

# Alex Caruana

## Conservation Scientist

I am a conservation scientist with a strong passion for biodiversity conservation and environmental planning. I have strong data analysis skills (R and QGIS) and a focus on doing rigorous research with applied relevance.

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## EDUCATION

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| Sep. 2024 -<br>Ongoing   | <b>D.Phil. Conservation Biology</b><br>University of Oxford (United Kingdom)<br>Thesis Title: "Constructing counterfactuals for changes in species population as a basis for impact evaluation."<br>Primary Thesis Supervisor: Professor Joseph W. Bull, Secondary co-supervisor: Professor Julia P. G. Jones  |
| Sep. 2021 -<br>Sep. 2023 | <b>M.Sc. Sustainable Forest and Nature Management specialised in Conservation Biology and Land Management</b><br>University of Copenhagen (Denmark) & Bangor University (United Kingdom)<br>Degree Classification: Distinction<br>Thesis Title: "Lessons Lost – Lack of post-project monitoring hinders evidence-based conservation".<br>Thesis Supervisor: Professor Julia P. G. Jones (grade: 87%) |
| Oct. 2018 -<br>Jun. 2021 | <b>B.Sc. Environmental Engineering</b><br>Malta's College of Arts, Science and Technology (Malta)<br>Degree Classification: First Class Honours<br>Awards: <i>Outstanding Performance Award</i><br>Thesis Title: "Assessing the effectiveness of seeding in large-scale ecological restoration of <i>Periplocion angustifoliae</i> maquis".<br>Thesis Supervisor: Dr. Eman J. Calleja                |

## PUBLICATIONS

### Peer-review Papers

1. Shackelford, N., [and 76 others, including Caruana, A.] et. al. 2021. Drivers of seedling establishment success in dryland restoration efforts. *Nature Ecology and Evolution*. <https://doi.org/10.1002/2688-8319.12325> [Published]
2. Caruana A, Camilleri B, Farrugia L, Jones JPG. 2024. Mechanical excavation of wetland habitat failed to eradicate invasive American red swamp crayfish (*Procambarus clarkii*) in Malta. *Ecological Solutions and Evidence*. <https://doi.org/10.1002/2688-8319.12325> [Published]
3. Caruana, A., Muir, M., White, T., Jones, J. P. G. 'Lessons lost: Lack of requirements for post-project evaluation and reporting is hindering evidence-based conservation', *Conservation Science and Practise*. <https://doi.org/10.1111/csp2.13260> [Published].

### Other Reports & Datasets

1. Caruana, A. and Farrugia, L. (2023) 'Assessment of Red Swamp Crayfish presence, distribution and abundance within the Fiddien valley system'. *Applied Ecological Resources*. <https://www.britishecologicalsociety.org/applied-ecology-resources/document/20240157815/> [Published]

## CONFERENCES

1. **Caruana, A.** and Calleja, E. Assessing the effectiveness of seeding as a cheap large-scale restoration tool in a semi-arid Mediterranean habitat. Oral presentation delivered (online) at the *World Conference on Ecological Restoration*, 24<sup>th</sup> June 2021. Available online at <https://www.ser-rrc.org/resource/assessing-the-effectiveness-of-seeding-as-a-cheap-large-scale-restoration-tool-in-a-semi-arid-mediterranean-habitat/>

## WORK EXPERIENCE

Sep. 2020 -	<b>Environmental Specialist (Auditor)</b> , MPS Limited (Malta)
Sep. 2021	Executed in-depth water audits within households, agricultural farms, and governmental buildings to improve water-use efficiency. Wrote technical reports and documentation.
Jan. 2019 -	<b>Environmental Intern (Research and Monitoring)</b> , ADI Associates and En-sure Limited (Malta)
Sep. 2020	Provided GIS support, producing maps for Environmental Impact Assessments. Conducted site surveys and ecological assessments for over 100 water bodies throughout the Maltese Isles for Malta's MedisWet Project. Analyzed data and wrote reports.
Jun. 2017 -	<b>Environmental Research Assistant</b> , Ministry for Environmental Sustainability, the Environment and Climate Change (Malta)
Sep. 2018	Provided GIS support, producing maps for Environmental Impact Assessments. Conducted site surveys and ecological assessments for over 100 water bodies throughout the Maltese Isles for Malta's MedisWet Project. Analyzed data and wrote reports.

## SCHOLARSHIPS AND FUNDING

Oxford's Clarendon Scholarship (2024 – 2027)	€ 67,490
Malta's Endeavour Scholarship Scheme (2021 – 2023)	€ 16,791
World Conference on Ecological Restoration Ticket funded via MCAST (2021)	€ 189
Bangor University's School of Natural Science Master Thesis Fund	€ 288
<b>Total Funding</b>	<b>€ 84,758</b>

## OTHER

### Technical skills:

- Data Analysis via R Programming (<https://github.com/AlexCaruana>)
  - o Previously used packages: *ggplot2*, *tidyr*, *dplyr*, *ggpmisc*, *ggpattern*, *magrittr*, *patchwork*, *readxl*, *tidyverse* and *eurostat*.
- Geographical Information Systems (QGIS & ArcGIS)
- Design Programs (Adobe Photoshop, Illustrator & InDesign)
- General Software (Microsoft Word, Excel & PowerPoint)

### Licenses and Certificates:

- Driving License (B)
- Online Certificate in Mapping, Spatial Data and GIS (University of Oxford)
- Global and Regional Assessor Certificate (IUCN)
- Data Science: Foundation using R Certificate (John Hopkins University via Coursera.com)

### Membership of Professional Associations:

- British Ecological Society (since June 2023)
- Society for Conservation Biology (since September 2019)
- Society for Ecological Restoration (since September 2019).

**Languages:** English (Native), Maltese (Native)

## **VOLUNTEER EXPERIENCE**

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- Dec. 2022 - **Voluntary Research Assistant**, University of Edinburgh (Scotland)  
Jan. 2023 Contributing to a systematic review of community-based protected area law enforcement led by William Sharkey and supervised by Dr. Aidan Keane and Prof. Dame E.J. Milner-Gulland.
- Oct. 2020 - **Voluntary Research Assistant**, Shark-Lab (Malta)  
May 2021 Gathering data on shark and ray populations around the Maltese Isles by surveying the industrial fish market. Contributing to reintroduction efforts by harvesting any remaining egg cases from deceased sharks and transporting them to the National Aquarium located in Qawra for incubation.
- Aug. 2019 - **Ecological Restoration Volunteer**, Nature Trust (Malta)  
Aug. 2021 Organized and aided in ecological restoration activities within Il-Magħluq ta' Marsaxlokk. Activities included regenerating the sand-dune barriers with bio-engineered structures, sowing endemic species in deteriorated areas, and eradicating invasive alien species.