

CURRICULUM VITÆ — Alberto De Rosa

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Edmonton, October 29, 2025

Current Position

Postdoctoral Fellowship February 2023 — December 2026.

University of Alberta — Edmonton, AB, Canada.

Supervisors:

Professor Matina Kalounis-Rueppell — University of Alberta, Edmonton.

Professor Erin Bayne — University of Alberta, Edmonton.

Main Topics: student mentoring, teaching, bioacoustics, conservation biology, passive acoustic monitoring, habitat suitability, ultrasonic, landscape ecology.

Education

Doctorate (Zoology), August 2022.

Massey University — Palmerston North, Aotearoa New Zealand.

Supervisors:

Professor Isabel Castro — Massey University, Palmerston North

Professor Stephen Marsland — Victoria University of Wellington, Wellington

A/P Weihong Ji — Massey University, Albany

Dissertation: “On Kiwi (*Apteryx mantelli*, Bartlett) vocal behaviour and activity: relations to population densities, and applications to conservation”

Main Topics: statistical ecology, bioacoustics, conservation biology, passive acoustic monitoring, behavioural ecology, paired sampling, playback technique

Master of Science (Biodiversity and Evolution), March 2014

University of Bologna — Bologna, Italy. Final score: 110/110 *cum laude*

Supervisor: A/P Maria Vallisneri

Dissertation: “Inter-specific foraging behaviour analysis in a mixed group of birds, in a semi-natural area in the Wild Birds Recovery Centre of Faenza (RA), Italy”

Main Topics: avian population ecology, foraging ecology, biodiversity monitoring, conservation acts, population genetics (SSR) of mediterranean corals (*Balanophyllia europaea*, Risso)

Bachelor of Science (Biological Sciences), October 2007

University of Bologna — Bologna, Italy. Final score: 91/110

Supervisor: Professor Francesco Zaccanti

Dissertation: “The Wolves in the Monti Sibillini National Park: a snowtracking survey”

Main Topics: wolves (*Canis lupus*, Linnaeus) population ecology, snowtracking, anthropic environmental impact, movement ecology, biogeography

High School Diploma (Technical High School — Information Technology), June 2004

ITIS “Montani” — Fermo, Italy. Final score: 84/100

Final project: high- and low- level software development to control a step-by-step motor driven mechanical arm over the internet with webcam integration

Research Interests

Conservation Biology, Statistical Ecology, Citizen Science with special interest on collaboration and work with local community groups, Passive Acoustic Monitoring, Bioacoustics, Evolution, Speciation and Adaptation.

Research Outputs

Articles Published

De Rosa, A., Castro, I., Marsland, S., 2021. The playback technique in avian fieldwork contexts: a systematic review and recommendations for best practice. *Ibis*. <https://doi.org/10.1111/ibi.13033>.

Castro, I., De Rosa, A., Priyadarshani, N., Bradbury, L., and Marsland, S., 2019. Experimental test of birdcall detection by autonomous recorder units and by human observers using broadcast. *Ecology and Evolution*; 9: 2376–2397. <https://doi.org/10.1002/ece3.4775>.

Conferences Proceedings

De Rosa, A., Hurtado, C., Bayne, E., and Kalcounis-Rueppell, M. — Modelling Bat Echolocation Data at Provincial Scales: Structure: Signal Uncertainty, and Spatial Grains — North American Society of Bat Research Conference — Edmonton, Alberta – Canada. October 2025.

De Rosa, A., Hurtado, C., Bayne, E., and Kalcounis-Rueppell, M. — Model Structure Selection to Minimise Uncertainty in Modelling Hoary Bat Echolocation Detections in Alberta — The Wildlife Society — Edmonton, Alberta — Canada. October 2025.

De Rosa, A., Castro, I., Marsland, S. — Implementing Spatial Mark Resight Models With Acoustic Activity Data Described Through Environmental Covariates. International BioAcoustic Congress — Sapporo, Hokkaido – Japan. November 2023.

De Rosa, A., Hurtado, C., Kalcounis-Rueppell, M., Bayne, E. — Landscape level correlates of bats in the boreal region of Alberta, Canada. North American Society of Bat Research Conference — Winnipeg, Manitoba – Canada. October 2023.

Marsland, S., De Rosa, A., Castro, I., — Animal-borne acoustic recorders can inform consistent abundance estimates based on passive acoustic monitoring. New Zealand Ecological Society Conference — Dunedin, Otago — Aotearoa New Zealand. November 2022.

Castro, I., Feenstra, E., De Rosa, A., Marsland, S. — Smile! You are on camera: use of trail cameras to estimate the abundance of a cryptic, unmarked species, Stewart Island kiwi/Rakiura tokoeka. New Zealand Ecological Society Conference — Dunedin, Otago — Aotearoa New Zealand. November 2022.

De Rosa, A., Olsen, D., Castro, I., Marsland, S. — Pairing Community and Individual Vocal Activity Data can Inform Consistent Abundance Estimates Using Animal-Borne Acoustic Recorders. North American Congress for Conservation Biology — Reno, Nevada – United States of America. July 2022.

De Rosa, A., Olsen, D., Castro, I., Marsland, S. — Animal-Borne Acoustic Recorders Inform Mark-Resight Models For Abundance Estimates In North Island Brown Kiwi (*Apteryx mantelli*). International Statistical Ecology Congress — Cape Town, South Africa. June 2022.

De Rosa, A., Olsen, D., Castro, I., Marsland, S. — Using animal-borne acoustic recorders to inform abundance estimates in Kiwi (Apterygiformes). National Kiwi Hūi – Lyttelton, Canterbury, Aotearoa New Zealand. June 2022.

De Rosa, A., Castro, I., Olsen, D., Marsland, S. — Miniature animal-borne acoustic recording units as aids to investigate vocal behaviour and derive population density estimations. Australasian Ornithological Conference. Auckland, Aotearoa New Zealand. February 2022.

De Rosa, A., Olsen, D., Castro, I., Marsland, S.— Miniature Acoustic Recorders Embedded Into Kiwi Transmitters: challenges and opportunities for behavioural ecology and conservation. Ecoacoustic Congress, Urbino, Italy. June 2021.

De Rosa, A., White, A., Castro, I., Marsland, S., 2019. Hey, R. U. There? Autonomous Recording Units - ARUs - as means to monitor sounds in a spatially explicit fashion. Poster presentation at: Statistical Ecology and Environmental Management Conference, Wellington, , Aotearoa New Zealand. December 2019.

Marsland, S., Priyadarshani, N., Juodakis, J., Castro, I., De Rosa, A., Listanti, V., Feenstra, E., 2019. AviaNZ: Software and Research into Acoustic Monitoring of Birds. Birds New Zealand Conference, Wellington, June 2019

Castro, I., Marsland, S., Priyadarshani, N., Juodakis, J., De Rosa, A., Listanti, V., Feenstra, E., 2019. Unobtrusive monitoring of Kiwi. Birds New Zealand Conference, Wellington, June 2019

Articles In Preparation

De Rosa, A., Castro, I., Marsland, S.— Spatial Mark-Resight Models with Acoustic Data.

De Rosa, A., Bayne, E., Kalcounis–Ruepell M. — Selecting Model Structures for Bat Habitat Suitability using Echolocation Data of Hoary Bats in Alberta.

Hedley, R., Saini, A., De Rosa, A., Bayne, E. — Mapping anthropogenic noise at the provincial scale using passive acoustic monitoring data.

Mason, K., Godoy, C., De Rosa, A., Castro, I. — Experimental comparison of methods to estimate avian diversity in vineyards.

Zeller, A., De Rosa, A., Mahon, L., Bayne, E., — Pileated Woodpecker habitat use in the boreal forest of Alberta: The relative importance of response variables, land cover, and scale.

De Rosa, A., Dami, B., Franceschini, A., Lebeuf–Taylor, I., Meyhoff, S., Martinez–Lanfranco, J.A., Leston, L., Bayne, E. — A Mathematical Comparison of Species Distribution Models for Ruffed Grouse (*Bonasa umbellus*).

De Rosa, A., Hurtado, C., Kalcounis–Ruepell, M., Bayne, E. — Mitigating uncertainty in habitat suitability models employing multi-scale multi-source data for NABat formatted data in Alberta.

De Rosa, A., Zeller, A., Bayne, E. — Including flexible interaction terms in ecological models: an empirical proof.

De Rosa, A., Mugnier, L., Klute, J., Brown R., Castro, I., Marsland, S. — A, R Us There? Seeking sound source location with Acoustic Recording Units.

De Rosa, A., Marsland, S., Castro, I. — Experimental test of acoustic playback as a monitoring enhancing tool in North Island Brown Kiwi (*Apteryx mantelli*, Bartlett).

De Rosa, A., Castro, I. Marsland, S., — North Island Brown Kiwi (*Apteryx mantelli*, Bartlett) vocal activity in relationship to handling during annual transmitter change.

Teaching Experience and Qualifications

Skills: Scholarship of Teaching, Course Alignment, Instructional Materials, Learning Outcomes and Assessment.

Course: Foundations of Teaching.

Date: 08/2021 – 10/2021

Taught by: A. Graeme Pate.

Institution: University of Alberta

Address: 5-02 Cameron Library, Edmonton, Alberta, Canada T6G 2J8.

Website: <https://www.ualberta.ca>

Skills: Andragogy, effective teaching, reflective writing.

Course: Advance Higher Education, Introduction to University Teaching Course — Associate Fellow.

Date: 07/2021 – 10/2021

Accreditation awarded on: 03/12/2021

Taught by: Linda Rowan and Fiona Murray.

Institution: Massey University

Address: Riddet Road – Palmerston North – 4410 – Manwatū–Whanganui – Aotearoa New Zealand

Website: <https://www.massey.ac.nz>

From: 1/08/2021 **To:** 13/10/2021

Employer: Massey University

Address: Riddet Road – Palmerston North – 4410 – Manwatū–Whanganui – Aotearoa New Zealand

Website: <https://www.massey.ac.nz>

Position: Guest Speaker

Duties: Teaching, Classes Preparation

Skills: engaging in interactive learning, evaluating student performance, student-centered learning

From: 1/08/2019 **To:** 30/11/2019

Employer: Massey University

Address: Riddet Road – Palmerston North – 4410 – Manwatū–Whanganui – Aotearoa New Zealand

Website: <https://www.massey.ac.nz>

Position: Lecturer

Duties: Teaching, Classes Preparation

Skills: management of availability of on-line class materials for students, interact with tertiary students

From: 03/10/2016 **To:** 30/06/2017

Employer: “G.U.S.” Gruppo Umana Solidarietà — Macerata, MC — Italy

Address: Via della Pace, 5 — 62100

Website: <http://www.gusitalia.it>

Position: Italian teacher

Duties: classes managing, preparation of individual study plans, teaching, social introduction

Skills: troubleshooting delicate social situations, class and individual study plan design, delivery, and management

Funding

Date: 04/2021 — **Funder:** *The Ornithological Society of New Zealand*

Website: <https://www.birdsnz.org.nz/funding/david-medway-scholarship/dms-projects/>

Project: Kiwi (*Apteryx mantelli*, Bartlett) vocal behaviour and activity: population densities, and applications to conservation

Amount: 5000 NZ\$

Date: 14/07/2020 — **Funder:** *Kiwis for Kiwi*

Website: <https://www.kiwisforkiwi.org>

Project: Translating numbers of calls into numbers of birds using cutting edge technology to improve Kiwi Call Counts

Amount: 15895 NZ\$

Date: 26/01/2018 — **Funder:** Te Pūnaha Matatini

Website: <https://www.tepunahamatatini.ac.nz>

Project/role: PhD Scholarship

Amount: 81900 NZ\$ + University Fees

Date: 26/07/2014 — **Funder:** Utah State University

Website: <http://www.usu.edu>

Project/role: Research assistantship — 12 months

Amount: 24000 US\$

Professional Organisations

International Bioacoustic Society — since 14/04/2023

North American Society for Bat research — since 01/05/2023

The Wildlife Society — since 02/07/2025

Other Relevant Job Experiences and Skills

Course: Bat Acoustic Identification Workshops

From: 27/01/2025 **To:** 31/01/2025

Taught by: Vesper Bat Detection Services

Course: H2S Awareness

From: 05/08/2023

Taught by: Canada Safety Training Centre

Course: Defensive and Four Wheel Driving Accreditation

From: 19-21/06/2023

Taught by: Kenji Kinoshita

Address: Human Resources, Health, Safety + Environment – University of Alberta.

Course: Bear Awareness and Safety

From: 16/05/2023

Taught by: Erin Bayne

Address: Field Research Office – 3-36 Tory Building. University of Alberta.

Course: Wilderness First Aid

From: 26-28/04/2023

Taught by: Kris Porlier

Address: Field Research Office – 3-36 Tory Building. University of Alberta.

Course: ATV Driving

From: 04/2023

Taught by: Kenji Kinoshita

Address: Human Resources, Health, Safety + Environment – University of Alberta.

Course: Intermediate First Aid with CPR C & AED

From: 01-02/04/2023

Taught by: James Garnet

Address: St. Mark James Training – 7915 104 St NW #200, Edmonton, AB T6E 4E1.

Skills: use trail cameras to evaluate biodiversity in agricultural settings

From: 05/2022

Employer: Plant & Food Research

Address: Batchelar Road, Fitzherbert, Palmerston North 4474

Position: Consultant

Duties: Experimental design, data extraction, delivery of results

Skills: advanced project management, deadlines time management, RCpp programming

From: 05/2022

Employer: Victoria University of Wellington

Address: Kelburn, Wellington

Position: Research Assistant

Duties: translate R to Rcpp, version control

Skills: agricultural fieldwork, agricultural practices, teamwork

From: 02/2022 **To:** 06/2022

Employer: Plant & Food Research

Address: Batchelar Road, Fitzherbert, Palmerston North 4474

Position: Casual Technician

Duties: Crops Harvesting, Seed cleaning

Skills: post-1080 drop monitoring work, advanced bush fieldwork, rat and possum lines laying

From: 15/07/2020 **To:** 22/07/2020

Employer: Tauahika Ltd

Address: 265 Ngaere Park Road – Turitea – Palmerston North - RD2 – 4474 – Manwatu–Whanganui – Aotearoa New Zealand

Position: Fieldworker

Duties: Post-1080 Drop Monitoring

Skills: working with strict deadlines, teamwork, client-oriented work

From: 1/08/2019 **To:** 30/11/2020

Employer: Michael and Paul Weber

Address: Clearwater – FL – USA

Position: Translator (English to Italian)

Duties: Translating Patents

Skills: Kiwi catching, handling, measuring, transmitterising, egg candling

Date: 03/2019

Trained by: Isabel Castro (all but egg candling), Emma Bean (egg candling).

Kiwi Accredited Handler #: 0403

Date: 01/12/2020

Course: Operation Nest Egg Candling Course at the National Kiwi Hatchery in Rotorua – Bay of Plenty – Aotearoa New Zealand

Skills: Bayesian inference, L^AT_EX, Science communication, English language proficiency

From: 26/07/2014 **To:** 31/07/2015

Institution: Utah State University

From: 01/03/2012 **To:** 30/06/2014

Role: Italian Red Cross Volunteer — Emergencies Ambulance Driver and First Responder

Institute: Italian Red Cross, Porto Potenza Picena Section — Potenza Picena, MC — Italy

Skills: C Programming, Descriptive statistics, advanced office suite usage, High and Low level computer programming, Unix/Linux

From: 15/09/2001 **To:** 15/06/2004

Institution: ITIS “Montani” — Fermo, Italy

Linguistic proficiencies

Italian – Mother Tongue	French – Rudimentary	Papiamentu – Rudimentary
English – TOEFL 109/120 - 2018	Spanish – Advanced	Te Reo Māori – Beginner