Dr Marie Rosanna Gabrielle Attard

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RESEARCH PROFILE

I am a multidisciplinary researcher with over 12 years' experience in species conservation, animal behaviour, and evolutionary biology. I specialise in combining cutting-edge remote sensing technologies, citizen science, and spatial analysis to address global conservation challenges. My work spans diverse taxa, from seabirds to marsupial carnivores, and includes significant contributions to avian reproductive biology. Proficient in Python, R, ENVI, QGIS, and ArcGIS Pro, I have led multiple high-impact projects featured in peer-reviewed publications and global media.

EDUCATION

- **PhD (Biological Sciences)**, University of New South Wales (UNSW), 2009-2013
- **BSc (Honours)**, 1st Class, Biological Sciences, Macquarie University, 2008
- **BSc (Advanced Science)**, Distinction, Western Sydney University, 2005-2007

EMPLOYMENT

British Antarctic Survey
Seabird Remote Sensing Data Analyst *(Dec 2023 – Present)*
- Leading Darwin Plus (DPLUS187) project to map mollymawks, shags, and burrowing petrels across South Georgia using high-resolution satellite imagery.
- Developing advanced workflows using advanced spectral analysis techniques.

Postdoctoral Albatross Project Image Analyst *(Dec 2021 – Nov 2022)*
- Monitored endangered albatross populations via satellite imagery and citizen science online platforms (e.g., GeoHive, Zooniverse).
- Co-ordinated Darwin Plus (DPLUS132) project, worked with stakeholders, enhanced satellite-based monitoring for wandering albatross and Tristan albatross.

Royal Holloway, University of London
Postdoctoral Research Associate *(Jun 2019 – Nov 2021)*
- Researched biomechanics and evolutionary adaptations of avian eggshells, focusing on surface properties.
- Published findings in high-impact journals, advancing knowledge of avian reproductive strategies.

University of Sheffield
Postdoctoral Research Associate *(Jan 2016 – Dec 2018)*
- Investigated ecological advantages of pointed egg shapes in marine birds.
- Conducted fieldwork and lab analyses on eggshell morphology and nesting behaviour.

University of New England
Research Assistant and Unit Co-ordinator *(Dec 2013 – Dec 2015)*
- Directed FEAR Lab projects, training students in 3D modelling and microCT image techniques.

- Published 3D geometric morphometric and Finite Element Modelling (FEM) papers.
- Designed and delivered curriculum for *Principles of Zoology (ZOOL100)*, incorporating practical classes and assessments.

Other Roles

Field Assistant, Greencollar Consulting Solutions *(Aug 2013 – Nov 2013)*
- Conducted vegetation surveys to estimate biomass for CO_2 abatement projects.

Research Assistant, University of New South Wales *(Jan 2009 – Dec 2009)*
- Analysed satellite tracking data and stable isotope data to map leopard seal ecology.

Educational Officer, Sydney Aquarium and Wildlife Park *(Jan 2008 – Dec 2008)*
- Delivered educational tours and supported animal handling and care.

Research Statistician, University of Western Sydney *(Jan 2007 – Apr 2007)*
- Designed curriculum content for *Integrative Science* courses.

GRANTS AND AWARDS

Research Funding

- Darwin Plus Round 11 Grant (£489,579), *South Georgia Seabirds from Space*, 2022–2026
- Postgraduate Writing and Skills Transfer Award, UNSW (AU$6,000), 2013
- E&ERC Postgraduate Research Start-Up Grant, UNSW. AU$1,000, 2012
- Golden Key International Honours Society Scholarship, AU$500, 2008

Academic Awards

- Academic Postgraduate Award. UNSW. AU$20,427 p.a., 2009-2012
- Academic Excellence Scholarship. Western Sydney University. AU$5,000 p.a., 2005-2007
- University Dean's Medal, Western Sydney University, 2005-2007
- British Ecological Society Training & Travel Grant. AU$300, 2013
- Postgraduate Research Student Support Scheme. UNSW. AU$3,300, 2011
- Society for Marine Mammalogy Travel Grant. US$1,000, 2011
- Ecological Society of Australia Travel Grant. AU$400, 2012

Presentations competitions

- UNSW Three Minute Thesis Competition Winner. AU$5,000, 2012
- Wiley-Blackwell Student Price for Best Oral presentation, AU$500, 2012

PUBLICATIONS AND CONFERENCES

- **Publications:** I have 21 peer-reviewed scientific publications, 461 citations and a h-index of 9. See full list on ORCID or website.
- **Talks and posters:** Presented at 25+ domestic and international conferences.

TECHNICAL AND LAB SKILLS

- **Programming and Statistical Analysis:** Advanced in Python and R for data analysis and statistical modelling.
- **Imaging and Structural Analysis:** Proficient in MRI and MicroCT scanning, photogrammetry, and surface characterisation for biological specimens.
- **Shape and Biomechanical Modelling:** Expertise in Finite Element Analysis (FEA), 3D specimen reconstruction, and geometric morphometrics for analysing structural adaptations.

- **Remote Sensing and GIS:** Advanced proficiency in GIS and remote sensing tools (e.g., QGIS, ArcGIS Pro, ENVI) for spatial analysis and environmental monitoring.
- **Molecular and Ecological Analysis:** Skilled in stable isotope analysis and specimen preparation for biomechanical and ecological studies.
- **Fieldwork and Data Collection:** Extensive experience in conducting vegetation surveys and ecological sampling in various field settings.
- **Lab Management and Mentorship:** Proven ability in project co-ordination, lab operations management, equipment procurement, and multi-disciplinary project oversight. Experienced in mentoring students and collaborators in imaging, biomechanical analysis, and modelling techniques.

PROFESSIONAL AFFILIATIONS

- Master's thesis examiner, University of Cambridge, 2024
- Committee Member. Women In Science. Royal Holloway, 2020-2021
- Reviewer for *Ecology and Evolution* and *Animal Behaviour*
- Honorary Associate, School of Engineering and Innovation. Open University, 2019-2021
- Honorary Adjunct Associate Lecturer, School of Environmental and Rural Science. University of New England, 2016-2019

PUBLIC OUTREACH

- Research featured in global media, including BBC, *The Guardian*, and radio. Highlights on marieattard.com/media.