Rishi De-Kayne

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http://rishidekayne.github.io/

Education:

EAWAG department of Fish Ecology & Evolution/University of Bern Institute of Ecology & Evolution 2016-Present: PhD Candidate

- Topic: Adaptation and Speciation Genomics of the Alpine Whitefish

Imperial College London 2015-2016: MRes Tropical Forest Ecology - Pass with Distinction

- Thesis: 'Endophytic fungal, not bacterial, communities differ between sympatric palm species'

Imperial College London 2012-2015: BSc Biology - 1st Class Honours

- Final Year Project: 'Resolving the phylogeny of the sharks using 20 transcriptomes' (1st)

St. Michael's School (The Bryn, Llanelli)

- 2012: A Levels – A*AAA
- 2009/2010: GCSEs - 9A*, 1A

Publications:

https://scholar.google.co.uk/citations?user=mgVYiCQAAAAJ&hl=en
Citations: 31
h-Index: 2

4. **R De-Kayne**, Stefan Zoller, PGD Feulner (2019)
A de novo chromosome-level genome assembly of *Coregonus sp. "Balchen"*: one representative of the Swiss Alpine whitefish radiation. BioRxiv

3. **R De-Kayne**, PGD Feulner (2018)
A European whitefish linkage map and its implications for understanding genome-wide synteny between salmonids following whole genome duplication. G3: Genes, Genomes, Genetics 8 (12), 3745-3755

2. OG Osborne*, **R De-Kayne***, MI Bidartondo, I Hutton, WJ Baker, Colin GN Turnbull, Vincent Savolainen (2017)
Arbuscular Mycorrhizal fungi promote coexistence and niche divergence of sympatric palm species on a remote oceanic island. New Phytologist 217 (3), 1254-1266

1. PGD Feulner, **R De-Kayne** (2017)
Genome evolution, structural rearrangements and speciation. Journal of Evolutionary Biology 30 (8), 1488-1490

*authors contributed equally

Research Experience:

Field Technician – Savolainen Lab Imperial College London (Lord Howe Island): August-September 2015
This project aimed to determine whether *Howea* palms, a textbook example of sympatric speciation, are adapted to different soil types on Lord Howe Island. I was responsible for co-designing and implementing a large reciprocal transplant experiment on the island, which I set

up singlehandedly. I gained valuable skills in fieldwork logistics, experimental design, plant identification and soil analysis as well as further developing my interpersonal and communication skills by working closely with the local community.

Undergraduate Research Opportunity Placement (UROP) – Kew Gardens: July-September 2014
This project aimed to investigate the diversity and distribution of mycorrhiza across Europe. Whilst at Kew I independently processed and cleaned plant roots before identifying roots with mycorrhizal colonies. I then carried out DNA extractions on these roots, PCR, gel electrophoresis and did bioinformatic processing of the sequence data in Geneious.

Volunteer in Conservation/Research department - National Botanic Garden of Wales: Summer 2011 and 2013
This project aimed to DNA barcode all native flowering plants and conifers of Wales (DNA Barcoding the Native Flowering Plants and Conifers of Wales, de Vere et al. 2012). I was responsible for collecting samples and independently carrying out DNA extractions, PCR and gel electrophoresis to sequence the *rbcL* and *matK* regions for the 'Barcode Wales' database.

Skills:

- Proficient IT use including bioinformatics including Linux, python and R scripting
- Molecular lab experience including producing RAD libraries and extracting high molecular weight DNA for genome sequencing.
- Fieldwork experience in a variety of habitats from broad biodiversity studies to species-specific collections.
- Aquarium experience breeding and rearing salmonid larvae
- Herbarium specimen preparation and organization.
- Possess a full, clean driving licence.

Science communication:

- Founded and run the PhDetails blog: http://phdetails.blogspot.com/ - featuring weekly interviews with biology PhD students from around the world to promote the diversity of people and projects in biology. Over 80 PhD students have featured to date - average of 1200 hits/month.

Interests and Hobbies:

- TOPSport Scholar at Imperial College London (2015) for playing handball for the Great Britain University squad.
- Enjoy a variety of outdoor activities and sports including cycling and climbing.

References: (Available on request)

2. Dr. Philine Feulner
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3. Professor Ole Seehausen
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- +41 31 631 31 31

1. Professor Vincent Savolainen
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