

Mathilde Martin, PhD

Postdoctoral researcher University of Zürich



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RESEARCH EXPERIENCE

Nov 2023 – Present: **Postdoctoral researcher** at University of Zürich - Investigation of meerkats close calls within cohesive foraging groups

Department of Evolutionary Biology and Environmental Studies, Communication and Cognition in Social Mammals Research group (Marta Manser), University of Zurich, Switzerland

Oct 2019 - April 2023: **PhD** - Acoustic Communication Network in Cape fur seals (Arctocephalus pusillus): deciphering information encoded in vocal signals

Acoustic Communications Team, NeuroPSI, Paris-Saclay University, Saclay, France (Supervisor: Isabelle Charrier)
Sea Search Research and Conservation, Stellenbosch University, Cape Town, South Africa (Supervisor: Tess Gridley)

2018 (3-month program): **Fieldwork volunteering** collection of acoustic, genetic and behavioural data on humpback whales Cétamada (Non-profit organisation), Scientific team, Ambodiforaha, Sainte-Marie, Madagascar

2018 (6 months): **Research internship** - Study of mother-young interactions in humpback whales of Madagascar: investigations of individual vocal signatures and song playback experiments on mother-calf pairs

Acoustic Communications Team, NeuroPSI, Paris-Saclay University, France (Supervisors: Isabelle Charrier, Olivier Adam)

2017 (2 months): **Research internship** - Exploring the population structure of two amphiatlantic reef fishes across the Atlantic Ocean using molecular analyses

BioGeMME laboratory, University of Western Brittany, Brest, France (Supervisor: Jean-Luc Jung)

EDUCATION

Sep 2023 (1-week training program) International master of bioacoustics (MoBi) – Terrestrial Mammals module. ENES Lab, Université Lyon / Saint-Etienne, Saint-Etienne, FR

May 2021 (2-week training program) Use of wild animals for scientific experimentation (e.g. captures, basic veterinary care, stress reduction, ethics). National Museum of Natural History, Paris, FR

2016 - 2018 Master « Oceanography and Marine Environment » (MSc). Sorbonne University, Paris, FR (ranked 6/46)

July 2017 (3-week summer school) Multivariate Analyses for Marine Ecology. Oceanographic observatory of Villefranche/mer, FR 2013-2016 Licence « Biology of organisms and populations » (BSc). University of Burgundy, Dijon, FR

RESEARCH GRANTS and PRIZES

August 2024 – August 2025: **Postdoctoral fellowship** from University of Zürich (UZH Candoc/Postdoc Grant, 12 months – 73,786 CHF). Meerkat vocal turn-taking: do we find interrogative-confirmative patterns in close calls within cohesive foraging groups? Communication and Cognition in Social Mammals research group, Department of Evolutionary Biology and Environmental Studies, University of Zurich

Jan 2024 – Jan 2026: **Postdoctoral fellowship** from Fyssen Foundation (24 months – 90,000 €). Meerkat vocal turn-taking: do we find interrogative-confirmative patterns in close calls within cohesive foraging groups? Communication and Cognition in Social Mammals research group, Department of Evolutionary Biology and Environmental Studies, University of Zurich

2024 - Prize of the **best PhD of the year 2023** from the French Society for the Study of Animal Behavior (SFECA).

2021 – Prize of the **best oral communication**. Martin M et al. Feel the beat: les mâles otarie à fourrure du Cap codent leur état d'excitation dans leurs barks. 50th colloquium of the French Society for the Study of Animal Behavior (SFECA).

SKILLS

Acoustic recordings: signal acquisition, editing and analysis (Avisoft, Adobe Audition, PRAAT, Seewave and Soundgen R packages)

Playback experiments: design, experimentations in the field and behavioural studies (BORIS)

Data manipulation and statistics: uni and multi-variate analysis, classification methods (R)

Deployment of embedded acoustic tags (CATS-cam, Acousonde, Sorokas) and **GPS trackers** (CatLogs, AxyTreks)

Passive acoustic and behavioural monitoring (Camera traps, SongMeter, AudioMoth)

Experience as a **zookeeper** (primates and lemurs)

Zoological park La Citadelle de Besançon (France), from 2014 to 2017 every school vacation period.

Personal skills: Classical guitar: 10 years of practice, Scuba-diving: 3 stars CMAS (40 meters autonomous diver) + Enriched Air Nitrox Certification, Wildlife photography

STUDENT SUPERVISION and TEACHING

2023: University of Zürich - Bio 386 Sociobiology of communication - Structure course

Matteo Ubaldi - Bachelor (Nov 2022 – Nov 2023): Behavioral study of perinatal period and maternal attendance in Cape fur seals, Arctocephalus pusillus. University of Bologna.

Blanche Colonna - Bachelor (April-May 2022): Comparaison acoustique des cris de deux sous-espèces de Pinnipèdes: l'otarie à fourrure du Cap et l'otarie à fourrure Australienne. Paris Saclay University (6 weeks).

Jessica Stow - Honours (March-Nov 2021): Microgeographic variation of the in-air vocalisations of Cape fur seals in South Africa. Stellenbosch University (11 months).

PHD COMMITTEES

2024 – Vanessa Rüegg from the University of Zürich. Investigating social influences on the ontogeny and complexity of the vocal repertoire in the yellow mongooses (Cynictis penicilata).

WORKSHOPS

2024 (June 27th) – "Setting-up a playback experiment" at the Second edition of the Emerging Bioacousticians Days conference. 25th to 28th of June 2024, Brest, France

REVIEWING ACTIVITIES and COMMITTEES

Journal reviews: Marine Mammal Science

SCIENTIFIC CONFERENCES ORGANISATION

2024 – European Conference on Behavioural Biology (ECBB). 16th to 19th of July 2024, Zurich, Switzerland Scientific abstracts evaluation

2024 – Second edition of the Emerging Bioacousticians Days conference. 25th to 28th of June 2024, Brest, France Search for sponsors, event organisation, scientific abstracts evaluation

OUTREACH

Outreach events organisation:

« Plongée sonore au cœur des océans » 25th of June 2024, Atelier des Capucins 70.8, Brest, France. A day of encounter with researchers to discover underwater bioacoustics.

Articles in journals:

ECR (early-career researchers) Spotlight JEB (Vol. 227, Issue 13). 2nd of July 2024. Mathilde Martin. https://doi.org/10.1242/jeb.248147

Inside JEB (Vol. 227, Issue 13). 2nd of July 2024. How Cape fur seal mums and pups reunite by ear. https://doi.org/10.1242/jeb.248167

Scoop.it! Life Sciences Université Paris-Saclay. October 2023. Variabilité dans la réponse comportementale des otaries à fourrure du Cap à l'exposition à du bruit de moteur de bateau entre différents sites d'étude en Namibie et en Afrique du Sud – Mathilde Martin.

Conservation and the Environment in Namibia 2021. NCE. Conversations in the cacophony – Mathilde Martin, Isabelle Charrier, Simon Elwen and Tess Gridley.