Jan Kollár postdoc

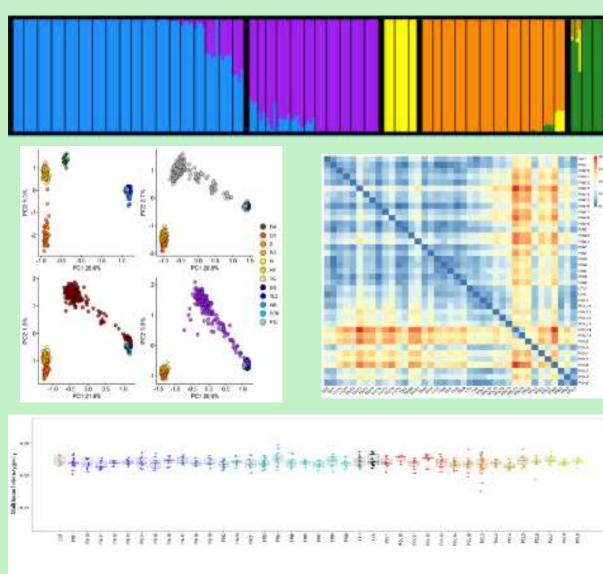


Bartosz Łabiszak

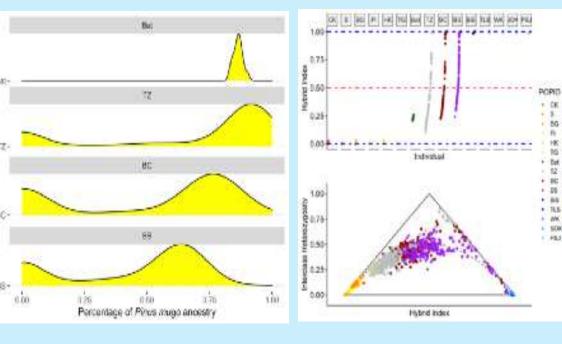
Department of Plant Ecology and Environmental Protection

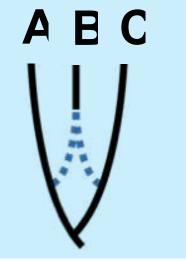


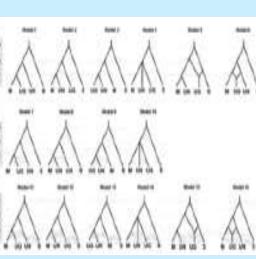
Conservation geneticts and population management



Speciation with gene flow in trees





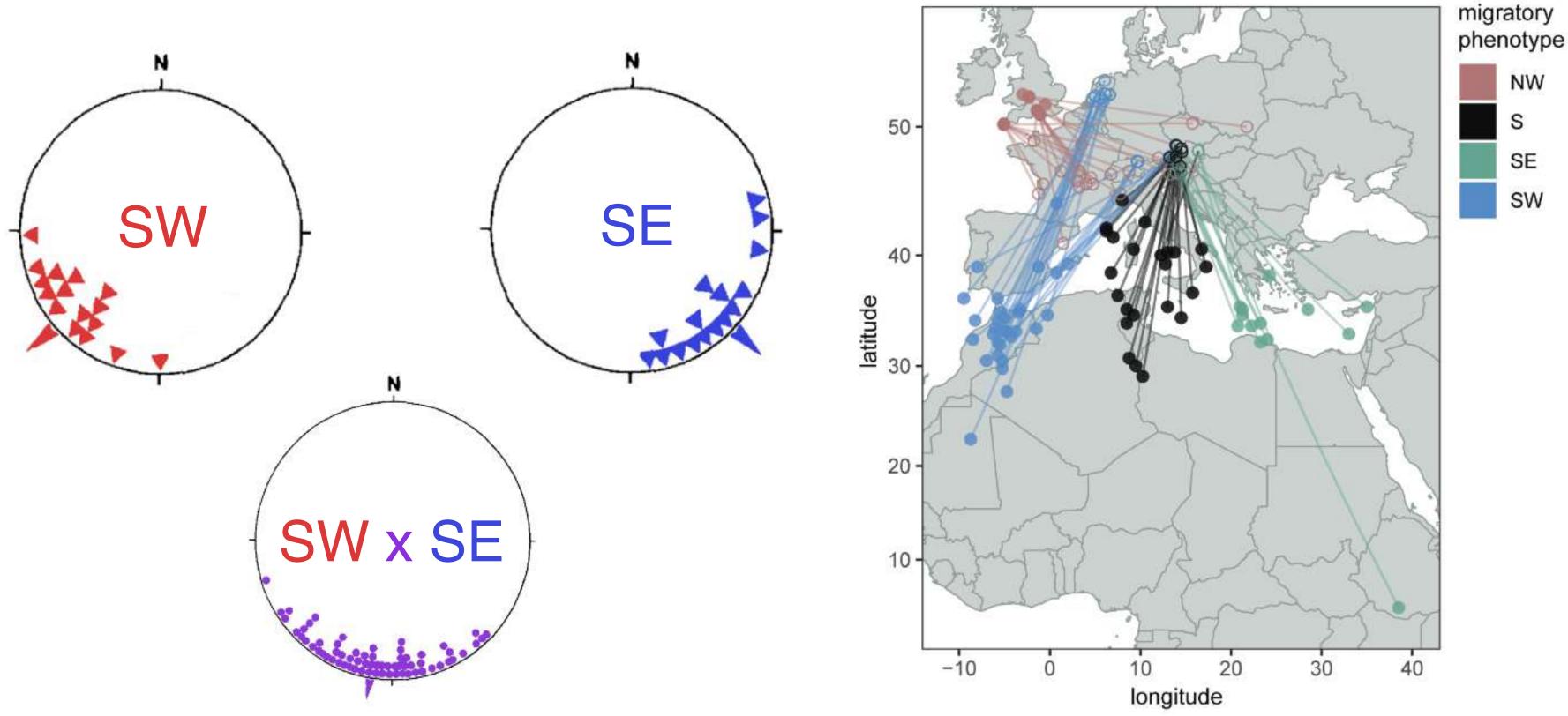


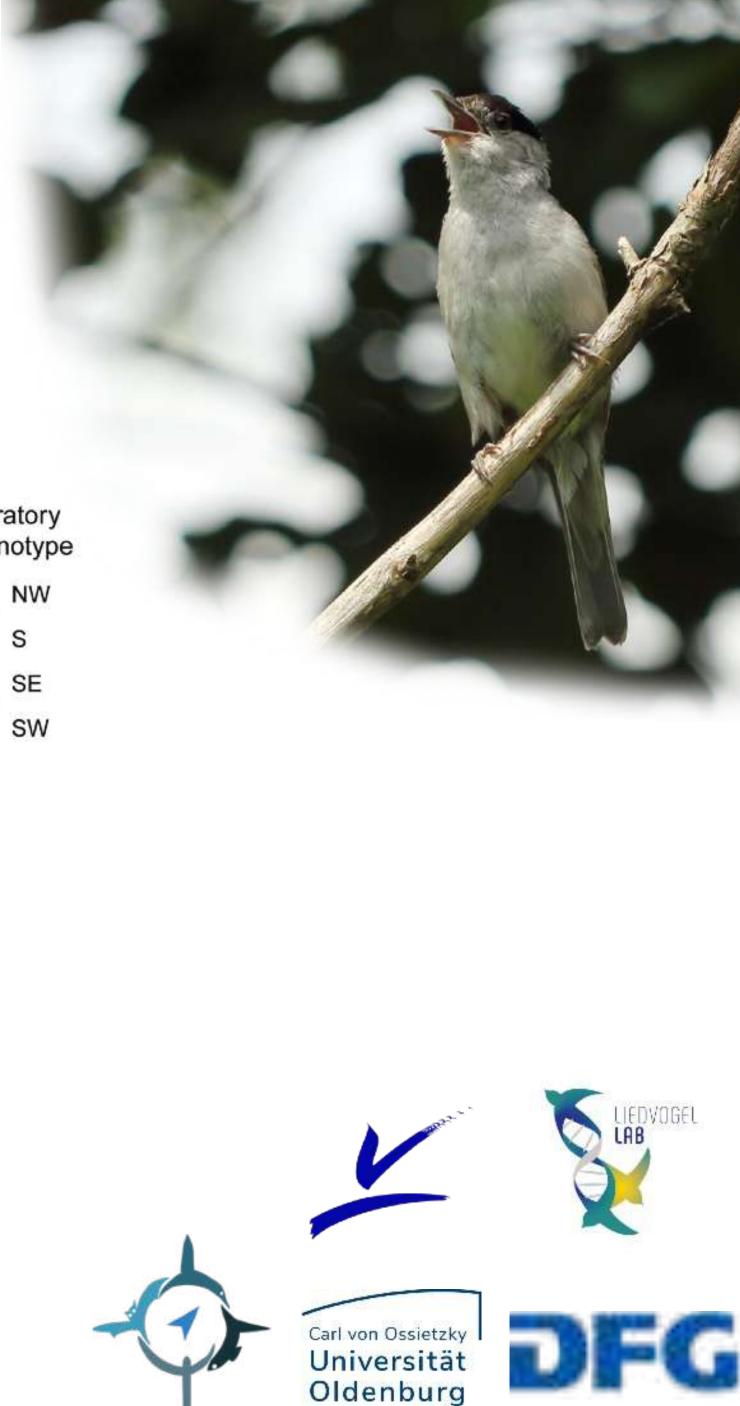


Genetics of migratory direction

Georg Langebrake

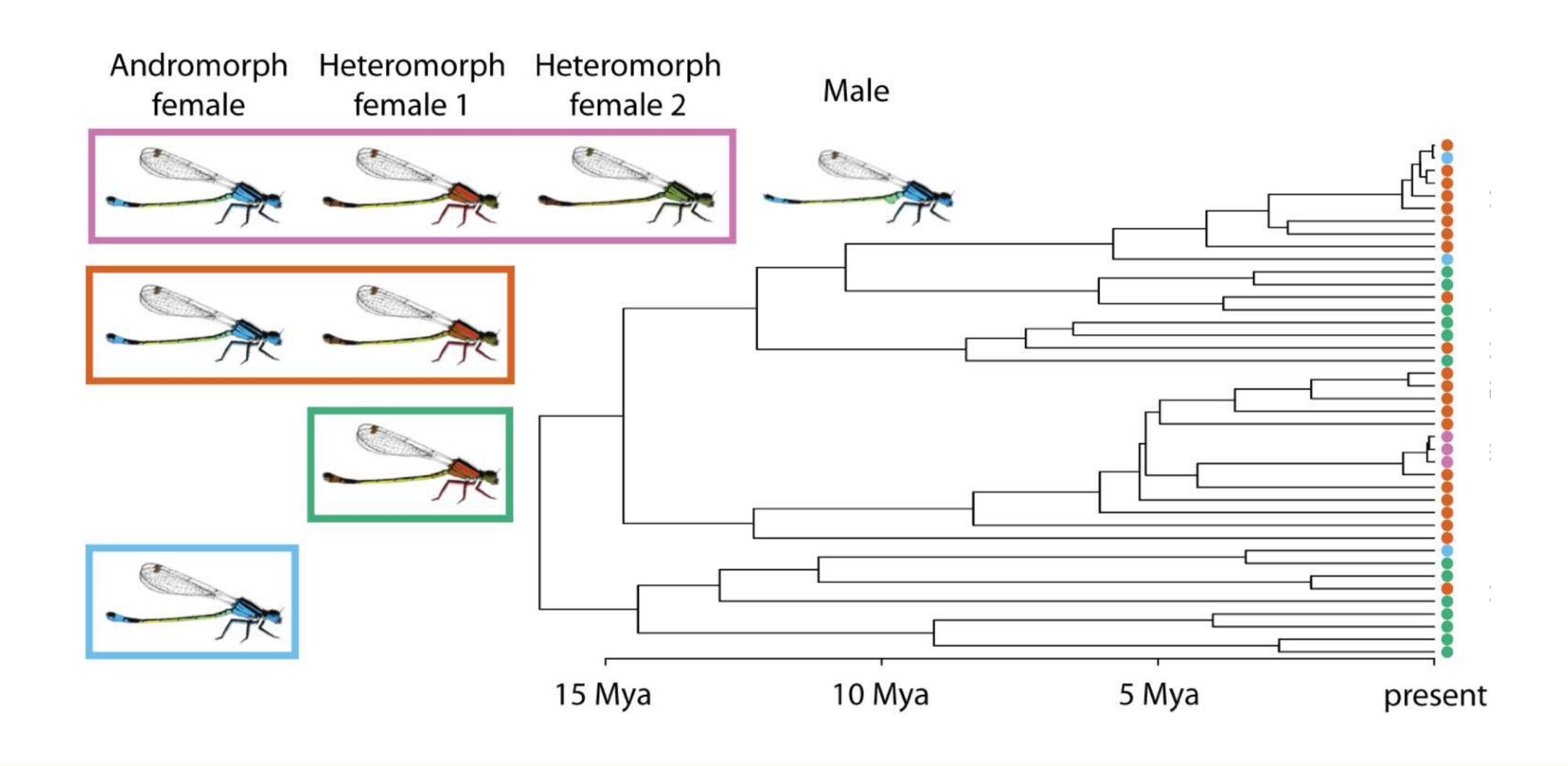
Institute of avian research "Vogelwarte Helgoland" Wilhelmshaven





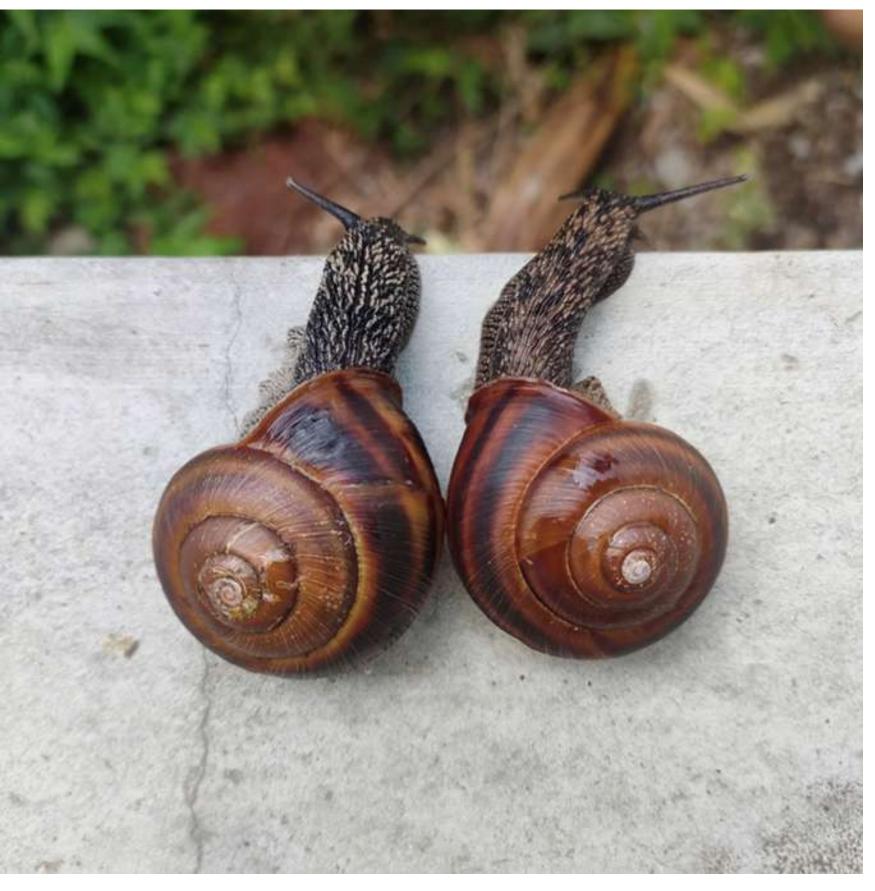
Helbig, A. J. (1990) Inheritance of migratory direction in a bird species: a cross-breeding experiment with SE- and SW-migrating blackcaps (*Sylvia atricapilla*). Delmore, K., Van Doren, B. M., Ullrich, K., Curk, T., van der Jeugd, H. P., Liedvogel, M. (2023) Structural genomic variation and migratory behavior in a

Guillaume Lavanchy Lund University, Sweden



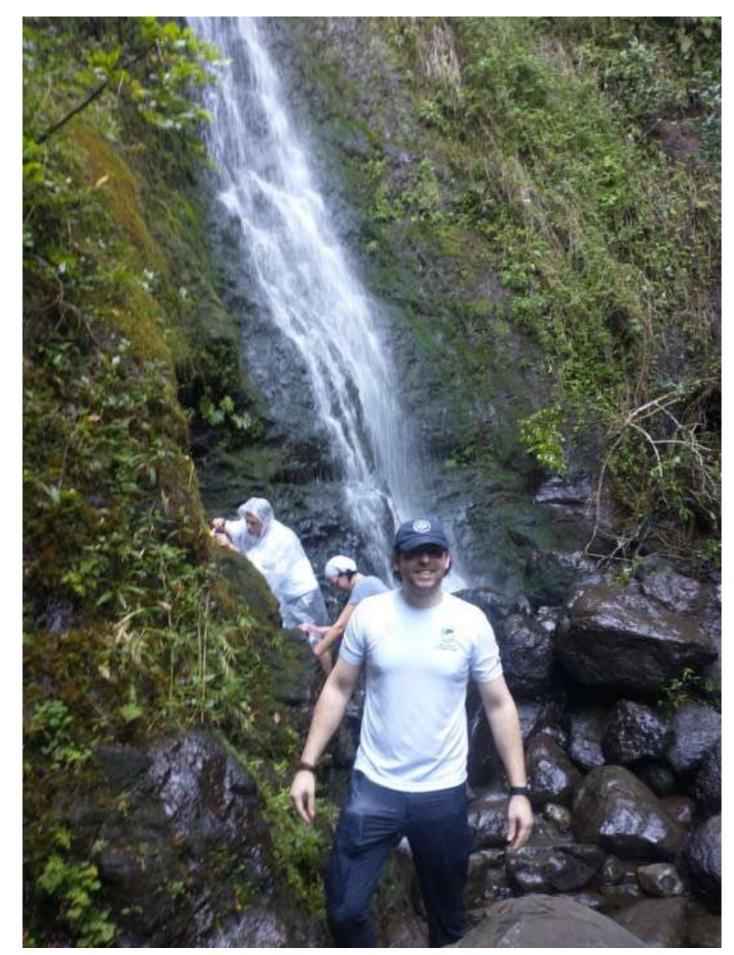
Evolution of Chirality and Colour in Snails

Alec Lewis: PhD Student, University of Nottingham



Professor Angus Davison, School of Life Sciences, University of Nottingham







@aleclewis_bio









How many manzanitas are there? (Arctostaphylos spp.)

Amy Litt, University of California, Riverside USA

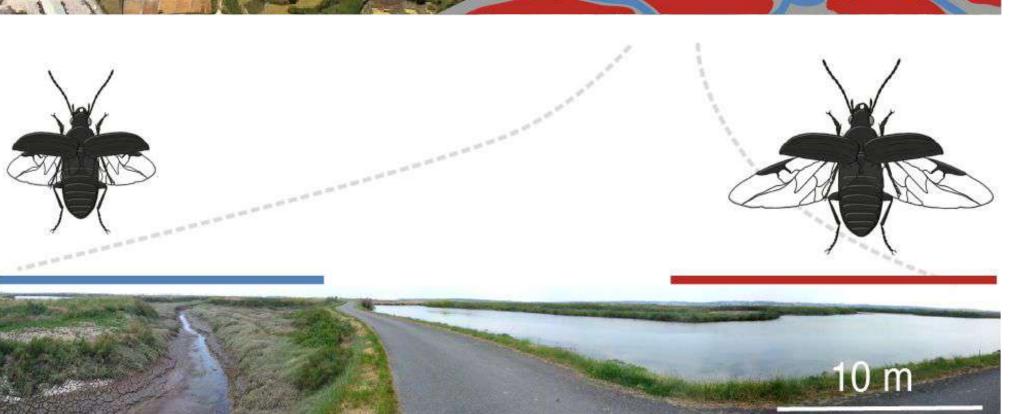
amylitt@ucr.edu



Maria A. Madrid-Restrepo, Eco-Evolutionary Genomics Lab (with Prof. Steven Van Belleghem)







Pogonus chalceus, wing-polymorphic tidal and seasonal ecotypes

Genomics, bioinformatics, population genetics, adaptation, speciation...



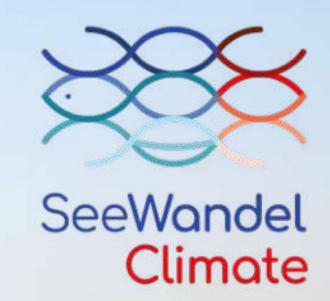


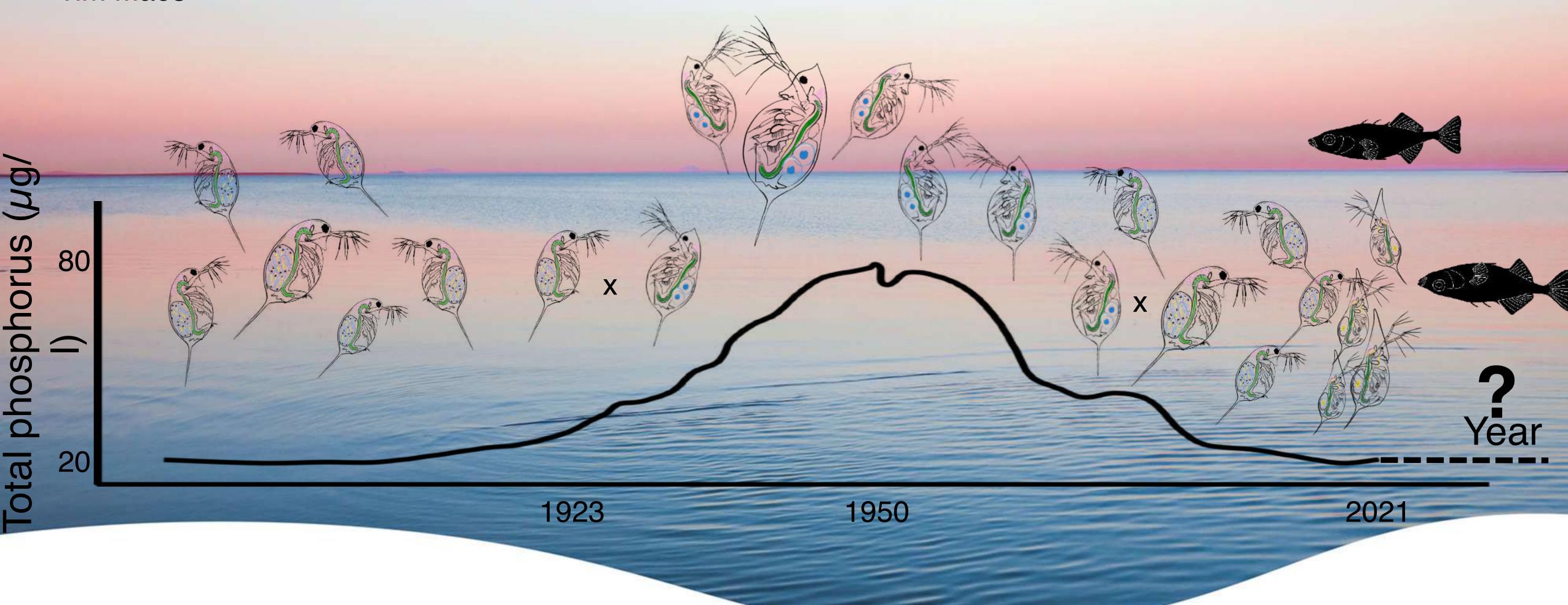






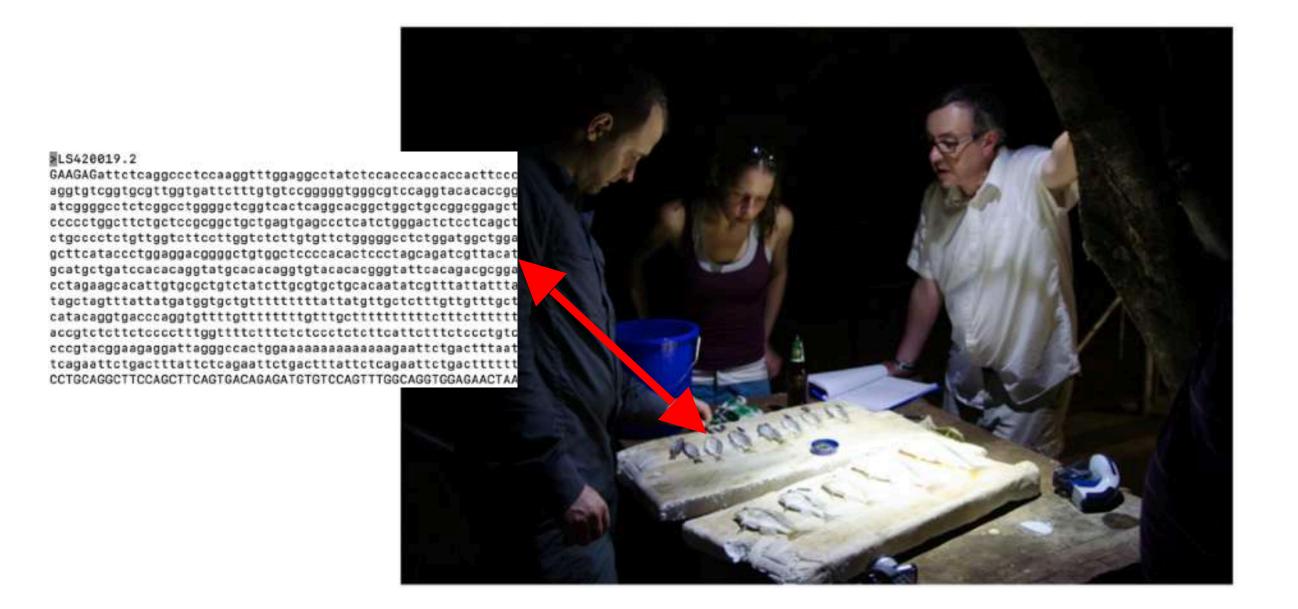
Tim Maes



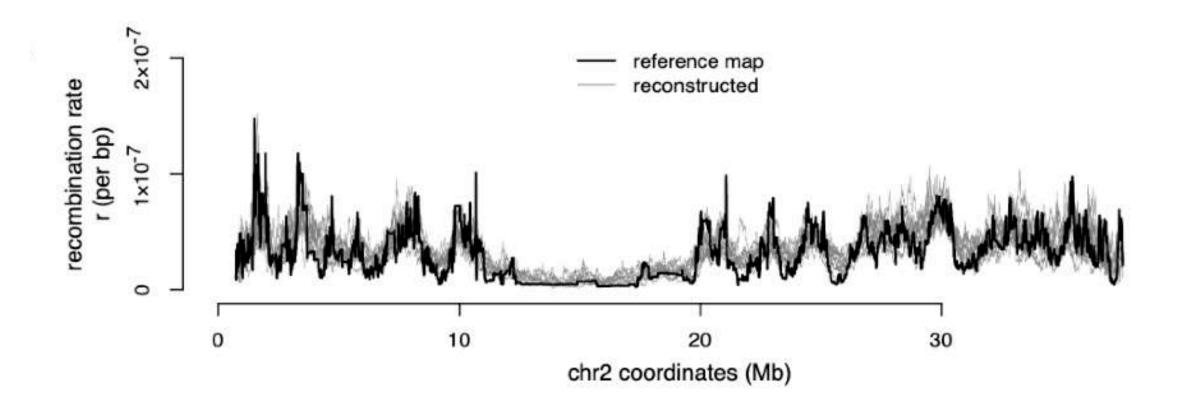


Scientific questions:

1. Genome evolution and function in cichlid fishes



2. Meiotic recombination



Milan Malinsky

Method + software development:

- 1. Inference of gene flow among populations / species
- Dsuite

Dsuite-fast D-statistics and related admixture evidence from VCF files 617

M Malinsky, M Matschiner, H Svardal Molecular Ecology Resources 21 (2), 584-595

- 2. Population structure inference
- RADpainter

RADpainter and fineRADstructure: Population

Inference from RADseq Data

M Malinsky, E Trucchi, DJ Lawson, D Falush Molecular biology and evolution 35 (5), 1284-1290

- 3. De novo genome assembly
- → trioSGA
- → Pipelines for long-read genomes
- 4. Recombination inference from sperm Hi-C
- Hi-reComb

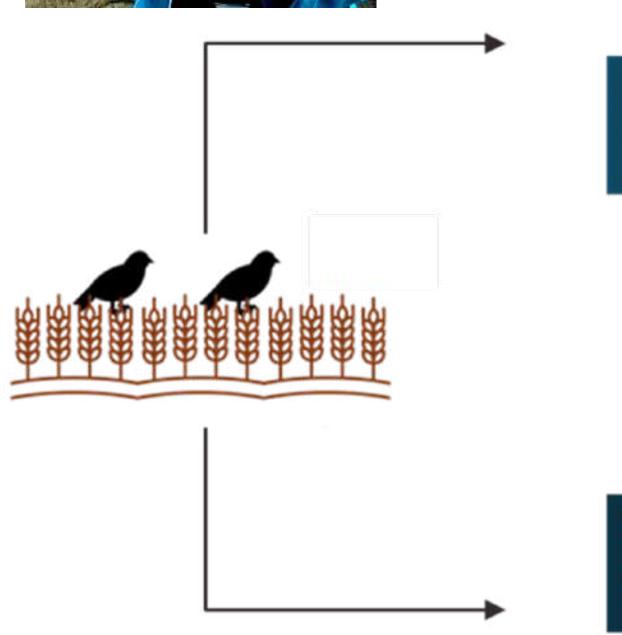


















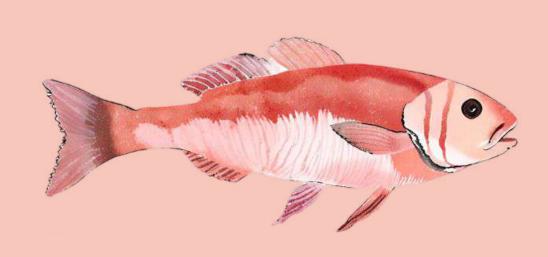


Bird Life in the in the Anthropocene:

Understanding convergent adaptation to urbanisation



Red mullet *Mullus barbatus*



Population genomics (ddRADseq) from 1373 specimen across 32 Mediterranean sites



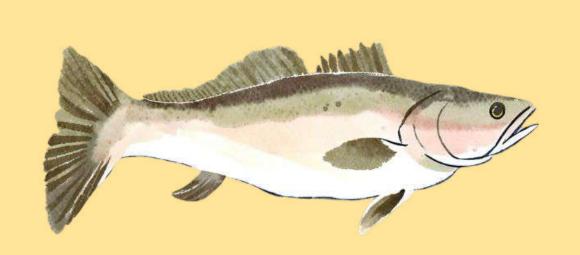
Bluefin tuna Thunnus thynnus



Conservation genomics from modern and ancient genomes



Hake *Merluccius merluccius*

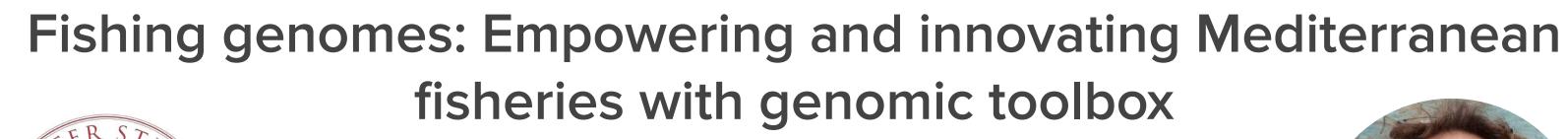


Seascape genomics (ddRADseq) across the Mediterranean





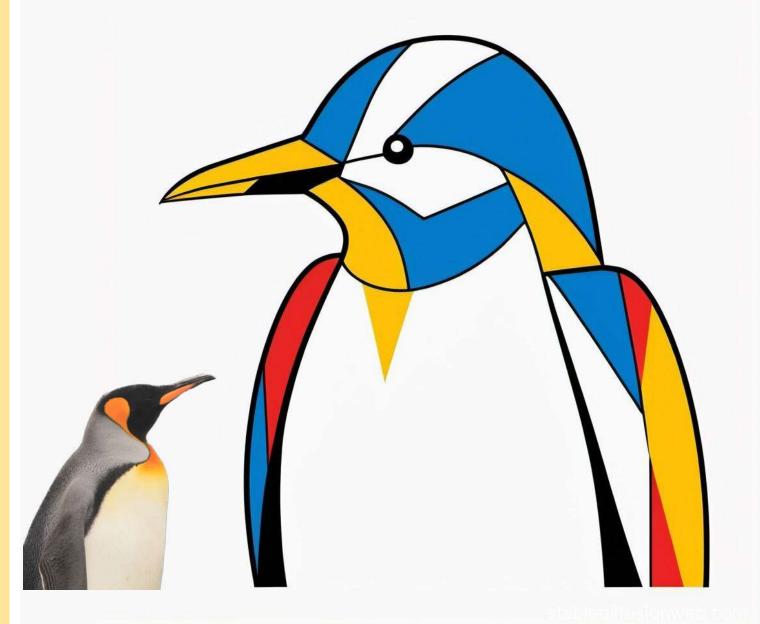




PhD student: <u>Piergiorgio Massa</u>
Supervisor: Alessia Cariani

Co-supervisor: Alice Ferrari





Life-history strategies' effect on fitness through a forward-in-time simulation study (SLiM, Haller & Messer)

Supervisor: **Emiliano Trucchi**Co-supervisor: **Flavia Nitta Fernandes**



Michael Matschiner

Ludwig-Maximilian-University of Munich Bavarian State Collection of Zoology

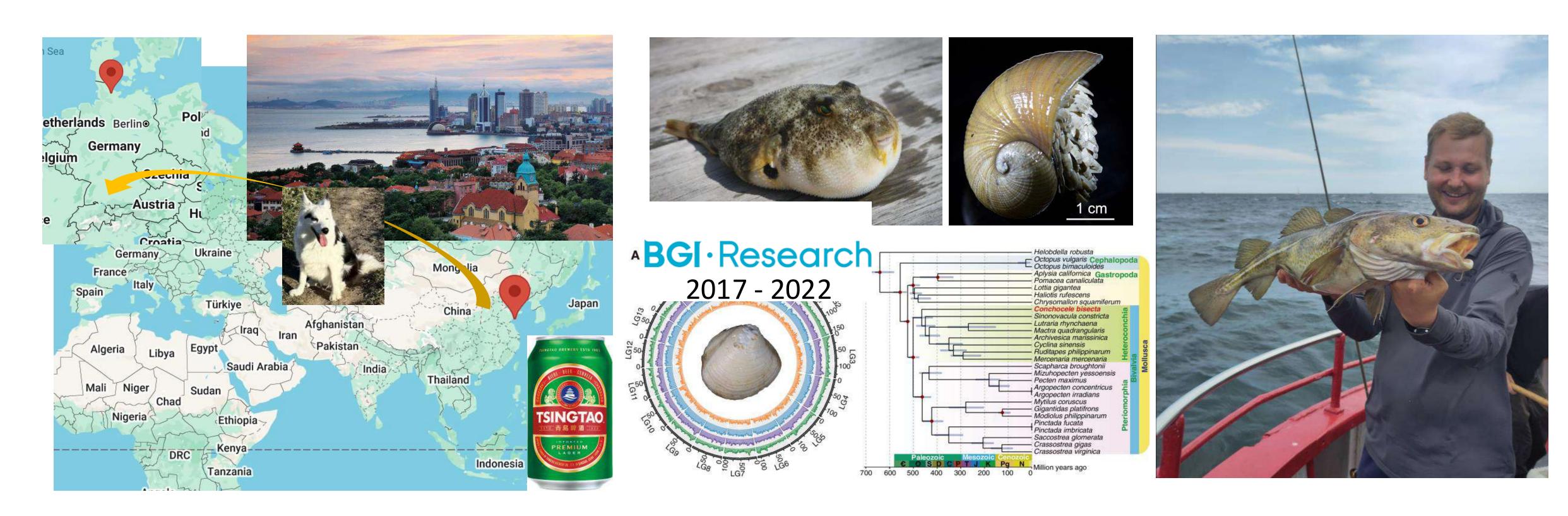












Exploring Structural Variation Polymorphism in Baltic Cod

with long-read whole genome resequencing



Lingfeng Meng

PhD student

PI: Thorsten Reusch

GEOMAR Kiel, Germany



@lingfengmeng.bsky.social



Translational Evolutionary Research





Caroline Mitchell





Pa Ci

For Pacific Crop

Notices

and Itsiand
and territories

"Instrumental Control

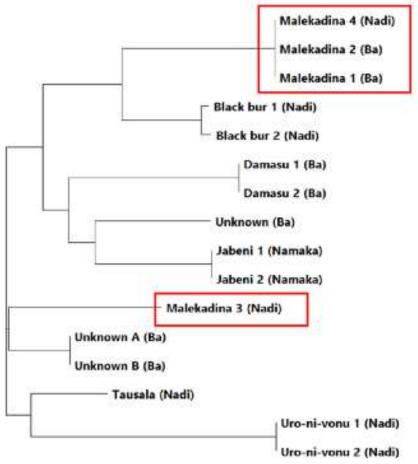
Washington And Ci

Washington And Ci

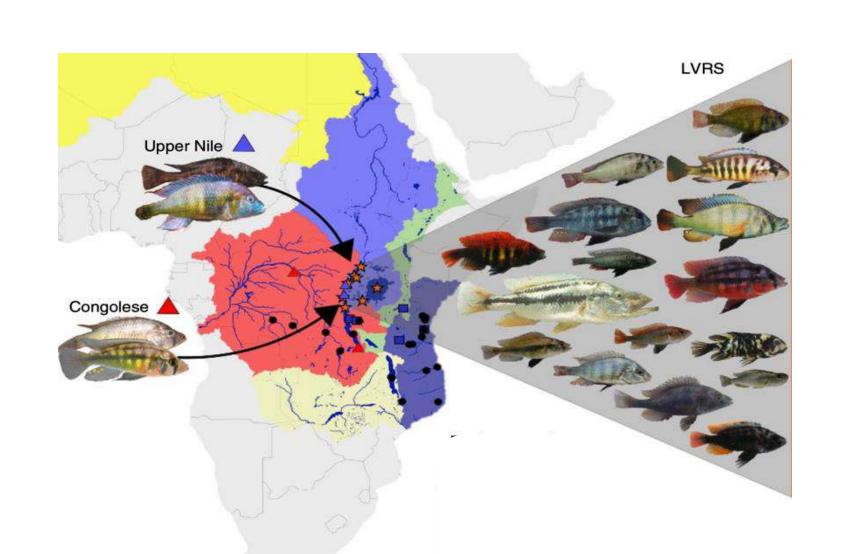
Washington

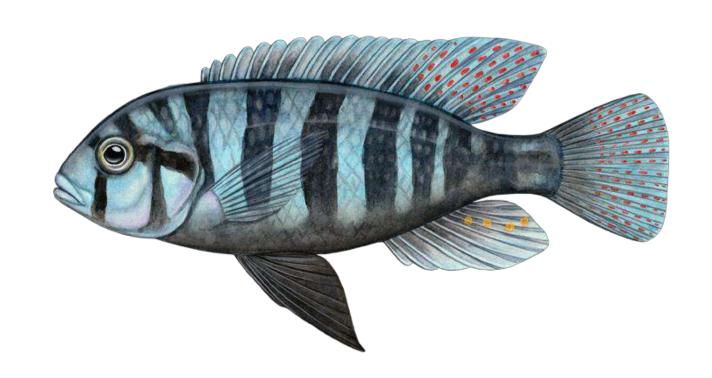
Malekadina 4 (Nadi)

Taro
(Colocasia
esculenta) genetic
characterisation



Evolutionary dynamics of trophic novelty and transitions during adaptive radiation



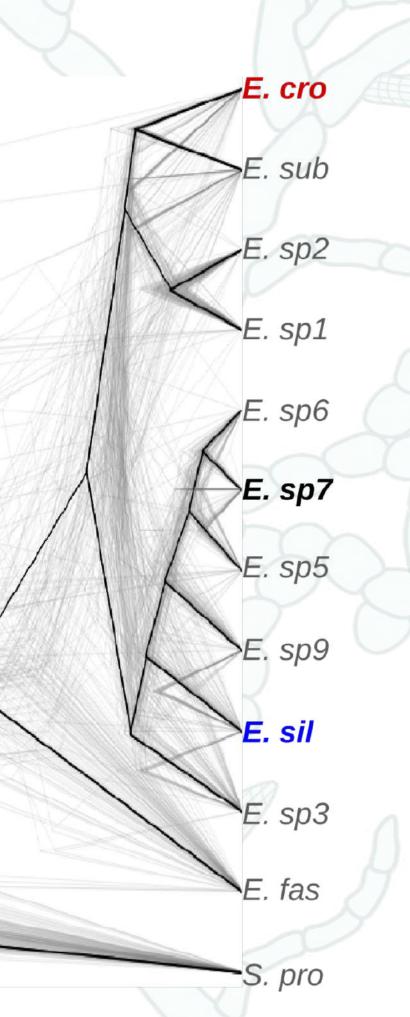


Clement Mlay

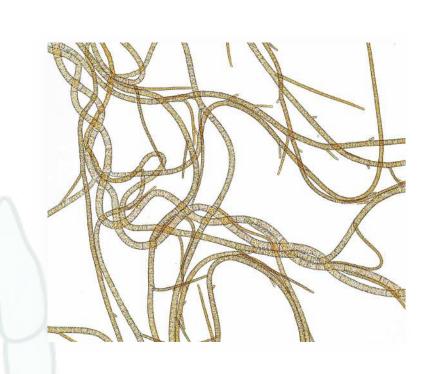


Meier et al 2017

Reproductive isolation, sex chromosomes and speciation in brown algae



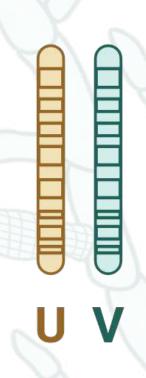




Scytosiphon sp.



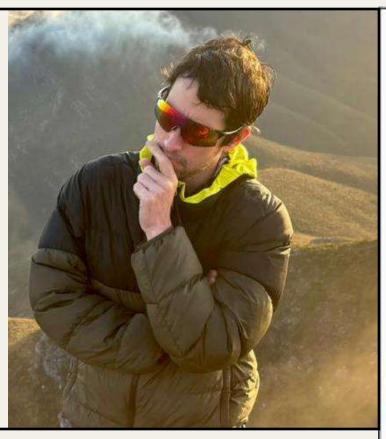
Haploid sex chromosomes



What is the genomic architecture of isolating barriers?



Javier A. Montenegro G.

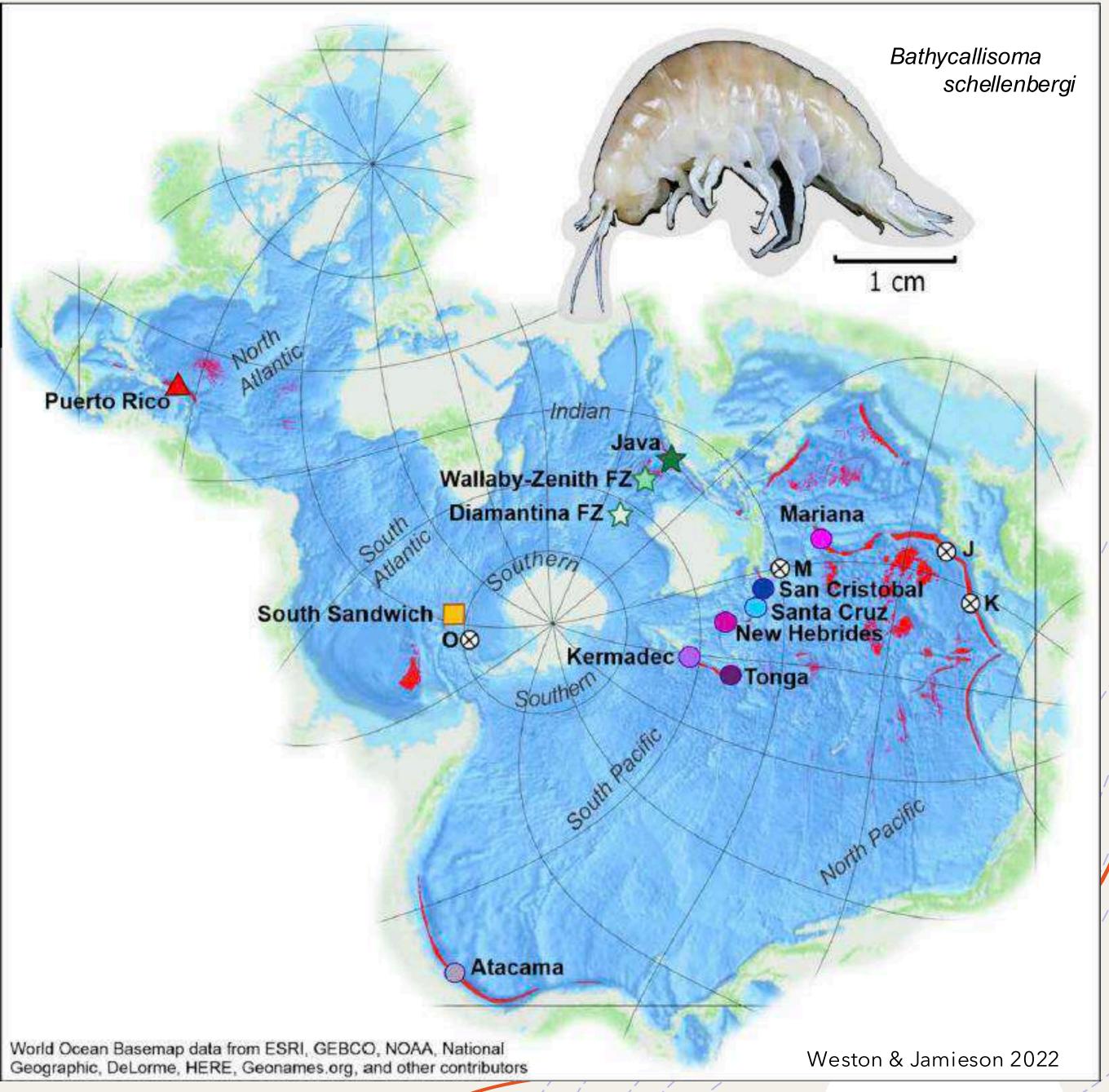


Minderoo-UWA Deep-Sea Research Centre











Billy Moore

JSPS Postdoctoral Fellow
Okinawa Institute of Science and Technology
b-moore@oist.jp

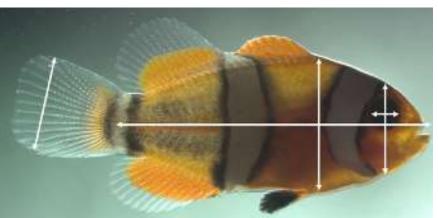


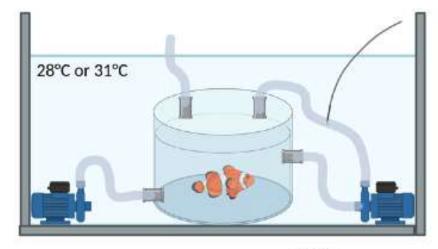
How will coral reef fish respond to future ocean warming?

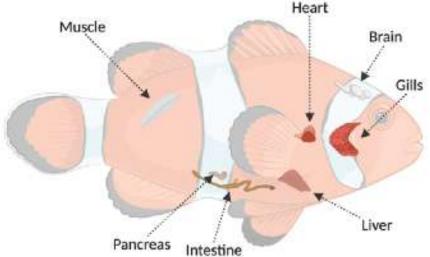
2019-Present: OIST PhD and PostDoc

Physiology + Genome Assembly + Gene Expression



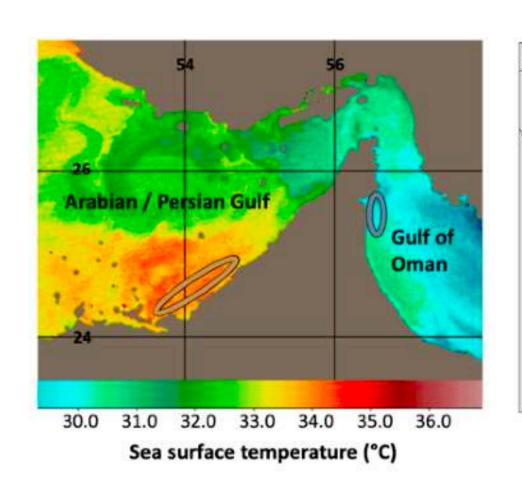


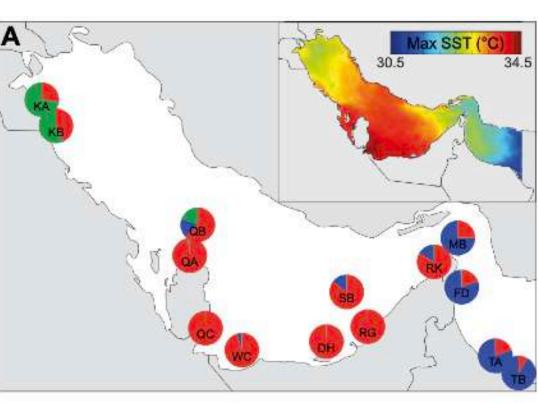




April 2025 : NYUAD PostDoc

Physiology + Gene Expression + Population Genomics

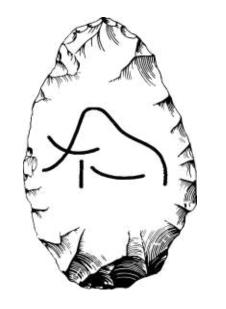


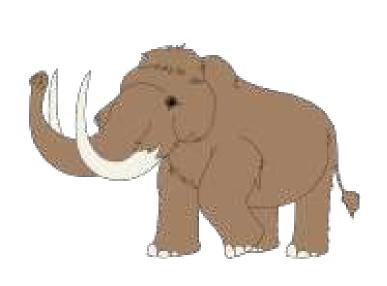






PhD student at
Centre for Palaeogenetics, Group of Love Dalén
Zoology Dept Stockholm University





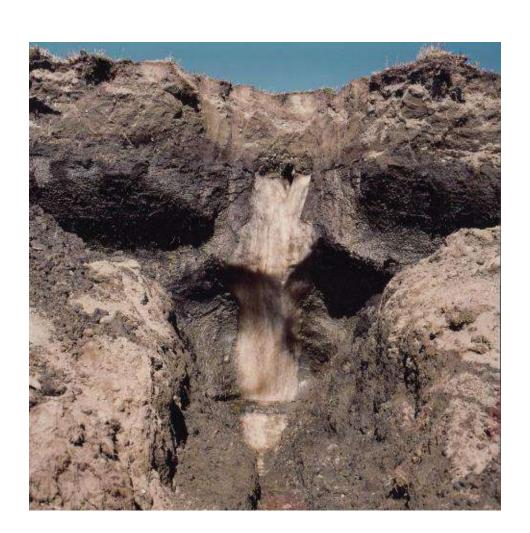
Interested in extinction dynamics and hominin impact on their environment

Currently working on extinction and population dynamics of woolly mammoths across the last million years from both sediment and physical remains

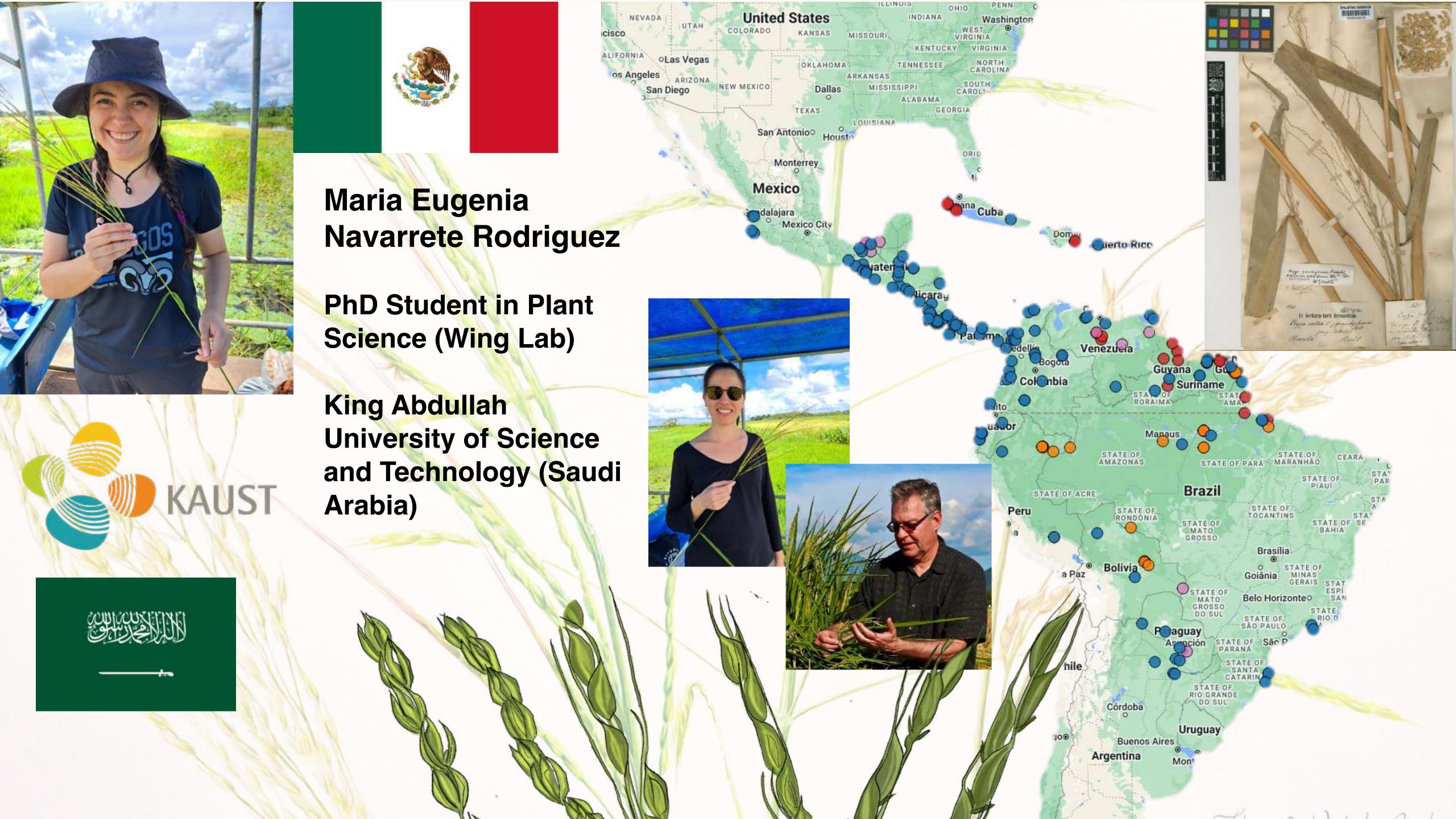
Previously worked on aDNA recovery from archaeological mammoth ivory, population genomics in reef-building corals and migratory shorebirds, and creating modified yeast cells for modelling human diseases







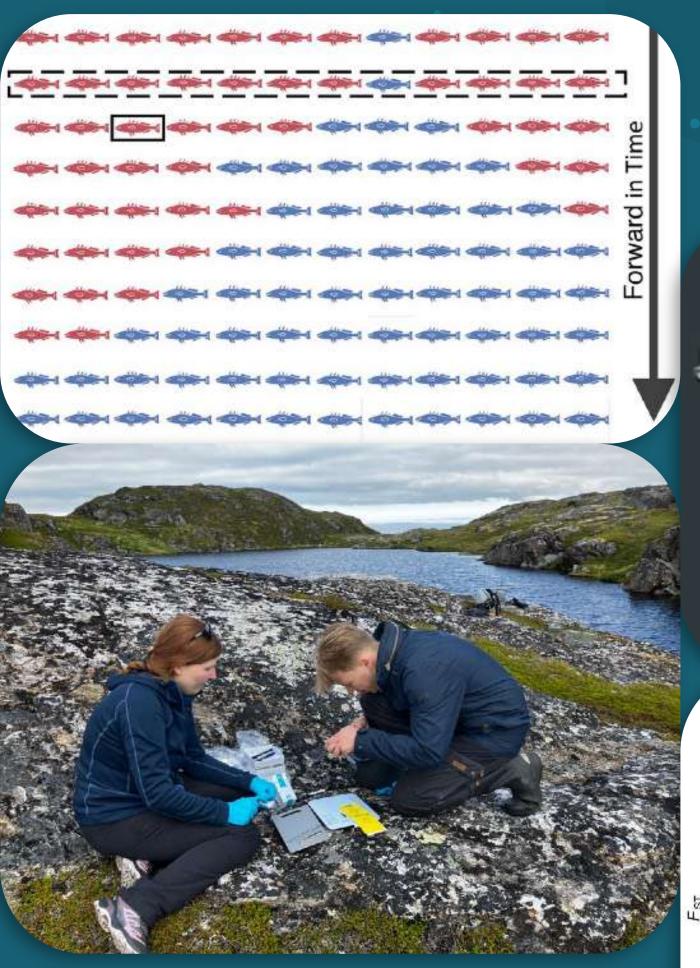


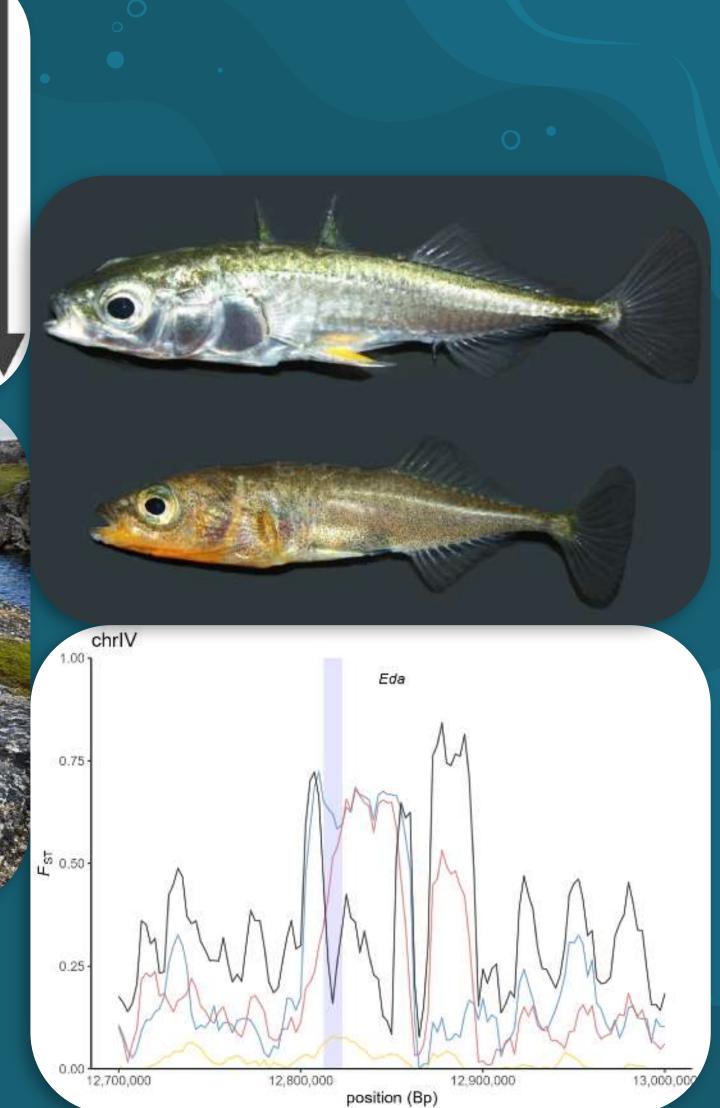




Jana Nickel PostDoc University of Oslo

- Population genomics
- Hybridization
- Adaptation to freshwater
- Mutation load & fitness effects









How is variation maintained in natural populations?









The Common Bluetail Damselfly (Ischnura elegans)

Sofie Nilén, Lund University





Dr. Jill Oberski

Senckenberg Natural History Museum and Research Institute (Frankfurt, DE)



Hope COLLEGE

Hope College (Holland, MI, USA)

Dorymyrmex ants

(Formicidae: Dolichoderinae)

social parasitism with close and distant relatives





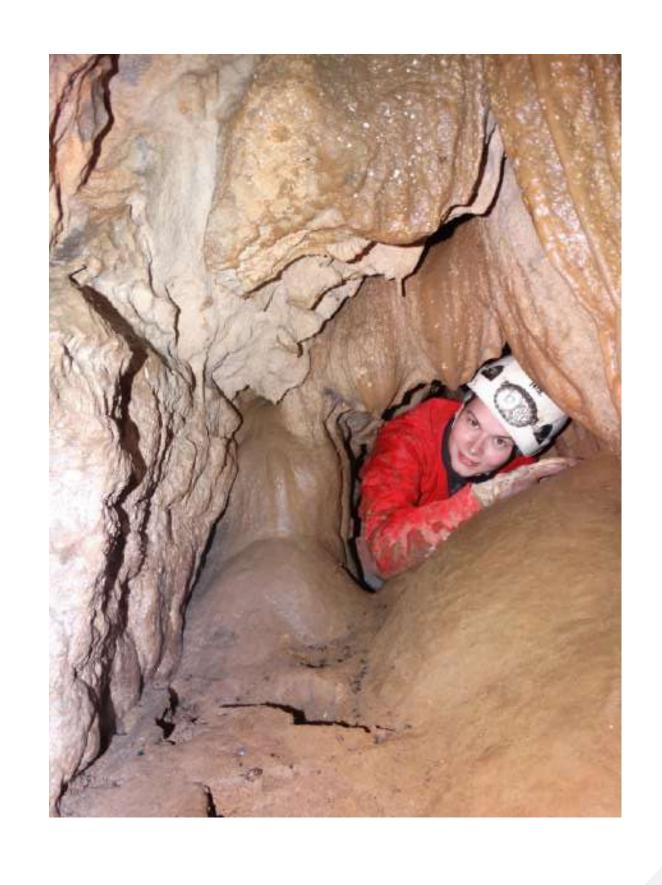






species complexes & species delimitation

phylogenomics

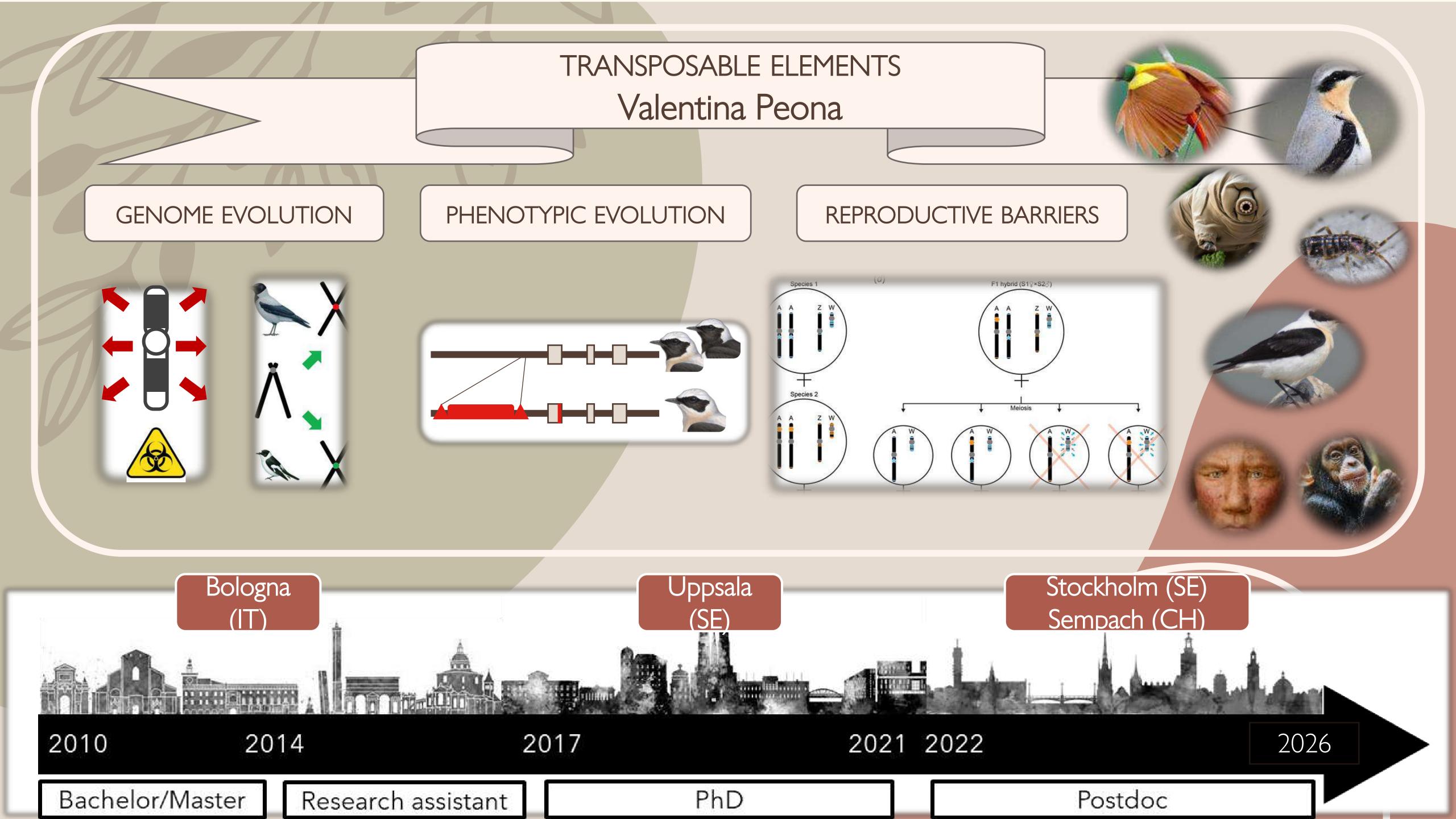








Eva Pavlovič
University of Ljubljana, Biotechnical Faculty
Slovenia



Enrico Maria Perlini

PhD student, University of Oslo

Naturhistorisk museum



CEG \ Comparative and evolutionary genomics

Hooded Seal (*Cystophora cristata* Erxleben, 1777)

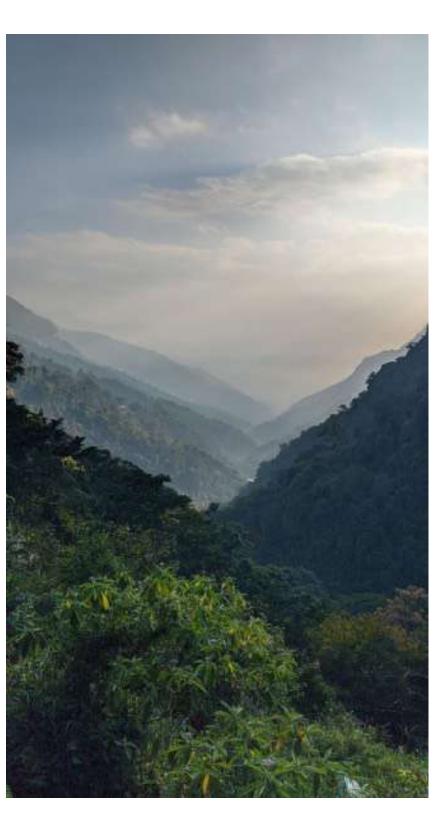


Genomic insights into an invasive plant- Self-pollination and homozygosity drive genetic structure in *Lantana camara*



Praveen Prakash
National Centre for Biological Sciences

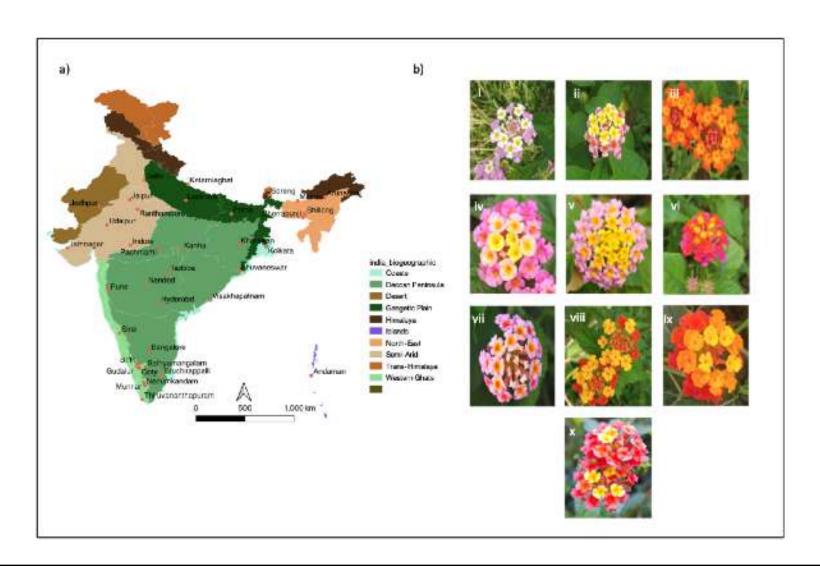


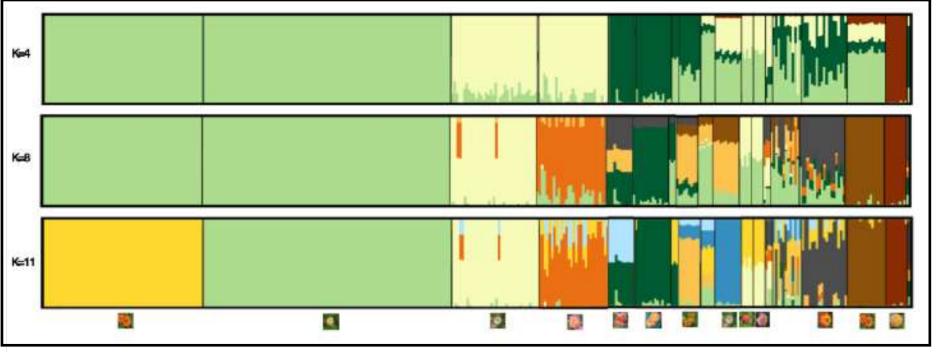


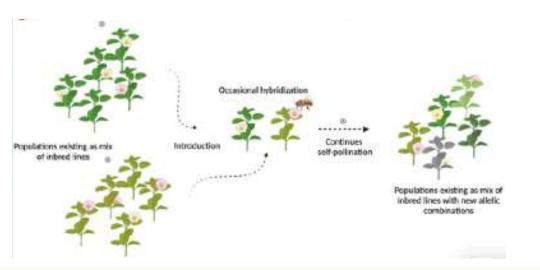












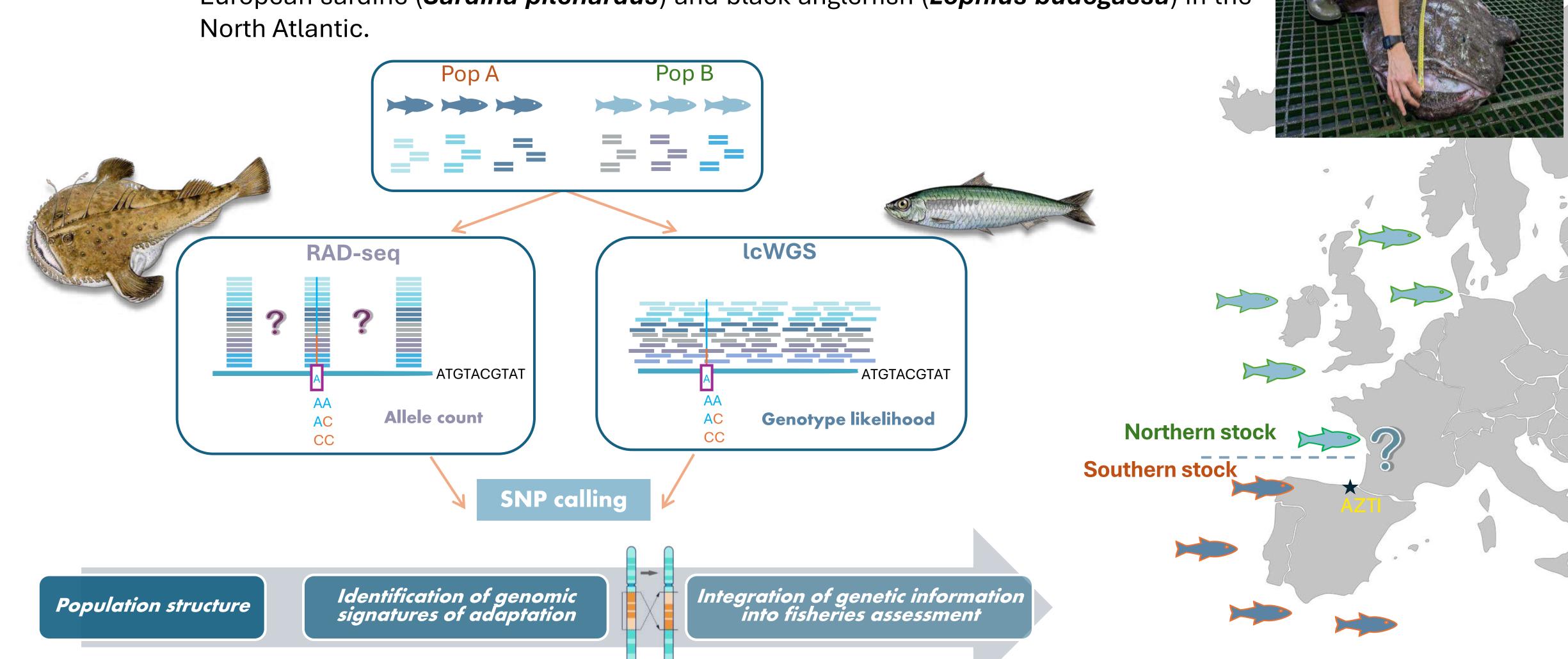
Google images

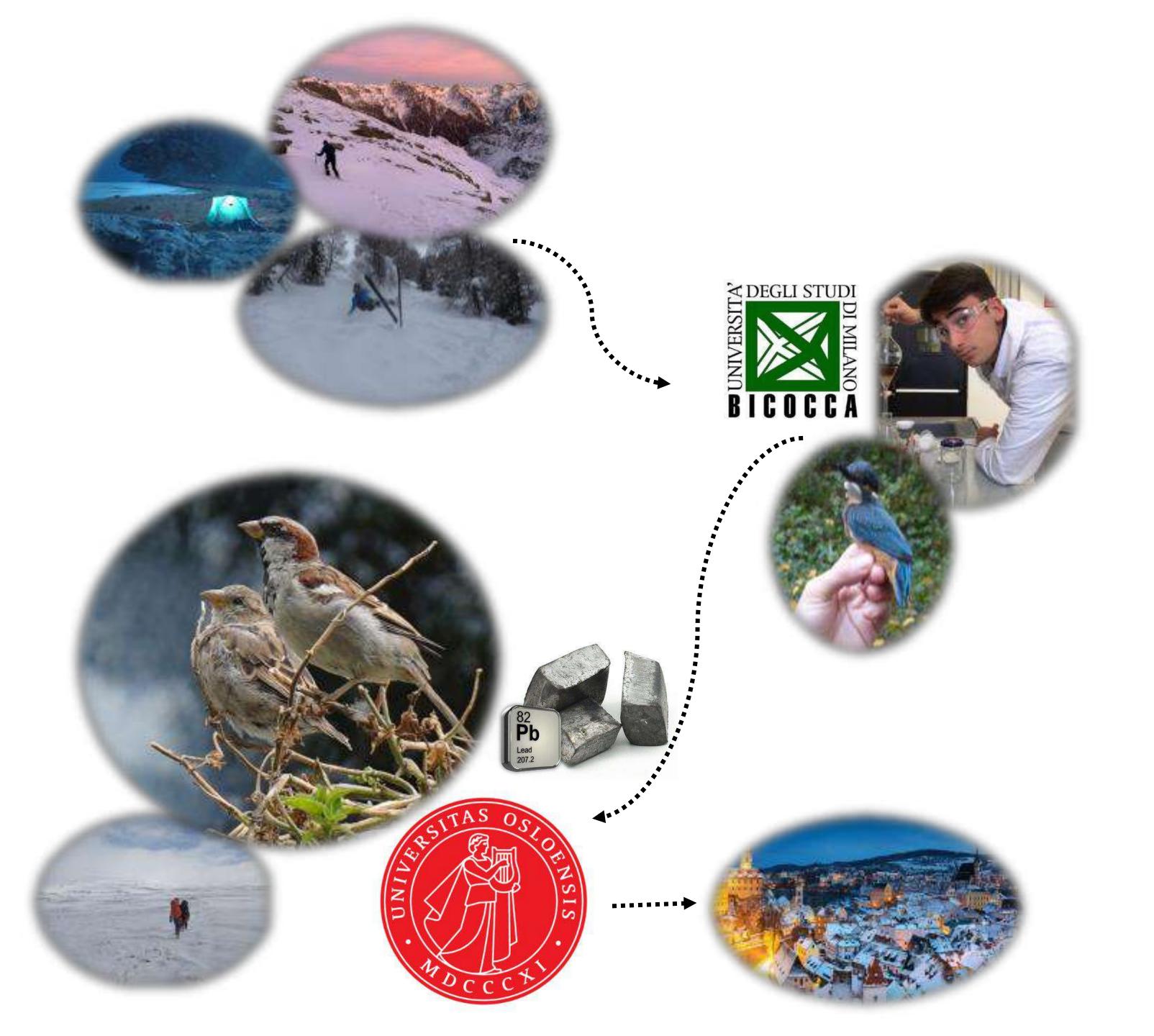


Marina Puebla Aparicio

PhD student at AZTI (Spain)

Thesis: High-throughput sequencing to inform fisheries assessment: case study of European sardine (*Sardina pilchardus*) and black anglerfish (*Lophius budegassa*) in the North Atlantic.





Francesco G. Quadrio Master's student

University of Milan Bicocca,
Dipartimento di Scienze e
Tecnologie per l'Ambiente e il
Territorio

University of Oslo, Center for Ecological and Evolutionary Synthesis

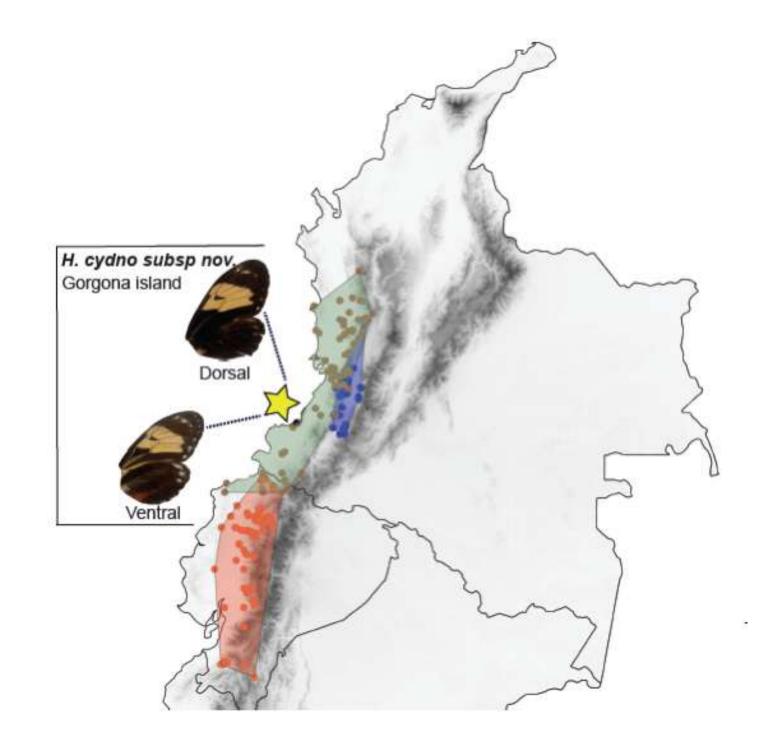
Email:
francesq@uio.no
f.quadrio1@campus.unimib.it
Discord:
francescoquadrio

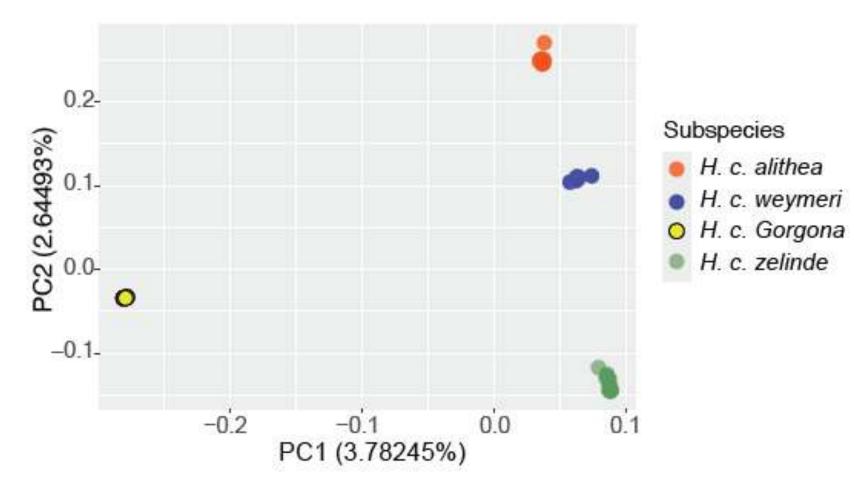


Geraldine Rueda Muñoz

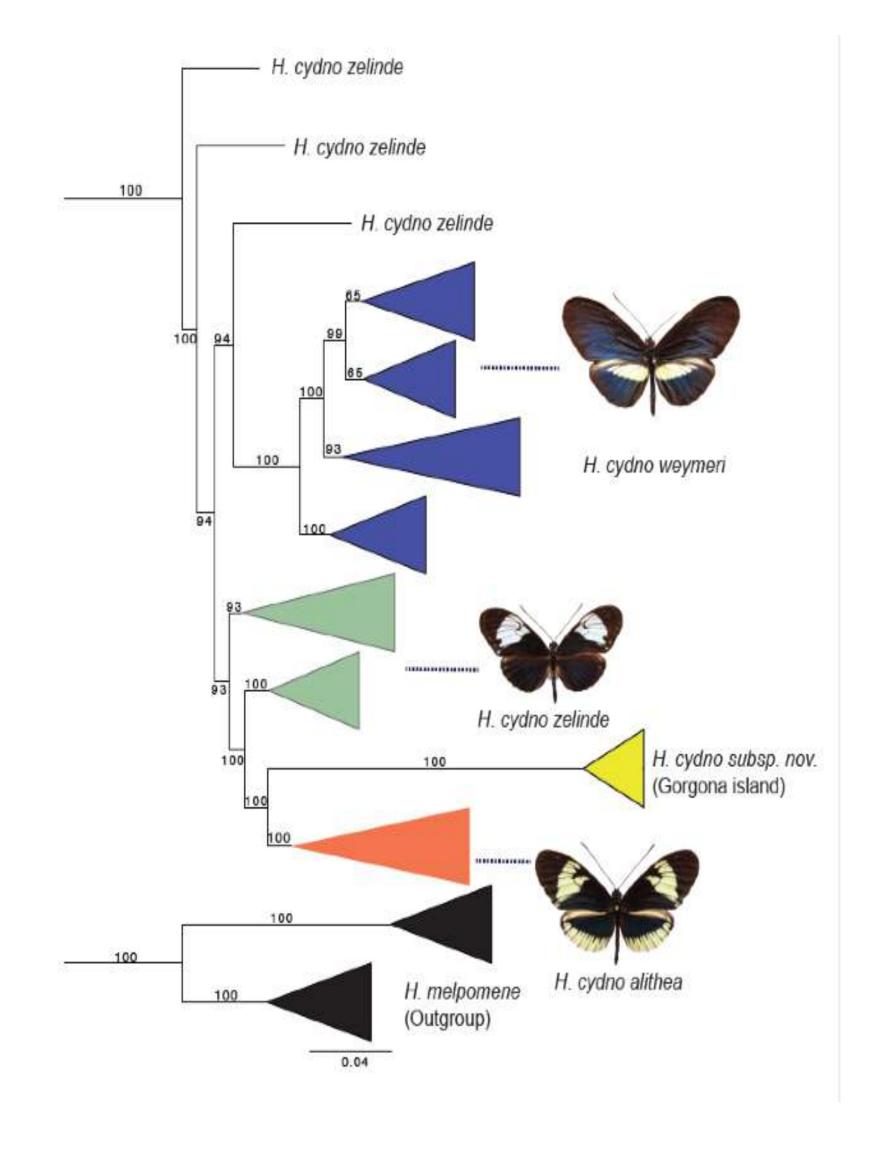
Student of MsC. Ecology and Evolution

University of Oslo, Norway





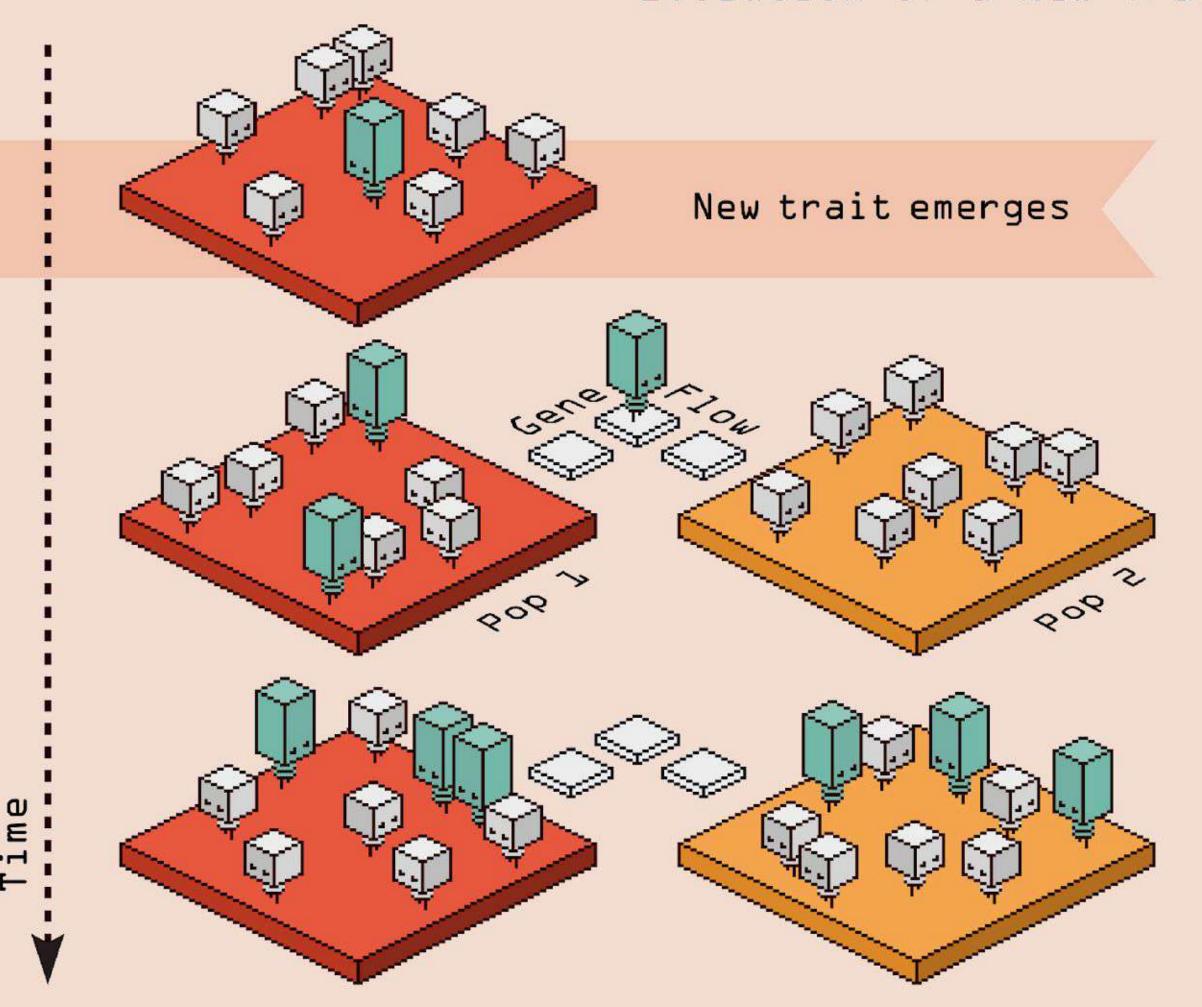




Scenario B

Simulations in SLiM

Evolution of a New Trait for GWAS Data





Exploring the power of GWAS through population simulations



Diego Salazar University of Oslo



Identifying Evolutionary Processes and Drivers of Rapid Diversification in *Dianthus*











Bushra Shahid Plant Ecological Genetics (PEG) Group under Alex Widmer

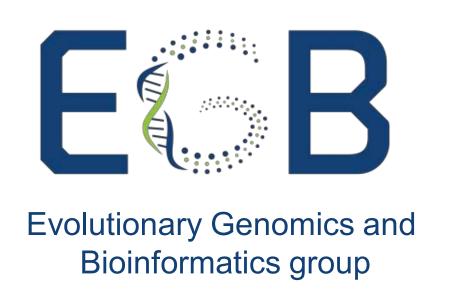
Andrea Soler i Núñez Uppsala University



UPPSALA	PhD Human Evolution and Genetics	Genomic history, adaptation and disease in human populations across Africa
UNIVERSITET	2024-2028	and time
UPPSALA UNIVERSITET	MSc Evolutionary Biology 2022-2024	[] Bronze-to-Iron Age human demographic history of Pella (Jordan) using an ancient DNA approach
UAB Universitat Autònoma de Barcelona	BSc Genetics 2018-2022	GENOMES MÍNIMS Des dels inicis de la uida a la gran promesa de la biología sintetica COLUCCO TI-MISTIBBIRBEIR COLUCCO TI-MISTIBBIRBEIR



Vitor C. Sousa Universidade de Lisboa, Portugal vmsousa@fc.ul.pt









Bioinformatics and Population genomics

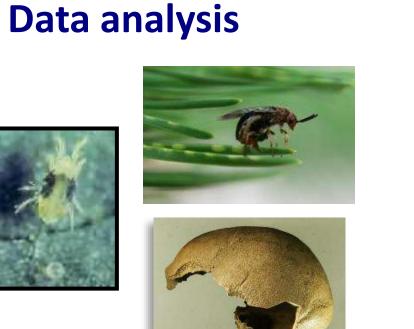
Interaction of gene flow and natural selection

Development of methods to infer demographic history and selection

Data from experimental evolution and natural populations

Theory and computational methods t_{m_1} t_{m_2} t_{m_2} $f_{c_i}(\mathbf{t}, \mathbf{n}) = \sum_{i=1}^{c_T + m_T} \left[\Delta t_i \binom{\mathbf{n}_{j_i}}{2} \right],$





Hybridizing Iberian chubs – sampling, cell cultures, omics data







João Souto - Univeristy of Lausanne

Bachelor and Master





Master Thesis Melo-Ferreira group



Introgression in Iberian

PhD

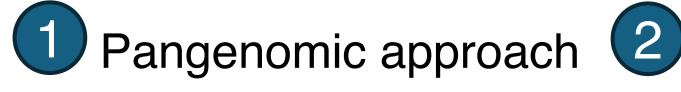




Goudet group

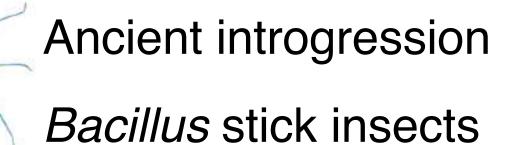
Schwander group

The impact of introgression on the evolution of species





Recombination





landscapes Ongoing

introgression

Swiss formica ants



Switzerland

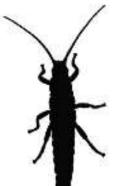


museum samples

Owls (genus *Tyto*)



Incomplete lineage sorting



Introgression

Parthenogenesis evolution

Timema stick insects

Hobbies

Cooking

Camping

Metal Festivals



Travelling (unusual destinations)

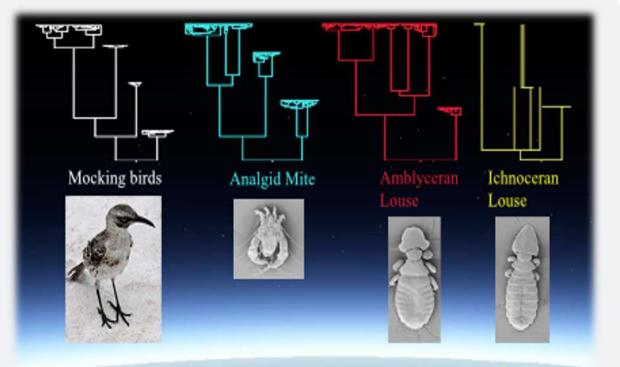


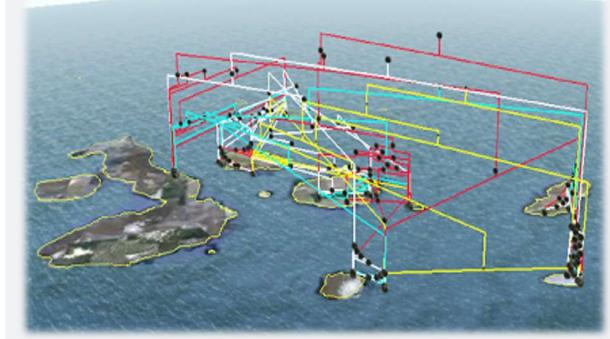
Laboratory of Molecular Ecology and Evolution

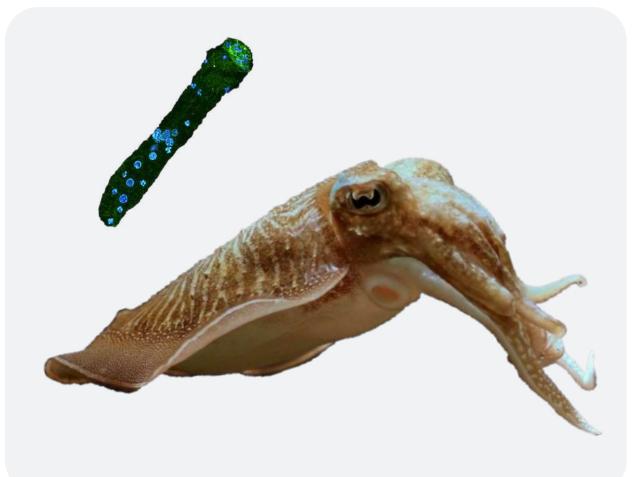
Přírodovědecká fakulta Faculty of Science

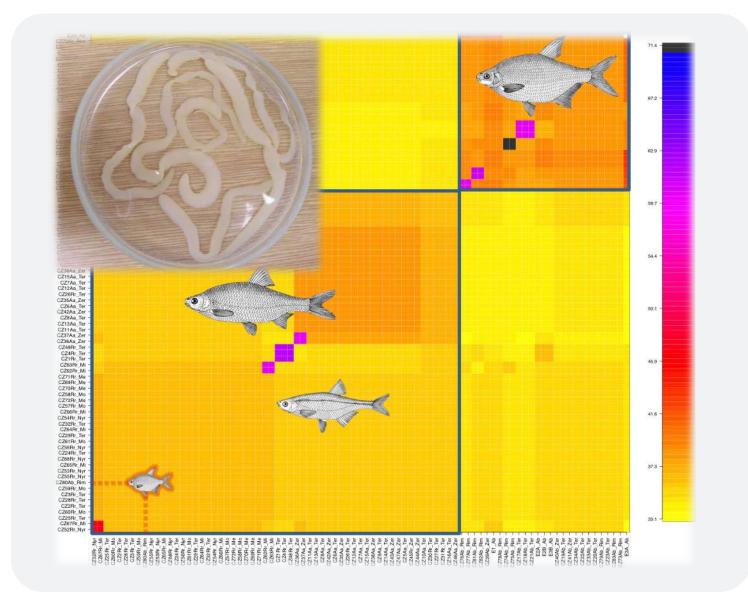
Jihočeská univerzita v Českých Budějovicích University of South Bohemia in České Budějovice

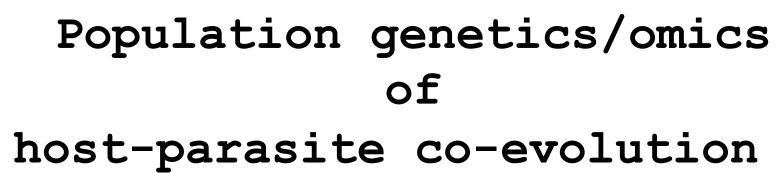


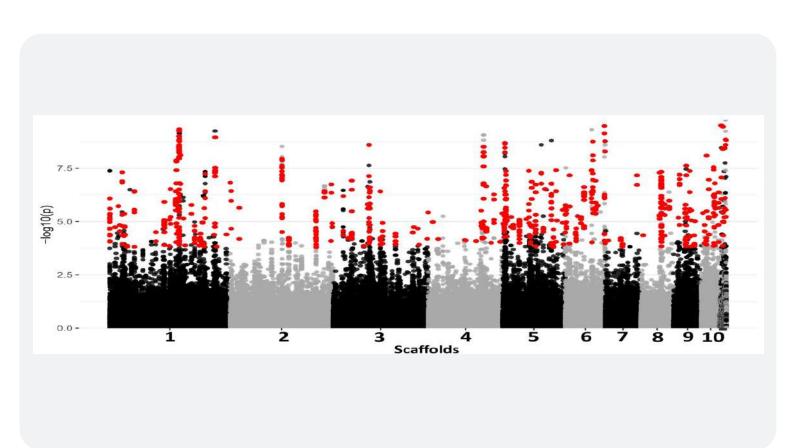


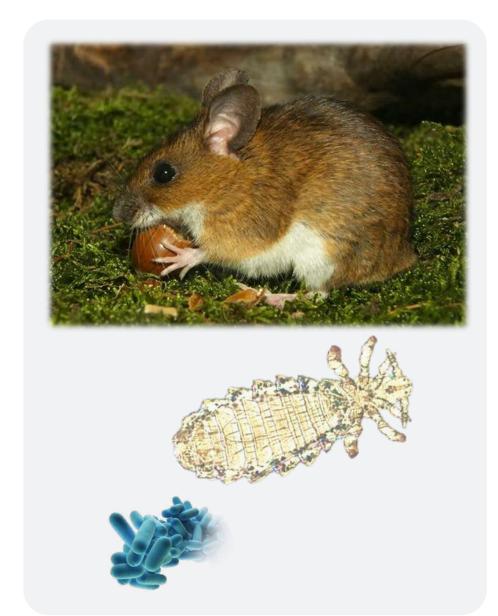
















Leyi Su

PhD student (2024.02 -)

Department of Medical Biochemistry and Microbiology,

Uppsala University, Sweden

Using population genomic data to study adaptive evolution in natural populations:

- the genetic mechanism underlying the different male mating strategies in Ruff (Calidris pugnax)
- the genome evolution in related to ecological adaptation in Atlantic herring (Clupea harengus)

Take-home:

Leyi loves bird watching!

Ruff (satellite male)

Marion Talbi

Nice landscapes



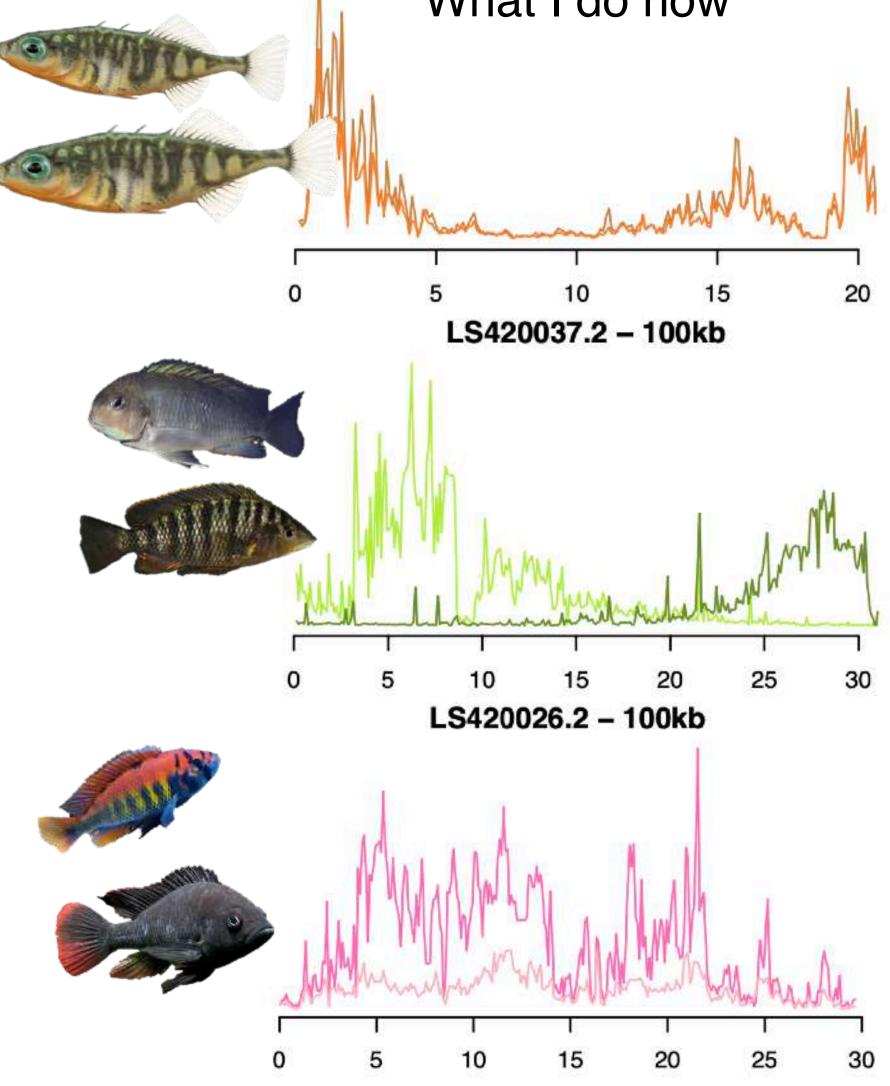








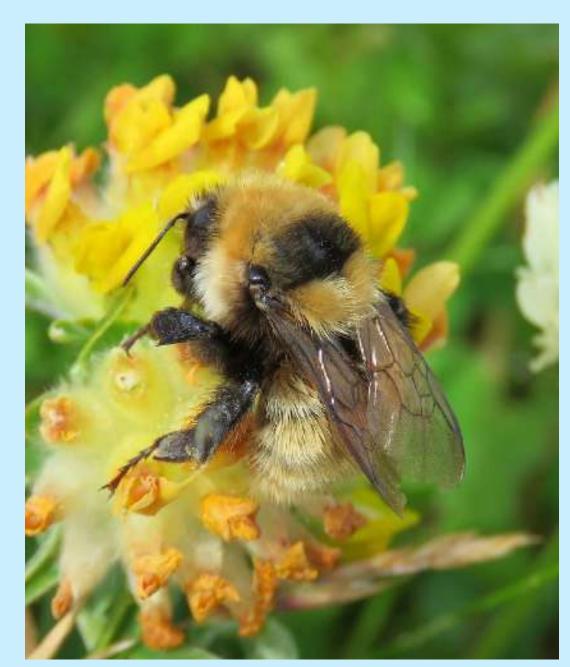
Recombination landcapes What I do now



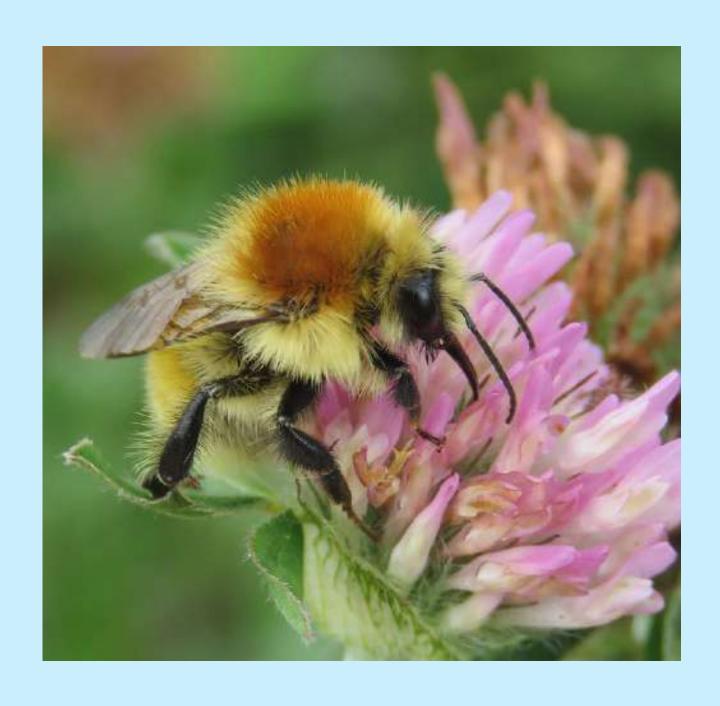




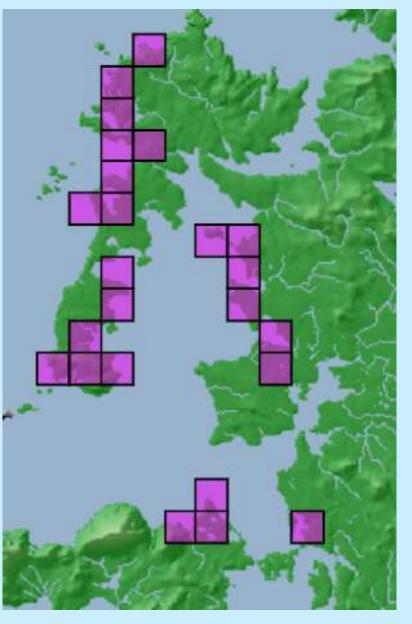




Bombus distinguendus
Great Yellow
Bumblebee



Bombus muscorum Large/ Moss Carder Bee



Co. Mayo, Ireland



Machair Grassland

- Extinction Risk
- Conservation Strategies

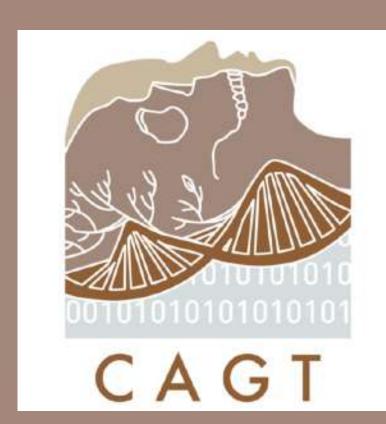


Gaétan Tressieres 2nd year PhD

> Ludovic Orlando Prof. and Dir.

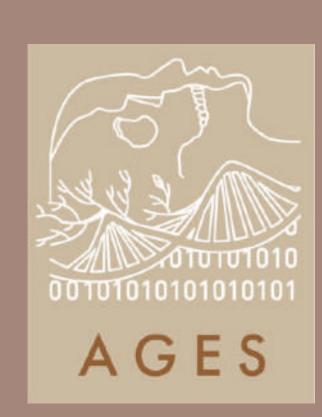


Centre for
Anthropobiology and
Genomics of
Toulouse



TEAM

Archaeology,
Genomics, Evolution
and Societies





PhD's project

The horse of the First Steppe Empire and the First Chinese Dynasty: paleogenomics, funerary and breeding practices.

HorsePower project

Interactions between China, Mongolia and the steppes 2000-0 BCE



Emiliano Trucchi

Investigating demographic and adaptive processes in natural

populations of (mostly) non-model species



Keywords

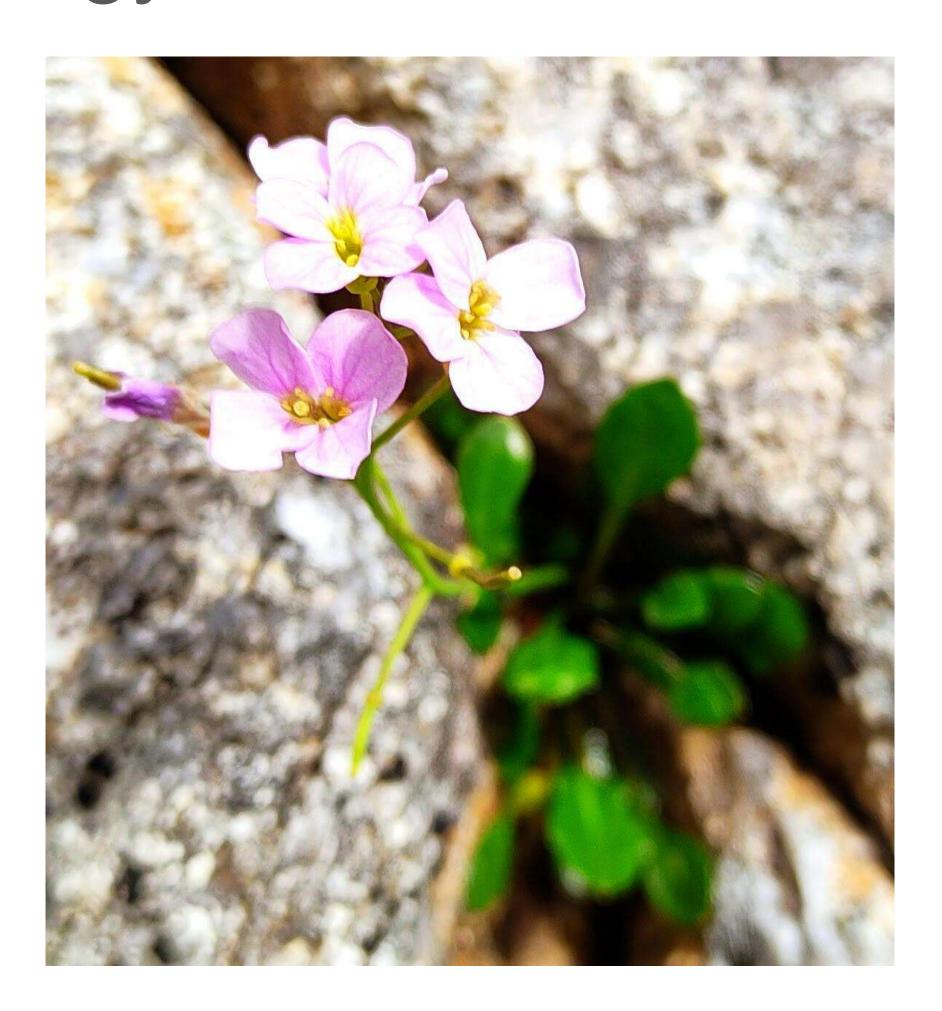
Population genetics, Genomics, Transcriptomics, Bioinformatics, Conservation biology

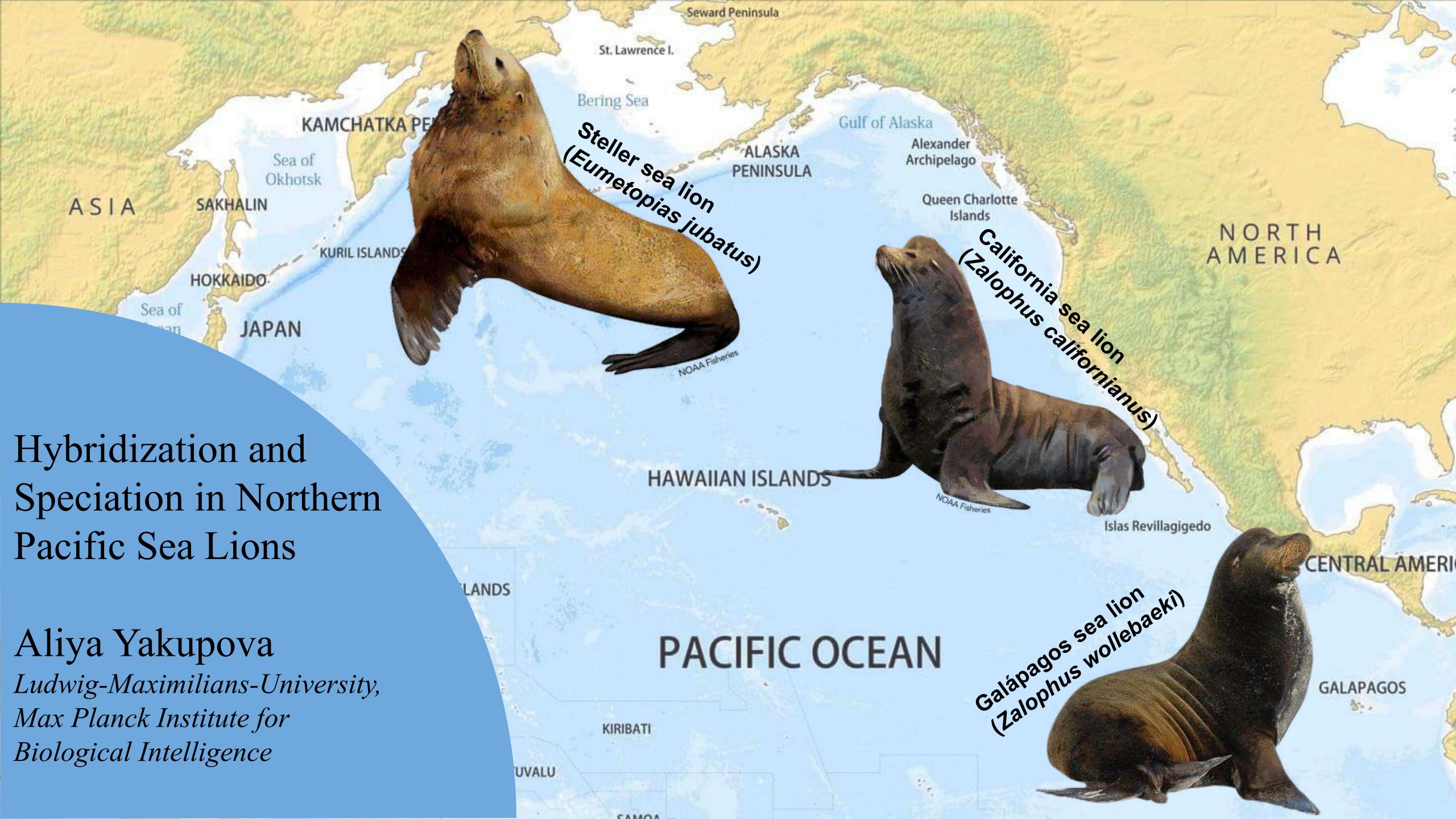


Jakub Vlček

Dep. of Botany, Charles Uni., Prague Biology Centre & Dep. of Zoology, USB, Budweis







Thanks!