

# Dr Daniel Hending

4 Manor Close, Cassington, Witney, Oxon OX29 4ER, UK

DOB: 10/06/1993

Mobile: +44 (0)7541133149

danhending2@gmail.com

daniel.hending@biology.ox.ac.uk

## Education

---

**University of Bristol and Bristol Zoological Society, Sep 2018 – July 2021**

**PhD in Biological Sciences**

Project Title: Conservation biogeography of the Cheirogaleidae.

**University of Bristol and Bristol Zoological Society, Sep 2014 – July 2016**

**MSc by research in Wildlife Ecology and Conservation**

Project Title: Behavioural ecology of the Sambirano mouse lemur, *Microcebus sambiranensis*, and its implications for direct conservation action.

**University of the West of England, Sep 2011 – June 2014**

**BSc (Hons) Conservation Biology - 2:1 (Upper Second-Class Degree with Honours)**

## Employment History

---

**Postdoctoral Research Assistant, University of Oxford, Sep 2022 – Present**

Development of analysis pipelines for multimodal data sets, consisting of camera trap data, observational data, acoustic, and seismic recordings to understand why African Elephants use seismic communication, and how we can utilise elephant signals for remote population monitoring. Communication of research results via scientific publications and conference presentations, and preparation of grant applications.

**Postdoctoral Researcher, University of Bristol, June 2021 – Nov 2021**

Acquisition, collation, analysis and interpretation of UK-wide university teaching data to improve teaching efficiency and student learning experience within the department and faculty. Presentation of results to teaching and research staff within the department.

**Customer Assistant, OneStop, Sep 2020 – Nov 2021**

Providing helpful and friendly assistance to customers, stock and wastage management, maintaining health, safety and security procedures.

**Researcher, Bristol Zoological Society (Department of Field Conservation and Science),  
Dec 2016 – June 2021**

Conducting fieldwork in northern Madagascar, statistical analysis of data, publishing in peer-reviewed journals, lecturing undergraduate students on field techniques and conservation case-studies. Editor for the Lemur News journal.

**Teacher/Demonstrator, University of Bristol, Sep 2014 – Sep 2016, Sep 2018 – June 2021**

Coordinating undergraduate laboratory practical sessions, conducting mock interviews, hosting undergraduate presentation sessions, assessing and marking written essays and practical reports, tutoring undergraduates in statistics.

**Customer Assistant, Tesco, Jul 2009 – Sep 2018**

Providing helpful and friendly assistance to customers, multiskilled and experienced on a range of departments, stock and wastage management.

## **Key Skills and Competencies**

---

**Field skills:** Highly experienced with a range of field equipment including radio collars and receivers, GPS, automated and handheld acoustic recorders and seismic nodes, live-traps, camera traps and solar power cells. Skilled in methods of biodiversity assessment, organism sampling, and animal and plant identification and taxonomy. Experienced in behavioural and ecological research of many terrestrial organism groups including mammals, reptiles, amphibians, birds, invertebrates and plants. Qualified open-water diver with experience of ecological population sampling techniques on underwater environments such as coral reefs. I have demonstrated these skills whilst leading numerous field-studies in the tropics.

**Laboratory skills:** Skilled with compound and dissectional microscopes and have experience in their use through the taxonomic identification of terrestrial and freshwater invertebrates and mosses. Skilled in hormone sampling and analysis procedures.

**Computing:** High level of confidence with Microsoft Office, Python, statistical analysis computer programs including R and SPSS, and the computer mapping software ArcGIS. Adept at species distribution modelling, trained in MaxEnt and related R packages. Confident and highly experienced with acoustic analysis software including Avisoft SASLab and related R packages, and the population density estimation software Distance. Practiced with calculation of indices to quantify biodiversity, and experienced with the application of machine learning tools to analyse large ecological and conservation datasets.

**Data handling:** Extensively practised in the collection, collation, analysis and synthesis of original and already-published data into original research articles, critical reviews and meta-analyses. Highly confident with the analysis of large, complex datasets, and practiced in the application of mixed models, variable-reduction and classification analysis. Experienced in utilizing demographic, ecological and social data to inform species and habitat conservation initiatives, and a regular participant in IUCN's Red Listing process for Madagascar's lemurs.

**Other:** Proven leadership and communication skills, demonstrated whilst leading multiple long-term field-studies in Madagascar. I am a participating member in the IUCN/SSC Primate Specialist Group for Madagascar, British Ecological Society, Society for Experimental Biology, and the UK Bioacoustics Special Interest Group. I hold a clean UK driving licence, and am trained in emergency first aid for day-to-day and fieldwork scenarios.

## Published Works

---

28. Schüßler, D., Blanco, MB., Guthrie, N., Sgarlata, G., Dammhahn, M., Ernest, R., Evasoa, M., Hasaniaina, A., **Hending, D.**, Jan, F., Le Pors, B., Miller, A., Olivieri, G., Rakotonanahary, A., Rakotondranary, S., Rakotondravony, R., Ralantoharijaona, T., Ramananjato, V., Randrianambinina, B., Raeolinjanakolona, N., Rasoazanabary, E., Rasoloarison, R., Rasolofoson, D., Rasoloharijaona, S., Rasolondraibe, E., Roberts, S., Teixeira, H., van Elst, T., Johnson, S., Ganzhorn, J., Chikhi, L., Kappeler, P., Louis, E., Salmona, J. and Radespiel, U. (In Press) Morphological variability or inter-observer bias? A methodological toolkit to improve data quality of multi-researcher datasets for the analysis of morphological variation. *American Journal of Biological Anthropology*.
27. **Hending, D.**, McCabe, G., Cotton, S. and Holderied, M. (2023) Conservation biogeography of the Dwarf Lemurs (*Cheirogaleus*) of Madagascar, investigated via ecological niche modelling. *International Journal of Primatology*. 44, pp. 960–983.
26. **Hending, D.**, Randrianarison, H., Andriamavosoloarisoa, NNM., Ranohatra-Hending, C., Cotton, S., Holderied, M. and McCabe, G. (2023) Effects of forest fragmentation on the dietary ecology and activity of a nocturnal lemur community in North West Madagascar. *American Journal of Primatology*. e23569
25. **Hending, D.**, Randrianarison, H., Andriamavosoloarisoa, NNM., Ranohatra-Hending, C., Holderied, M., McCabe, G. and Cotton, S. (2023) Forest fragmentation and its associated edge-effects reduce tree species diversity, size, and structural diversity in Madagascar's transitional forests. *Biodiversity and Conservation*. 32, pp. 3329 – 3353.
24. **Hending, D.**, Randrianarison, H., Andriamavosoloarisoa, NNM., Ranohatra-Hending, C., Solofondranohatra, JS., Tongaso, HR., Ranarison, HT., Gehrke, V., Andrianirina, N., Holderied, M., McCabe, G. and Cotton, S. (2023) Seasonal differences in the encounter rate of the fat-tailed dwarf lemur (*Cheirogaleus medius*) in the transitional forests of North West Madagascar: implications for reliable population density assessment. *International Journal of Primatology*. 44, pp. 482–498.
23. Mulder, T., Kiuna, S., Oduor, S., Murithi, I., Markham, A. and **Hending, D.** (2023) Field studies: list local contributors as authors. *Nature*. 618, pp. 675.
22. Schüßler, D., Rabemananjara, NR., Radriarimanga, T., Rafamantanantsoa, SM., Randimbiharinirina, RD., Radespiel, U. and **Hending, D.** (2023) Habitat and ecological niche characteristics of the elusive Hairy-eared Dwarf Lemur (*Allocebus trichotis*) with updated occurrence and geographic range data. *American Journal of Primatology*. 85(4), e23473.

21. **Hending, D.**, Andrianaiaina, A., Rakotomalala, Z. and Cotton, S. (2023) Conservation value of vanilla agroecosystems for vertebrate diversity in northeast Madagascar. *Oryx*. 57(1), pp. 118-128.
20. Abondano, LA., Webber, AD., Valencia, LM., Gómez-Posada, C., **Hending, D.**, Cortes, FA. and Fuentes, N. (2023) Community-based strategies to promote primate conservation in agricultural landscapes. In: *Primates in Anthropogenic Habitats* (McKinney, T., Rodrigues, M. and Waters, S. Eds.). pp. 103-120. Springer, Cham, Switzerland.
19. **Hending, D.**, Andrianaiaina, A., Rose, M., Rowlands, A., Storm, S., Holderied, MW. and Cotton, S. (2022) Vanilla bats: Insectivorous bat diversity in the vanilla agroecosystems of northeastern Madagascar. *Acta Chiropterologica*. 24(2), pp. 363-378.
18. **Hending, D.**, Randrianarison, H., Andriamavosoloarisoa, NNM., Ranohatra-Hending, C., McCabe, G., Cotton, S. and Holderied, M. (2022) A new population of mouse lemurs (*Microcebus* sp.) from Northwestern Madagascar, with population size and density estimates. *Primate Conservation*. 36, pp. 103-111.
17. Randriatahina, G., Cotton, S., **Hending, D.**, Schwitzer, C., Tinsman, J. and Volampeno, S. (2022) Blue-Eyed Black Lemur, *Eulemur flavifrons* (Gray 1867). In: *Primates in Peril: The World's 25 Most Endangered Primates 2022–2023* (Mittermeier, RA., Reuter, KE., Rylands, AB., Jerusalinsky, L., Schwitzer, C., Strier, KB., Ratsimbazafy, J. and Humle, T. Eds.). pp. 16-20. IUCN SSC Primate Specialist Group, International Primatological Society, Re:wild, Washington, DC.
16. **Hending, D.**, Holderied, M., McCabe, G. and Cotton, S. (2022) Effects of future climate change on the forests of Madagascar. *Ecosphere*. 13(4), e4017.
15. **Hending, D.**, Randrianarison, H., Holderied, M., McCabe, G. and Cotton, S. (2021) The kapok tree (*Ceiba pentandra* (L.) Gaertn, Malvaceae) as a food source for native vertebrate species during times of resource scarcity and its potential for reforestation in Madagascar. *Austral Ecology*. 46(8), pp. 1440-1444.
14. **Hending, D.** (2021) Niche-separation and conservation biogeography of Madagascar's fork-marked lemurs (Cheirogaleidae: *Phaner*): Evidence of a new cryptic species? *Global Ecology and Conservation*. 29, e01738.
13. **Hending, D.** (2021) Environmental drivers of Cheirogaleidae population density: Remarkable resilience of Madagascar's smallest lemurs to habitat degradation. *Ecology and Evolution*. 11, pp. 5874-5891.
12. **Hending, D.**, Drew, H. and Holderied, M. (2021) Habitat use of constant frequency echolocating bats in north west Madagascar with acoustic evidence for a possible new species. *Acta Chiropterologica*. 23(1), pp. 153-164.
11. **Hending, D.**, Randrianarison, H., Cotton, S., Holderied, M. and McCabe, G. (2021) Observations of daytime activity in the nocturnal northern giant mouse lemur (*Mirza zaza*). *Behaviour*. 58, pp. 69-76.
10. **Hending, D.**, Seiler, M. and Stanger-Hall, KF. (2020) The vocal repertoire of the northern giant mouse lemur (*Mirza zaza*) in captivity. *International Journal of Primatology*. 41, pp. 732-763.

9. **Hending, D.**, Sgarlata, GM., LePors, B., Rasolondraibe, E., Jan, F., Rakotonanahary, AN., Ralantoharijaona, TN., Debulois, S., Andrianiaina, A., Cotton, S., Rasoloharijaona, S., Zaonarivelo, JR., Andriaholinirina, NV., Chikhi, L. and Salmona, J. (2020) Distribution and conservation status of the Endangered Montagne d'Ambre fork-marked lemur (*Phaner electromontis*). *Journal of Mammalogy*. 101(4), pp. 1049-1060.
8. Emmett, C., **Hending, D.**, Davis, A., McCabe, G. and Bray, TC. (2020) Hearing ghosts: Acoustic survey protocol and vocalization characterization for lemur leaf frogs. *Herpetological Review*. 51(1), pp. 24-29.
7. **Hending, D.**, Andrianiaina, A., Maxfield, P., Rakotomalala, Z. and Cotton, S. (2020) Floral species richness, structural diversity and conservation value of vanilla agroecosystems in Madagascar. *African Journal of Ecology*. 58, pp. 100-111.
6. Seiler, M., **Hending, D.** and Stanger-Hall, KF. (2019) Spacing and mate attraction: Sex-specific function of advertisement calls in the northern giant mouse lemur (*Mirza zaza*). *Folia Primatologica*. 90, pp. 361-378.
5. **Hending, D.**, McCabe, G. and Holderied, M. (2018) Mouse lemurs with “eyes bigger than their belly”: a case of primates being out-muscled by hawk-moths. *Lemur News*. 21, pp. 5-6.
4. **Hending, D.**, Andrianiaina, A., Rakotomalala, Z. and Cotton, S. (2018) The use of vanilla plantations by lemurs: encouraging findings for both lemur conservation and sustainable agroforestry in the SAVA region, north east Madagascar. *International Journal of Primatology*. 39(1), pp. 141-153.
3. **Hending, D.**, McCabe, G. and Holderied, M. (2017) Sleeping and ranging behavior of the Sambirano mouse lemur, *Microcebus sambiranensis*. *International Journal of Primatology*. 38(6), pp. 1072-1089.
2. **Hending, D.**, Andrianiaina, A., Rakotomalala, Z. and Cotton, S. (2017) Range extension and behavioural observations of the recently described Sheth's dwarf lemur (*Cheirogaleus shethi*). *Folia Primatologica*. 88, pp. 401-408.
1. **Hending, D.**, Holderied, M. and McCabe, G. (2017) The use of vocalizations of the Sambirano mouse lemur (*Microcebus sambiranensis*) in an acoustic survey of habitat preference. *International Journal of Primatology*. 38(4) pp. 732-750.

For access to publications see: [danielhending.com](http://danielhending.com) or [researchgate.net/profile/Dan\\_Hending](https://researchgate.net/profile/Dan_Hending)

## Grants and Awards Received

---

- National Geographic Society Explorer Community Project Fund (Shared) (2020) - \$1,000
- University of Bristol PGR Research Grant (2020) - £800
- University of Bristol PGR Research Grant (2019) - £1,000
- AEECL Research Grant (2019) - €1,000
- Primate Society of Great Britain Conservation Grant (2019) - £1,000
- Primate Conservation, Incorporated Research Grant (2019) - \$2,800
- Bristol Zoological Society Alumni Award (2018)

- La Vallee des Singes Research Grant (2018) - €2,500
- University of Bristol PGR Research Grant (2018) - £2,000
- Idea Wild Equipment Grant (2018) - \$820
- National Geographic Society Early Career Grant (2018) - \$9,500
- Global Wildlife Conservation Lemur Action Fund (2018) - \$5,000
- Primate Conservation, Incorporated Research Grant (2015) - \$1,035
- AEECL Research Grant (2015) - €1,000
- Rufford Small Grant for Conservation (2015) - £5,000
- Idea Wild Equipment Grant (2015) - \$1,300
- Mohammed bin Zayed Species Conservation Grant (2014) - \$4,900

## Fieldwork Experience

---

Jan 2023 – May 2023: Fieldwork lead. Why do elephants use seismic communication?, Mpala, Kenya.

Feb 2019 – Nov 2019, Dec 2021 – June 2022: Principal investigator and project lead. Spatial, behavioural and physiological responses of nocturnal lemurs to habitat fragmentation and habitat degradation, Sahamalaza-Iles Radama National Park, Madagascar.

Jan 2017 – May 2017: Co-principal investigator. Landscape and biodiversity assessment of vanilla plantations and surrounding areas, Sava Region, Madagascar.

Feb 2015 – Jun 2015: Principal investigator and project lead. Behavioural ecology of the Sambirano mouse lemur, *Microcebus sambiranensis*, and its implications for direct conservation action, Sahamalaza-Iles Radama National Park, Madagascar.

Mar 2014 – April 2014: Participant. Terrestrial and aquatic biodiversity assessment, Isla de la Juventud, Cuba.

## Teaching and Supervisory Experience

---

Sep 2022 – Present: Tutor and postgraduate student supervisor, University of Oxford, UK.

Oct 2020 – Present: Mentor and MSc student supervisor, Lemur Love NGO, USA.

Sep 2018 – July 2021: Teacher, mentor, laboratory demonstrator and tutor to undergraduate students, University of Bristol, UK.

Dec 2016 – June 2021: Researcher and frequent guest lecturer, Bristol Zoological Society, UK.

Sep 2014 – May 2016: Teacher, mentor, laboratory demonstrator and tutor to undergraduate students, University of Bristol, UK.

## Conferences and Symposiums Attended and Invited Talks

---

- Oxford Brookes University Primatology and Biological Anthropology Seminar 2023 (Invited talk) - Ecology and conservation biogeography of the Cheirogaleidae.
- University of Oxford Behaviour and Biomechanics Symposium 2023 (oral presentation) – Forest fragmentation and edge effects impact the behavioural ecology of a nocturnal lemur community.
- British Ecological Society (BES) Conservation Ecology & Tropical Ecology Joint Twitter Conference 2021, Online (Twitter presentation) - Niche-separation and conservation biogeography of Madagascar's fork-marked lemurs (Cheirogaleidae: *Phaner*): Evidence of a new cryptic species?
- World Bats Twitter Conference 2021, Online (Twitter presentation) - Habitat use of CF bats in north west Madagascar with acoustic evidence for a possible new species
- BritBats Annual Symposium 2021, Online (oral presentation) - Habitat use of constant frequency echolocating bats in north-west Madagascar: acoustic evidence for a possible new species
- UK Bioacoustics Special Interest Group Workshop 2019, Bristol, United Kingdom (oral presentation) - Distribution of the Montagne d'Ambre fork-marked lemur (*Phaner electromontis*): Eight years of passive acoustic survey data
- Association for Tropical Biology and Conservation (ATBC) Annual Conference 2019, Antananarivo, Madagascar (oral presentation) - Distribution of the Montagne d'Ambre fork-marked lemur (*Phaner electromontis*) throughout Northern Madagascar
- University of Bristol Postgraduate Symposium 2019, Bristol, United Kingdom (participant)
- Primate Society of Great Britain (PSGB) Winter Meeting 2018, Bristol, United Kingdom (poster presentation) - Spacing and mate attraction: Sex-specific function of advertisement calls in the northern giant mouse lemur (*Mirza zaza*)
- Bristol Zoological Society (BZS) Annual Symposium 2018, Bristol, United Kingdom (poster presentation) - Plant diversity, species richness and community structure in areas of vanilla cultivation: a comparison between four habitat types of the Sava region, north east Madagascar
- Bristol Zoological Society (BZS) Annual Symposium 2016, Bristol, United Kingdom (poster presentation) - Acoustic survey of habitat preference of the Sambirano mouse lemur, *Microcebus sambiranensis*, with a description of its vocal repertoire
- European Federation of Primatology (EFP) Conference 2015, Rome, Italy (participant)

## Editor Roles and Peer-Reviewing

---

Associate Editor for Biodiversity and Conservation, and Lemur News. Regular reviewer for African Journal of Ecology, American Journal of Primatology, Applied Vegetation Science, Contributions to Zoology, Ecosystems, Ecosystem Health and Sustainability, Folia Primatologica, Frontiers in Ecology and Evolution, Global Ecology and Conservation,

International Journal of Primatology, Journal of Mammalogy, Lemur News, Madagascar Conservation and Development, and Primates. I have also reviewed grant applications for National Geographic Society, and British Ecological Society.

## **Collaborators**

---

**Prof. Marc Holderied**, University of Bristol; **Prof. Beth Mortimer**, University of Oxford; **Prof. Claire Grierson**, University of Bristol; **Dr Grainne McCabe**, Wilder Institute; **Dr Sam Cotton**, Bristol Zoological Society; **Prof. Tarje Nissen-Meyer**, University of Exeter; **Prof. Andrew Markham**, University of Oxford; **Angelo Andrianiaina**, Université d'Antananarivo; **Heriniaina Randrianarison**, Université d'Antananarivo; **Dr Zafimahery Rakotomalala**, Université d'Antananarivo; **Dr Melanie Seiler**, Deutsche Sporthochschule Köln; **Prof. Kathrin Stanger-Hall**, University of Georgia; **Prof. Lounés Chikhi**, Instituto Gulbenkian de Ciência; **Dr Jordi Salmons**, Université Toulouse; **Gabriele Sgarlata**, Instituto Gulbenkian de Ciência; **Dr Ines Fürtbauer**, Swansea University; **Dr Marni LaFleur**, University of San Diego; **Dr Tim Bray**, Bristol Zoological Society; **Dr Adrià López-Baucells**, Natural Sciences Museum of Granollers; **Dominik Schüßler**, Universität Hildesheim; **Prof. Ute Radespiel**, Universität Hannover; **Rio Heriniaina**, Université d'Antsiranana; **Prof. Ricardo Rocha**, University of Oxford; **Dr Sehen Andriantsaralaza**, Université d'Antananarivo; **Dr Jen Tinsman**, University of California; **Samuel Kiuna**, Karatina University; **Miary Raselimanana**, Bangor University; **Amanda Rowe**, Stony Brook University.