

# Christopher David Barratt

## Personal Information

Place and date of birth: Salford, UK  
Gender: Male  
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## Profile

Evolutionary ecologist focusing on molecular (bioinformatic) and spatial (eco-informatic) analyses to understand biodiversity patterns and processes, and providing tools and insights to aid biodiversity and ecosystem management

## Education

Sep 2013–Apr 2017 **PhD** (Summa cum laude): Biodiversity patterns and conservation of the coastal forests of Eastern Africa. University of Basel, Advisor: Dr. S. Loader, External examiner: Prof. N. Burgess (WWF, UNEP-WCMC)  
Jul 2010–Jul 2012 **MSc by research** (Pass): Developing microsatellite markers for East African caecilian amphibians. University of Salford, Advisor: Dr. R. Jehle, External Examiner: Dr. A. Pernatta (University of Brighton)  
Sep 2003–Jun 2007 **BSc** (1st class honours): Wildlife and Practical Conservation. University of Salford, Advisor: Dr. P.A. Rees

## Scientific Experience

April 2020–March 2023 **Postdoctoral Researcher**, sDiv (Synthesis Centre for Biodiversity Science), part of the German Centre for Integrative Biodiversity Research (iDiv), Halle-Jena-Leipzig. Individual Postdoc grant 'Life on the edge: a new bioinformatic toolbox to conserve wildlife populations under threat from future global change' (Main PI).  
Aug 2018–March 2020 **Postdoctoral Researcher**, German Centre for Integrative Biodiversity Research (iDiv), Halle-Jena-Leipzig. 'Dynamic aspects of chimpanzee diversification across Africa using paleoclimate and genomic data' (Main PI).  
Nov 2017–May 2018 **Desk editor** (Scientific journals) Brill publishers, Leiden, Netherlands.  
Sep 2016–Jun 2017 **Visiting scientist**, Biogeography and Macroecology group, Institute for Biodiversity and Ecosystem Dynamics, University of Amsterdam. 'Population genomics and historical distributions of East African amphibians' (Dr. W.D. Kissling).  
Dec 2011–Dec 2016 **Managing editor**, Herpetological Journal (freelance). **Production editor**, Wolters Kluwer publishing, London, UK (full time, Nov 2012–Sep 2013).  
Sep 2010–Nov 2012 **Teaching Assistant**, School of Environment and Life Sciences, University of Salford, UK.  
Aug 2008–May 2009 **Research Officer**, Frontier Savannah Research Project, Kilombero valley, Tanzania.  
Aug–Dec 2005 **Research officer**, Corlett Maritima bird project, Principe Island, West Africa.

## Periods of leave (2 children)

2020-2021 - Paternity leave in Germany (3 months leave Aug-Oct, 8 months working at 75% Nov 2020-Apr 2021)  
2019 - Paternity leave in Germany (4 months working at 75% Jan-Apr)  
2018 - Paternity leave in Germany (2 months leave Jun-Jul, 5 months working at 75% Aug-Dec)  
2017-2018 - Paternity leave in Netherlands (80% working contract while working for Brill publishers)

## **Teaching**

|               |  |
|---------------|--|
| Jun 2022      | Organiser of 2 day yDiv workshop (with Laura Mendez Cuellar): “Stacks 2 – from raw reads to genome-wide genetic diversity, population structure and phylogeny” iDiv, Leipzig   |
| Jun 2020-2022 | Practical leader (2 day) for Macroecology, Macroevolution and Global change MSc course: “SDMs and phylogenetic indices for biogeography and conservation” iDiv/University of Leipzig   |
| Jun 2020-2022 | Guest lecturer and exam assessor for Macroecology, Macroevolution and Global change MSc course Lecture topics: “Micro and Macro- evolution, Species Distribution Modelling, and Evolutionary data in biodiversity research” iDiv/University of Leipzig |
| Oct 2019      | Organiser of 2 day workshop: “Making sense of high-throughput sequencing (short read) data: population structure, coalescent theory, demographic modelling” iDiv, Leipzig  |
| Mar 2019      | Organiser of 1 day workshop: “Generating and processing high-throughput short read data (eg. RAD-seq, ddRAD) introduction: Important considerations for sampling design and some initial bioinformatics” iDiv, Leipzig                                 |
| Oct 2015      | Organiser and teacher of two half-day workshops: “Spatial analysis in R” and “An introduction to next generation sequencing in unix”, at the Institute of Biogeography, University of Basel  |
| Sep 2010–12   | Teaching Assistant: ~200 undergraduate contact hours over 5 semesters: Population genetics, Systematics and taxonomy, Statistical methods, Terrestrial and freshwater habitats, Hydrobiology, Laboratory techniques, University of Salford             |

## **Student supervision**

### **Ongoing**

|            |  |
|------------|--|
| Nov 2021 – | Marilia Souza Lucas (Co-supervisor, PhD, 2021–2024, “Harnessing the power of RADseq data to achieve a more mechanistic understanding of rapid evolution”), Main supervisor: Prof. Isabell Hensen (MLU Wittenberg-Halle)      |
| Oct 2019–  | Francisco V. Puentes (Co-supervisor, PhD, 2019–2023, “Micro- and macro-evolutionary dynamics of seasonally dry neotropical forests”), Main supervisor: Dr. Renske Onstein (iDiv, Leipzig)                                    |
| Feb 2019–  | Jepianto Manurung (Co-supervisor, PhD, 2018–2021, “Evolutionary ecology of <i>Lumnitzera racemosa</i> and <i>Lumnitzera littorea</i> (Combretaceae)”), Main supervisor: Dr. Alexandra Muellner-Riehl (University of Leipzig) |
| Sep 2018–  | Laura Mendez Cuellar (Co-supervisor, PhD, 2018–2021, “Genomic signatures of megafaunal palms on Madagascar”, Main supervisor: Dr. Renske Onstein (iDiv, Leipzig)   |

### **Past**

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|---------------|--|
| Jan 2021-2022 | Rebecca Strueber (Main supervisor, MSc thesis, 2021–2022), “Examining spatial shifts of species occurrences through time: Past and future climate change impacts on the geographic distribution of <i>Enterolobium</i> (Fabaceae) in the Neotropics”. MLU Wittenberg-Halle/iDiv, Leipzig |
| Apr Jun 2021  | Amelie Hauer, Anne Peter, Christian Weiss (Main supervisor, MSc student project 2021), “The impact of new genetic information on species vulnerability to global change: The African elephant as a case study”. University of Leipzig/iDiv   |
| Nov 2014–2015 | Marco Crotti (Co-supervisor, MSc thesis, 2014–2015, “Empirical data from a species of African frog support the negative consequences of excluding missing data from RADseq analyses”, Main supervisor: Dr. Jeffrey Streicher (Natural History Museum London)                             |
| Aug–Dec 2011  | Jack Muskett (Co-supervisor, BSc lab project, 2011–2012, “Gene flow and metapopulation dynamics in <i>Triturus cristatus</i> ”, Main supervisor: Dr. Robert Jehle (University of Salford)  |
| Apr–May 2009  | Richard Saunders-Irving (Main supervisor, BTEC in Tropical Habitat Conservation) “The effects of the Kilombero Valley Teak Company Mavimba sawmill site on large mammal movement” (Frontier Tanzania Savannah Research Project)  |
| Jan–Mar 2009  | Fred Griffith (Main supervisor, BTEC in Tropical Habitat Conservation) “Effects of seasonal burning on birds in African dry forest” (Frontier Tanzania Savannah Research Project)  |
| Jan–Mar 2009  | Sebastian Ngasoma (Main supervisor, BTEC in Tropical Habitat Conservation) “Bird diversity in the Kilombero Valley” (Frontier Tanzania Savannah Research Project)  |
| Sep–Dec 2008  | Camilla Hassing (Main supervisor, BTEC in Tropical Habitat Conservation) “Hunting techniques of Carnivores” (Frontier Tanzania Savannah Research Project)  |
| Sep–Dec 2008  | Natalie Kay (Main supervisor, BTEC in Tropical Habitat Conservation) “How is butterfly diversity affected by burning in miombo woodland?” (Frontier Tanzania Savannah Research Project)  |

## **Publications**

1. **Barratt CD**, Horsburgh GJ, Dawson, DA, Gower DJ, Wilkinson M, Loader SP, Jehle R (2012). Isolation and characterisation of nine polymorphic microsatellites for the caecilian amphibian *Boulengerula uluguruensis*, and cross-species amplification with four congeneric species. *Conservation Genetics Resources* 4, 225–229
2. O'Brien CD, Hall JE, Orchard D, **Barratt CD**, Arntzen JW, Jehle R. (2015). Extending the natural range of a declining species: Genetic evidence for native great crested newt (*Triturus cristatus*) populations in the Scottish Highlands. *European Journal of Wildlife Research* 61, 27–33
3. Sala-Bozano M, Mariani S, **Barratt CD**, Sacchi H, Boufana B, Coscia I. (2015). Spatio-temporal variability in the population structure in North-East Atlantic stocks of horse mackerel (*Trachurus trachurus*). *Proceedings of the Royal Irish Academy: Biology and Environment* 115, 211–220
4. Bwong BA, Nyamache JO, Malonza PK, Wasonga DV, JM Ngwava, **Barratt CD**, Nagel P, Loader SP (2017). Amphibian diversity in Shimba Hills National Reserve, Kenya: a comprehensive list of specimens and species. *Journal of East African Natural History* 106, 19–46
5. Zimkus B, Lawson L, Barej M, **Barratt CD**, Channing A, Dehling JM, Gehring S, Greenbaum E, Gvodzik V, Harvey J, Kielgast J, Kusamba C, Nagy Z, Pabijan M, Penner J, Du Preez L, Rödel MO, Vences M, Weber K, Lötters S. (2017). Leapfrogging into new territory: how Mascarene ridged frogs have diversified across Africa. *Molecular Phylogenetics and Evolution* 106, 254–269
6. Bittencourt-Silva GB, Tolley K, Lawson LP, Portik DM, **Barratt CD**, Nagel P, Loader SP (2017) Impact of species delimitation and sampling on niche models and phylogeographic inference: a case study of the East African reed frog *Hyperolius substriatus* Ahl 1931. *Molecular Phylogenetics and Evolution* 114, 261–270
7. **Barratt CD**, Lawson LP, Bittencourt-Silva GB, Doggart N, Morgan-Brown T, Nagel P, Loader SP (2017). A new, narrowly distributed, and critically endangered species of spiny-throated reed frog (Anura: Hyperoliidae) from a highly threatened coastal forest reserve in Tanzania. *Herpetological Journal* 27, 13–24
8. **Barratt CD**, Bwong BA, Onstein RE, Rosauer DF, Menegon M, Doggart N, Nagel P, Kissling WD, Loader SP (2017). Environmental correlates of phylogenetic endemism in amphibians and the conservation of refugia in the coastal forests of Eastern Africa. *Diversity and Distributions* 23, 875–887
9. Jongsma G, Barej M, **Barratt CD**, Burger M, Conradie W, Greenbaum E, Hirschfeld M, Leache A, Penner J, Portik DM, Rödel MO, Blackburn D (2018). Diversity and biogeography of frogs in the genus *Ammirana* (Anura: Ranidae) across sub-Saharan Africa. *Molecular Phylogenetics and Evolution* 120, 274–285
10. **Barratt CD**, Bwong BA, Jehle R, Liedtke HC, Onstein RE, Nagel P, Portik DM, Streicher JW, Loader SP (2018). Vanishing refuge? Testing the forest refuge hypothesis in coastal East Africa using genome-wide sequence data for seven amphibians. *Molecular Ecology* 27, 4289–4308
11. Crotti, M, **Barratt CD**, Loader SP, Gower DJ, Streicher JW (2019). Causes and analytical impact of missing data in RADseq phylogenetics: insights from an African frog (*Afrixalus*). *Zoologica Scripta* 48, 157–167
12. Portik DM, Bell RC, Blackburn DC, Bauer AM, **Barratt CD**, Branch WR, Burger M, Channing A, Colston TJ, Conradie W, Dehling JM, Drewes RC, Ernst R, Greenbaum E, Gvoždík V, Harvey J, Hillers A, Hirschfeld A, Jongsma GFM, Kielgast J, Kouete MT, Lawson LP, Leaché AD, Loader SP, Lötters S, van der Meijden A, Menegon M, Müller S, Nagy ZT, Ofori-Boateng C, Ohler A, Papenfuss TJ, Röbber D, Sinsch U, Rödel M-O, Veith M, Vindum J, Zassi-Boulou AG, McGuire JA (2019). Sexual Dichromatism Drives Diversification Within a Major Radiation of African Amphibians. *Systematic Biology* 68, 859–875
13. Onstein RE, Vink D, Veen J, **Barratt CD**, Flantua S, Wich S, Kissling D (2020). Fruit colours determine the broad-scale distribution and diversification of primate vision. *Proceedings of the Royal Society B* 287, 20192731
14. Kalan A, Kulik L, Arandjelovic M, Boesch C, Haas F, Dieguez P, **Barratt CD**, Abwed EE, Agbor A, Angedakin S, Aubert D, Ayimisin EA, Bailey E, Bessone M, Brazzola G, Buh VE, Rebecca Chancellor R, Cohen H, Coupland C, Curran B, Danquah E, Deschner T, Dowd D, Eno-Nku M, Fay JM, Goedmakers A, Granjon A-C, Head J, Hedwig D, Hermans V, Jeffery KJ, Jones S, Junker J, Kadam P, Kambi M, Kienast I, Kujirakwinja D, Langergraber KE, Lapuentea J, Larson B, Lee KC, Leinert V, Llana M, Marrocoli S, Meier AC, Morgand B, Morgan D, Neila E, Nicholl S, Normand E, Ormsby LJ, Pacheco L, Piel A, Preece J, Robbins M, Rundus A, Sanz C, Sommer V, Stewart F, Taggn N, Tennie C, Vergnes V, Welsh A, Wessling EG, Willie J, Wittig RM, Yuh YG, Zuberbühler K, Kühl HS (2020). Environmental variability supports chimpanzee behavioural diversity. *Nature communications* 11, 4451
15. Bwong BA, **Barratt CD**, Loader SP, Nyamache JO, Menegon M, Malonza PK, Nagel P, Lawson LP (2020) Systematics of *Hyperolius mitchelli* Loveridge, 1953 and *H. rubrovermiculatus* Schiøtz, 1975 (Anura: Hyperoliidae) and assignment of populations from northern Tanzania. *African Journal of Herpetology* 69, 165–181
16. Ngwava JM, **Barratt CD**, Bwong BA, Boakes E, Wasonga V, Muchai V, Nguku J, Nyamache J, Malonza PK, Channing A, Owen N, Couchman O, Loader SP (2021). Species-specific or assemblage-wide decline? The case of *Arthroleptides dutoiti* Loveridge, 1935 and the amphibian assemblage of Mount Elgon, Kenya. *African Journal of*

17. Lester JD, Vigilant L, Gratton P, **Barratt CD**, McCarthy MS, Boesch CD, Kuhl H, Dieguez P, Aebischer T, Agbor A, Álvarez-Varona P, Angedakin S, Assumang AK, Aubert F, Ayimisin EA, Bailey E, Bamba A, Barubiyo D, Bessone M, Bonnet M, Brazzola G, Chancellor R, Cipoletta C, Cohen H, Corogenes K, Coupland C, Curran B, Danquah E, Dengui JC, Deschner T, Dilambaka E, Dowd D, Dunn A, Dupain J, Egbe VE, Eno-Nku M, Goedmakers A, Granjon AC, Head J, Heilman A, Hedwig D, Hermans V, Imong I, Jeffery KJ, Jones S, Junker J, Kadam P, Kaiser M, Kalan AK, Kambere M, Kambi M, Kehoe L, Kienast I, Kujirakwinja D, Langergraber KE, Lapeyre V, Lapuente J, Larson B, Laudisoit A, Lee K, Leinert V, Llana M, Manasseh EN, Maretti G, Marrocoli S, Martín R, Masozera M, Meier A, Morgan D, Muhanguzi G, Mulindahabi F, Murai M, Neil E, Nicholl S, Nixon S, Niyigaba P, Normand E, Ntare N, Nzeheke A, Orbell C, Ormsby LJ, Orume R, Pacheco L, Piel A, Preece J, Regnaut S, Robbins M, Rundus A, Sanz C, Sciaky L, Siaka AM, Sommer V, Städele V, Stewart F, Tagg N, Telfer P, Terrade E, Tickle A, Ton E, van Schijndel J, Vanleeuwe H, Vergnes V, Vyalengerera MK, Wessling EG, Willie J, Wittig RM, Ginath Y, Yurkiw K, Zuberbuehler K, Arandjelovic M (2021) Recent genetic connectivity and clinal variation in chimpanzees. *Nature Communications Biology* 283
18. Perino A, Pereira HM, Felipe-Lucia M, Kim H, Kühl HS, Marselle MR, Meya JN, Meyer C, Navarro LM, van Klink R, Albert G, **Barratt CD**, Bruelheide H, Cao Y, Chamoin A, Darbi M, Dornelas M, Eisenhauer N, Essl F, Farwig N, Förster J, Freyhof J, Geschke J, Gottschall F, Guerra C Haase P, Hickler T, Jacob U, Kastner T, Kim H, Korell L, Kühn I, Lehmann GUC, Lenzner B, Maes J, Marques A, Motivans E, Quintero LC, Pacheco A, Popp A, Rouet-Leduc J, Schnabel F, Siebert J, Staude IR, Trogisch S, Švara V, Svenning JC, Pe'er G, Raab K, Rakosy D, Vandewalle M, Werner AS, Wirth C, Xu H, Yu D, Zinngrebe Y & Bonn A (2021). Biodiversity Post-2020: Closing the gap between global targets and national-level implementation. *Conservation Letters* e12848
19. **Barratt CD**, Lester JD, Gratton P, Onstein RE, Kalan AK, McCarthy MS, Bocksberger G, White LC, Vigilant L, Dieguez P, Abdulai B, Aebischer T, Agbor A, Assumang AK, Bailey E, Bessone M, Buys B, Carvalho JS, Chancellor R, Cohen H, Danquah E, Deschner T, Dongmo ZN, Doumbe O, Dupain J, Duvall CS, Eno-Nku M, Etoga G, Galat-Luong A, Garriga R, Gatti S, Ghiurghi A, Goedmakers A, Granjon A, Hakizimana D, Head J, Hedwig D, Herlinger I, Hermans V, Jones S, Junker J, Kadam P, Kambi M, Kienast I, Kouakou CI, Kouame PN, Langergraber KE, Lapuente J, Laudisoit A, Lee KC, Maisels F, Mirghani N, Moore D, Morgan B, Morgan D, Neil E, Nicholl S, Nkambi L, Ntongho A, Orbell C, Ormsby LJ, Pacheco L, Piel AK, Pintea L, Plumptre AJ, Rundus A, Sanz C, Sommer V, Sop T, Stewart FA, Sunderland-Groves J, Tagg N, Todd A, Ton E, van Schijndel J, Vanleeuwe H, Vendras E, Welsh A, Wenceslau JFC, Wessling EG, Willie J, Wittig R, Yoshihiro N, Yuh YG, Yurkiw K, Boesch C, Arandjelovic M, Kühl HS (2021). Quantitative estimates of glacial refugia for chimpanzees (*Pan troglodytes*) since the Last Interglacial (120,000 BP). *American Journal of Primatology*, e23320
20. **Barratt CD**, Zizka A, Duarte Ritter C, Joerger-Hickfang T, Zizka V (2021). Existing approaches and future directions to link macroecology, macroevolution and conservation prioritization. *Ecography* (<https://doi.org/10.1111/ecog.05557>, under consideration for the E4 award).

#### **In review**

1. Ramsay MS, Sgarlata G, **Barratt CD**, Salmona J, Andriatsitohaina B, Kiene F, Manzi S, Ramilison ML, Chikhi, Lehman SM, Radespiel (in review). Effects of forest fragmentation on connectivity and genetic diversity in an endemic and an invasive rodent in northwestern Madagascar. *PLOS Biology*
2. Manurung J, **Barratt CD**, Andrés BMR, Schnitzler J, Jönsson BF, Susanti R, Durka W, Muellner-Riehl AN (in review). Deep phylogeographic splits and limited mixing by sea surface currents govern genetic population structure in the mangrove genus *Lumnitzera* across the Indonesian Archipelago. *Journal of Systematics and Evolution*

### **Professional services**

#### **Editorships**

- Associate editor for Herpetological Bulletin (2011-2017)

#### **Conference Organisation**

- Symposium organiser (with Dr. Renske Onstein) at the ATBC 2019 meeting in Antananarivo, Madagascar entitled “Broad-scale determinants of tropical diversification and community assembly”
- Symposium chair for ‘Historical and Paleobiogeography’ (Jan 2019 at IBS Malaga)

#### **Boards and Committees**

- iDiv associate member (2021-)

- yDiv (Graduate School for young biodiversity researchers, iDiv) board member (2019-)
- iDiv Internationalization committee (2021-)

#### **Working group memberships**

- African Amphibian Working Group (2011-)
- Amphibian Specialist Group (2016-), including IUCN red list assessment East African amphibians (2016)
- GEO-BON Genetic Composition Working group (2020-)
- sEngimas, sDiv working group (2021-) (<https://www.idiv.de/en/senigmas>)
- Research area co-organiser – “Biodiversity as driven by evolutionary and adaptive processes – from species to populations” at the German Centre for Integrative Biodiversity Research. Together with Sebastian Steinfartz, Martin Schlegel, Ekatarina Shelest, and Renske Onstein (2019-)
- Research area contributor (“iM2M: integrating meso to macro scales”) at the German Centre for Integrative Biodiversity Research (2018– present). (2018-)

#### **Current society memberships**

- Association for Tropical Biology and Conservation (2019-)
- International Biogeography Society (2014-)
- Society for the Study of Evolution (2016-)

#### **Reviews**

- Reviewed 30+ manuscripts for internationally recognized biodiversity journals. In the past 5 years I have reviewed for: Molecular Ecology, Evolution, Ecography, Journal of Biogeography, Biological Conservation, Ecology and Evolution, Molecular Phylogenetics and Evolution, Nature Scientific Data, Conservation Genetics Resources, Biological Indicators, Current Zoology, Journal of Zoological Systematics and Evolutionary Research, Asian Herpetological Research, Ecological Indicators, Zootaxa, African Zoology
- Grant reviews for GEO-BON-Microsoft Joint call (EBVs on the cloud) and Agence Nationale de la Recherche.

#### **Grants awarded** (as main PI, \* represents as co-PI)

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| Apr 2022  | iDiv (German Centre for Integrative Biodiversity Research) Halle-Jena-Leipzig – Flexpool Support Fund “Cryptic diversity under global change: the case of the <i>Hyperolius mitchelli</i> African reed frog species complex” (€10,000)   |
| Apr 2022* | iDiv (German Centre for Integrative Biodiversity Research) Halle-Jena-Leipzig – Flexpool Support Fund “The suitability of road verges for protected grassland plant species assessed at the gene level”. (co-PI, main PI: Sabrina Traeger, €10,000)  |
| Apr 2022* | iDiv (German Centre for Integrative Biodiversity Research) Halle-Jena-Leipzig – Flexpool Support Fund “Human impact on biodiversity: How anthropogenic factors influence the genetic diversity and stress hormone levels of the critically endangered crested macaques across Indonesia” (co-PI, main PI: Marlen Kuecklich, €10,000) |
| Nov 2020* | iDiv (German Centre for Integrative Biodiversity Research) Halle-Jena-Leipzig - Flexible Pool PhD grant [4 years] “Harnessing the power of RADseq data to achieve a more mechanistic understanding of rapid evolution” – as co-PI, main applicant: Isabell Hensen, University of Halle (€240,000)                                    |
| Jun 2020  | iDiv (German Centre for Integrative Biodiversity Research) Halle-Jena-Leipzig – sDiv Individual postdoc grant [3 years]: “Life on the edge: a new bioinformatic toolbox to conserve wildlife populations under threat from future global change” (€223,000)  |
| May 2018  | DFG (Deutsche Forschungsgemeinschaft) via iDiv Halle-Jena-Leipzig – Flexible pool postdoc grant [3 years]: ‘Dynamic aspects of chimpanzee diversification across Africa using paleoclimate and genomic data’ (€165,000)  |
| Apr 2018  | Society for the Study of Evolution – Travel to Evolution 2018 in Montpellier (\$500 USD)   |
| Oct 2016  | FAG Basel – PhD extension grant [6 months] (12,000 CHF)  |
| Feb 2016  | Swiss Zoological Society – Travel grant to attend International Biogeography Society conference in Tucson, AZ, US (1000 CHF)   |
| Jan 2015  | Departement Umweltwissenschaften, University of Basel – Travel grant to attend International Biogeography Society conference in Bayreuth, Germany (600 CHF)  |
| Aug 2014  | European Science Foundation ConGenOmics short grant – Specimen work at Natural History   |

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| May 2014 | Museum London and Museo Delle Scienze, Trento (€1350 EUR)   |
|          | Departement Umweltwissenschaften, University of Basel – Travel grant to attend 16th African Amphibian Working Group meeting, Bwindi, Uganda (800 CHF) |
| Apr 2014 | FAG Basel – Fieldwork grant for Tanzania (3500 CHF)   |
| Sep 2013 | Humer Foundation for Academic Talent – PhD grant [3 years] (150,000 CHF)  |

### **Visits in other Labs and Fieldwork**

| Institute   | Year | Duration | Purpose   |
|---|------|----------|---|
| University of Leipzig and iDiv (GEOBON) Essential Biodiversity Variables and Nature Futures Indicators for 2020 and beyond, Leipzig (Germany) | 2020 | 1 week   | Refining and selecting Essential Biodiversity Variables for the GEOBON inputs to the CBD post-2020 framework and Nature Futures |
| Xishuangbanna Tropical Botanical Garden and Kunming Institute of Botany, Chinese Academy of Sciences (China)                                  | 2017 | 2 weeks  | Collaboration at Biogeography & Ecology group and data collection. Funded and invited by Prof. Yaowu Xing                       |
| Grenoble University, Grenoble (France)  | 2016 | 1 week   | Workshop funded by French-Berkeley fund, invited by Prof. Brent Mishler and Dr. Wilfried Thuiller                               |
| University of Roehampton (UK)   | 2016 | 1 week   | Invited talk and project proposal writing (invited by Dr. Simon Loader)   |
| University of Basel (Walter Salzburger Lab)   | 2015 | 1 week   | RAD-seq library preparation supervision of MSc student Marco Crotti   |
| University of Basel (Walter Salzburger Lab)   | 2014 | 2 weeks  | Library preparation for RAD-seq project (PhD)   |
| Natural History Museum, London (UK)   | 2014 | 1 week   | Data collection (museum sampling) funded by ESF ConGenomics grant   |
| Museo Delle Scienze, Trento (Italy)   | 2014 | 1 week   | Data collection (museum sampling) funded by ESF ConGenomics grant   |
| Tanzania Savannah Research Programme, Kilombero Valley, (Tanzania)  | 2008 | 9 months | Research officer to record and monitor biodiversity and mentor volunteers   |
| Corlett Maritima, Santo Antonio (Principe Island)   | 2005 | 3 months | Data collection for BSc placement   |
| Mweka Wildlife College, Moshi (Tanzania)  | 2004 | 2 weeks  | Short course in African wildlife management and contribution to large mammal field surveys in Ngorongoro crater                 |

### **Training**

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| June 2022 | Teaching in Higher Education – improving didactic delivery (2 day workshop), iDiv, Leipzig Germany   |
| Sep 2021  | Congen 2021: Conservation Genetics, Population Genomics, and Molecular Ecology. University of Montana (online)                             |
| Jan 2020  | How can biodiversity science contribute to the CBD post-2020 framework? Leipzig, Germany   |
| Sep 2019  | Introduction to Transcriptomics, Helmholtz Centre for Environmental Research (UFZ), Leipzig, Germany                                       |
| Jan 2019  | sdm: a reproducible and extensible R package for species distribution modeling. International Biogeography Society biennial, Malaga, Spain |
| Nov 2018  | How to become a Junior Research Group Leader. iDiv (German Centre for Integrative Biodiversity Research), Leipzig, Germany                 |
| Jan 2017  | Cleaning Biodiversity Data. International Biogeography Society biennial, Tucson, AZ, US  |
| Jul 2016  | Bioinformatics of long-read sequencing – getting ready for the third generation, Swiss Institute for                                       |

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| Feb 2016 | Bioinformatics/University of Bern, Switzerland<br>Bioinformatics for Adaptation Genomics Winter School, Swiss Federal Institute of Technology, Weggis, Switzerland |
| Oct 2015 | Introduction to high performance computing cluster use. Swiss Institute for Bioinformatics/ University of Basel, Switzerland                                       |
| Jun 2015 | Genotyping By Sequencing. The Genome Analysis Centre, Norwich, UK  |
| Oct 2014 | Genomics of the speciation continuum. University of Fribourg, Switzerland  |
| Mar 2004 | Short course in African wildlife management, Mweka college, Moshi, Tanzania  |

### **Presentations** (\* indicates invited talks)

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|-----------|---|
| Apr 2022  | Life on the edge: assessing intraspecific vulnerability to global change by integrating environmental, ecological and molecular data, iDiv annual conference, Leipzig   |
| Feb 2020  | Long-term environmental stability, genomic diversity and demographic history of Pan-African chimpanzee populations, 4th Annual meeting in Conservation Genetics 2020, Senckenberg World of Biodiversity, Frankfurt, Germany |
| Feb 2020* | Long-term environmental stability, genomic diversity and demographic history of Pan-African chimpanzee populations, Laboratoire Evolution & Diversité Biologique, Université Paul Sabatier, Toulouse, France                |
| Dec 2019* | Using genomic data to understand biodiversity patterns and processes, Molecular Evolution and Systematics of Animals Research Group, University of Leipzig, Germany   |
| Dec 2019* | Population history and conservation of chimpanzees, Institute for Zoology, University of Veterinary Medicine, Hannover, Germany   |
| Nov 2019* | Chimpanzee population diversification using genomic and paleoclimate data, Molecular Evolution and Plant Systematics Research Group, University of Leipzig, Germany   |
| Sep 2019  | Afrotropical biodiversity and conservation using high throughput and genomic data, German Zoological Society annual meeting, Jena, Germany  |
| Aug 2019  | Elucidating diversification mechanisms in tropical biodiversity hotspots, Association for Tropical Biology and Conservation, Antananarivo, Madagascar   |
| Jan 2019  | Elucidating diversification mechanisms in tropical biodiversity hotspots, International Biogeography Society biennial, Malaga, Spain  |
| Jan 2019  | Dynamic aspects of chimpanzee diversification using paleoclimate and genomic data, Max Planck Institute for Evolutionary Anthropology, Department of Primatology seminar series, Leipzig                                    |
| Aug 2018  | Elucidating intraspecific diversification processes in the Afrotropics, iDiv conference, Leipzig  |
| Aug 2017* | Spatial phylogenetics for biodiversity conservation in East Africa. Xishuangbanna Tropical Botanical Gardens, Xishuangbanna, Yunnan Province, China   |
| Aug 2017* | Spatial phylogenetics for biodiversity conservation in East Africa. Xishuangbanna Tropical Botanical Gardens, Kunming Institute of Botany, Kunming, Yunnan Province, China  |
| Jan 2017  | Drivers of phylogenetic endemism and the conservation of centres of endemism in the coastal forests of Eastern Africa. International Biogeography Society biennial, Tucson, AZ, USA   |
| Apr 2016* | A phylogenetic approach to explain endemism in the East African coastal forests. Estación Biológica de Doñana, Seville, Spain   |
| Apr 2016* | Linking phylogenies and spatial data to explain amphibian endemism in the East African coastal forests. Natural History Museum of Bern, Switzerland   |
| Mar 2016* | Using Next Generation Sequencing and DNA barcoding to reveal the biodiversity value of the Coastal forests of Eastern Africa. Department of Life Sciences, University of Roehampton, UK                                     |
| Dec 2015  | Phylogenetic Endemism of a highly threatened biodiversity hotspot. Young Systematists Forum, Natural History Museum, London, UK.  |
| Mar 2014  | Vanishing refuge: The Coastal Forests of Eastern Africa. 16th African Amphibian Working Group conference, Bwindi, Uganda  |
| Apr 2011  | Newly developed microsatellite markers for the East African caecilian, <i>Boulengerula uluguruensis</i> and their utility in congeneric species. British Herpetological Symposium, Bangor, Wales                            |

## **Posters**

|            |  |
|------------|--|
| April 2022 | Insights from the PanAf project: Long-term environmental stability, genomic diversity and demographic history of chimpanzee populations, iDiv annual conference, Leipzig |
| Aug 2018   | Genome-wide data sheds light on amphibian diversification in the coastal forests of Eastern Africa. Evolution 2018, Montpellier, France                                  |
| Jun 2017   | Drivers of Phylogenetic Endemism and the Conservation of Centres of Endemism in the Coastal Forests of Eastern Africa. Evolution 2017, Portland, Oregon, US              |
| Feb 2016   | Are the Coastal forests of Eastern Africa a source area of diversity? Biology 16, Swiss Zoological Society, University of Lausanne, Switzerland                          |
| Aug 2015   | Are the Coastal forests of Eastern Africa a source area of diversity? Systematics Association biennial, Oxford, UK   |
| Jul 2015   | Are the Coastal forests of Eastern Africa a source area of diversity? Amphibian Conservation Research Symposium, University of Cambridge, UK                             |
| Jun 2015   | Are the Coastal forests of Eastern Africa a source area of diversity? Genotyping By Sequencing course, The Genome Analysis Centre, Norwich, UK                           |
| Feb 2015   | Speciation patterns in the Coastal Forests of Eastern Africa. Biology 15, Swiss Zoological Society, Dubendorf, Switzerland   |
| Jan 2015   | Speciation patterns in the lowland forests of Eastern Africa. International Biogeography Society conference, University of Bayreuth, Germany                             |
| Sep 2014   | Speciation patterns in the lowland forests of Eastern Africa. Genomics of the speciation continuum workshop, University of Fribourg, Switzerland                         |

## **Skills**

|                    |  |
|--------------------|--|
| Technical:         | Wet laboratory skills for DNA extraction/PCR, genetic labwork (genetic, microsatellites), and genomic library preparation. Competence in bioinformatics and ecoinformatics. Database use (Filemaker, MySQL) and analysis of large genomic datasets (exome, whole genome) and population analyses. Programming skills in R, bash and python, advanced HPC cluster use |
| Communication:     | Strong communicator, presenting complex information in a simple and digestible manner to a wide audience (see presentations and posters). Open minded, optimistic and diplomatic, collaborative with strong problem solving abilities. Native speaker in English, A2/B1 Dutch, A2 French, A1 Italian, A2 German, A2 Swahili  |
| Additional skills: | Driver's Licence for class B vehicles, Graphic design skills   |

## **Referees** (further referees available upon request)

- Dr. Hjalmar Kuehl. PanAf Project coordinator. German Centre for Integrative Biodiversity Research (iDiv), Halle-Jena-Leipzig, Deutscher Platz 5e, 04103 Leipzig, Germany (hjalmar.kuehl@idiv.de)
- Dr. Simon Loader. Principal Curator in charge of Vertebrates, Natural History Museum, Cromwell Road, London, UK, SW7 5BD (simon.p.loader@gmail.com)<sup>[1]</sup><sub>sep</sub>