

Patrick Morrison (he/him) is working towards a PhD at the University of Western Australia. His research interests include past climate change, submerged landscapes archaeology, 3D photogrammetry for cultural heritage and statistics.

In 2019, he was on the team that reported the first submerged Aboriginal archaeological site in Australia. In 2020 and 2021 he worked as a Maritime Archaeologist at the Western Australian Museum, where he recorded the oldest wreck site in Australia (Trial 1622) using 3D photogrammetry. In 2021, he commenced his PhD project, looking at the Holocene climate and culture and culture in Murujuga, northwest Australia.

EDUCATION

PhD Student — University of Western Australia — 2021 - present

- Thesis by publication: Voyaging in Murujuga: A Study of Holocene Maritime Culture and Climate
- Due for completion in mid-2024
- Investigating the role of climatic, environmental and sea level change on island occupation
- Associated with the ARC Dating Murujuga's Rock Art Project, and the Centre for Rock Art Research + Management.
- Best Student Poster - Australian Archaeology Conference 2022.

Graduate Diploma in Biostatistics (suspended during PhD) — University of Queensland — 2021 - ?

Graduate Certificate in Biostatistics — University of Queensland — 2020

Bachelor of Arts (First Class Honours) — University of Western Australia — Archaeology — 2019.

- Thesis title: *The Geoarchaeology of a Submerged Aboriginal Site in the Intertidal Zone of Dolphin Island, Murujuga.*
- Systematically recorded stone artefacts in the intertidal and on nearby land, contextualised with sediment coring, pXRF, drone photogrammetry and airborne LiDAR.
- Fieldwork in Murujuga during 2019, totalling over a month.

Bachelor of Science — University of Western Australia — Neuroscience and Archaeology. Graduated 2018.

- Class Prize in ARCY1002 Discoveries in Archaeology & ARCY3002 Archaeological Field Skills

EXPERIENCE

Archaeological Consulting (Freelance, max 1 day a week during PhD) — 2021-present

- Photogrammetric recording of the *Zeewijk* shipwreck site - WA Museum 2022.
- Research, writing and map making and for a travel guide to the National Heritage Listed Batavia shipwreck site and survivor camps - WA Museum 2021-2022.
- Photogrammetry training and data processing for archaeological fieldwork - Snappy Gum Heritage 2021.
- Photogrammetric recording of artefacts at the WA Museum - Australia Catholic University 2021.
- Essay writing for art exhibition on the *Zeewijk* shipwreck site - Todd Fuller '1727: Adriaan for Pieter' - M Contemporary

Research Assistant - University of Western Australia — 2021-present

- GIS support and training for various research projects

Assistant Curator — Maritime Archaeology Department, Western Australian Museum — 2020-2021

- Assisting with the preparation of new exhibitions for the WA Museum Boola Bardip, including 3D models of objects, digital labels and graphics.
- Shipwreck inspections, specialising in 3D site recording and including fieldwork for major upcoming documentary series.
- Grant writing, with a successful application for \$55,000 of funding in 2021.
- Writing custom software to assist fieldwork and data management.
- Collections and records management, using a Filemaker database and Content Manager.

- Co-organiser of the Principles for Managing Aboriginal Underwater Cultural Heritage workshop.
- Research into pXRF and statistical methods for provenancing glass from historic shipwreck sites.

Research Assistant — Centre for Rock Art Research and Management - University of Western Australia — 2019

- 3D visualisation of Murujuga rock art, auditing artefact entry into a database.
- Contributing to research papers on the archaeology and heritage management of Murujuga (Benjamin et al. 2020, McDonald et al. 2020).
- Managing an Endnote reference library.
- Producing videos for outreach.

Summer Intern — Pawsey Supercomputing Centre — Dec 2018 - Feb 2019

- Project title: 'Visualising Aboriginal Cultural Features on Rosemary Island, Dampier Archipelago'.
- High Performance Computing to visualise drone imagery, airborne LiDAR data and ground-level photographs.
- Contributed to the ARC Murujuga: Dynamics of the Dreaming, and Deep History of Sea Country projects.
- Finalist for the 2019 Council for the Humanities, Arts and Social Sciences Australia Prize for a Student.

Research Assistant — School of Biological Sciences - University of Western Australia — 2019

- Neuroscience lab assistant throughout the year, monitoring animals.

VOLUNTEERING AND FIELD SCHOOLS

Creator — Vis.Report — 2020 - present

- Created an interactive database for scuba divers to share site conditions.
- Now using statistical techniques to understand the controls on underwater visibility

President — Maritime Archaeological Association of Western Australia — 2022

- Following position as Secretary from 2018 to 2021
- Coordinated field work recording terrestrial and shipwreck sites around Rottnest Island.
- Developed training programs, and run courses on the use of 3D photogrammetric reconstruction for recording underwater cultural heritage.
- Managing membership, enquires, website and assisting with social media.

Volunteer — Western Australian Museum — 2016 - 2019

- Volunteer diving and deckhand for a PhD students fieldwork on the *James Matthews* wreck.
- Assisting on the boat undertaking remote sensing of shipwreck sites in the Perth Metro region.
- Underwater 3D photogrammetry for a shipwreck inspection in Albany.
- Structured light scanning of significant artefacts for exhibition.

Murujuga Rock Art and Artefact Recording — 2017, 2019

- 2019: Volunteer recording of rock art sites and stone artefacts scatters in preparation for a boardwalk development.
- 2017: Recorded rock art for two weeks on a UWA field school, with Rio Tinto and the Murujuga Aboriginal Corporation.

Western Australian Debate League — Technical Vice President — 2017-2018, Adjudicator/Committee Member 2016-2018

- Managed a team of ~40 volunteers for a competition of more than 2000 high school students.
- Setting topics, writing resources and managing feedback from parents and teachers.
- Adjudicated debates, and gave workshops to hundreds of students.
- Week-long residency in Alice Springs teaching debating, public speaking and critical thinking.
- Demonstrates my passion for critical thinking and communication, and my well-developed project management skills.

UWA 3rd Year Archaeology York Field School — April 2018

- Excavated and surveyed the Convict Depot, and recording the York Cemetery.

Vietnam Maritime Archaeology Project (VMAP) Field School — January 2018

- Led a team of students in sidescan sonar recording, and taught a workshop on 3D photogrammetry.
- Field school participant

TEACHING

Unit Coordinator and Lecturer at the University of Western Australia — 2022, 2023.-

- 2022 - ARCY3012 - Historical and Maritime Archaeology.
 - Primary coordinator - co-coordinated with Alistair Paterson.
 - Delivery of majority of lectures and tutorials, and the development of new course material.

Guest Lecturer at the University of Western Australia — 2018 - present

- 2023: Guest Lecturer in GEOG1106 - Climate Change: Environment and Society
- 2021, 2022, 2023: Guest Lecturer for ARCY1001 - Think Like an Archaeologist.
- 2019, 2020, 2021: Guest Lecturer for ARCY3012 - Historical and Maritime Archaeology.
- 2018, 2019: Guest Lecturer for ARCY3013 - Experimenting with Archaeology.
- 2018, 2019: Guest Tutor for ANIM5501 - Evolution and Development.

SKILLS

- Very proficient in 3D photogrammetry and visualisation (Agisoft Metashape, Blender)
- Very proficient in statistics and the R statistical language
- Proficient in the Python programming language
- Proficient in GPS survey and Geographic Information Systems (principally QGIS, R, PostgreSQL spatial databases, Leaflet.js)
- Experienced with the use of databases for cultural heritage
- Report writing and reference management
- Excellent public speaking skills
- Excellent photography skills, including artefact photography, underwater photography and drone photography.
- Experienced in leading teams
- Proficient with the Microsoft Office Suite (Word, Powerpoint, Excel)

CERTIFICATIONS AND LICENCES

- Current Senior First Aid, CPR and Oxygen Provider Qualifications (HLTAID001, HLTAID002, HLTAID003, HLTAID006).
- Class C Drivers License
- Current Working with Children Check
- PADI Rescue Diver

PUBLICATIONS

- Morrison, P., M. O'Leary, and J. McDonald 2023 The evolution of Australian island geographies and the emergence and persistence of Indigenous maritime cultures. *Quaternary Science Reviews* 308:108071.
- Leach, J., C. Wiseman, M. O'Leary, J. McDonald, J. McCarthy, P. Morrison, P. Jeffries, J. Hacker, S. Ulm, G. Bailey, and J. Benjamin 2021 The integrated cultural landscape of North Gidley Island: Coastal, intertidal and nearshore archaeology in Murujuga (Dampier Archipelago), Western Australia. *Australian Archaeology* 1–17.
- McDonald, J., K. Mulvaney, E. Beckett, J. Fairweather, P. Morrison, S. de Koning, J. Dortch, and P. Jeffries 2021 Seeing and managing rock art at Nganjarli: A tourist destination in Murujuga National Park, Western Australia. *Australian Archaeology* 1–26.
- McDonald, J., Beckett, E., Hacker, J., Morrison, P., O'Leary, M. 2020 Seeing the Landscape: Multiple Scales of Visualising Terrestrial Heritage on Rosemary Island (Dampier Archipelago) *Open Quaternary* 6(1) <https://dx.doi.org/10.5334/oq.81>
- Benjamin, J., O'Leary, M., McDonald, J., Wiseman, C., McCarthy, J., Beckett, E., Morrison, P., Stankiewicz, F., Leach, J., Hacker, J., Baggaley, P., Jerbić, K., Fowler, M., Fairweather, J., Jeffries, P., Ulm, S., Bailey, G. 2020 Aboriginal artefacts on the continental shelf reveal ancient drowned cultural landscapes in northwest Australia *PLOS ONE* 15(7), e0233912. <https://dx.doi.org/10.1371/journal.pone.0233912>

CONFERENCE PRESENTATIONS

- Morrison, P., McDonald J., O'Leary, M. 2022 Voyaging in Murujuga Chapter 1: Were there geographical influences on the persistence and emergence of Australian Aboriginal maritime cultures? (Poster). AAA Conference. Darwin.

- Morrison, P., McDonald J., O'Leary, M. 2019 Exploring the Archaeological Implications of Submerged Indigenous Heritage in Flying Foam Passage, the Dampier Archipelago. AAA Conference. Surfers Paradise.
- Teschendorff, M., Edwards, K., Morrison, P., and McCann, I. 2019 The Litter(al) Shore: rivers, wrecks and wastescapes in Perth, Western Australia. AIMA Conference. Brisbane.
- Morrison, P, Edwards, K, Bigourdan, N, Cecchi, J, Familton, R, Jackson, D, Reid, S, Sargeant, N, & Stamos, K 2017 SCRIMSHAW project: A case study of Cultural heritage, Community engagement and Holistic recording on the Swan and Canning Rivers (Perth, Western Australia). AIMA Conference Adelaide

RECENT TALKS

- Mather, C., Morrison, P., 2022 Dating Murujuga's Rock Art: Reconstructing climate and landscapes through time to understand human occupation and rock art production. SAGE Seminar Series. University of Western Australia, Perth.
- Morrison, P., 2022 3D Recording of Rottnest Island Shipwrecks. Rottnest Voluntary Guides Association. Dalkeith.
- Morrison, P., 2022 Voyaging in Murujuga: A Study of Holocene Maritime Climate and Culture. UWA Archaeology. University of Western Australia, Perth.
- Morrison, P., 2021 WA Museum Albany Shipwreck Inspections. Maritime Archaeological Association of Western Australia. Fremantle.
- Morrison, P., 2021 Submerged Landscapes in Murujuga. Western Australian Museum Boola Bardip. Perth.
- Morrison, P., 2021 Recording Objects in 3D. Western Australian Museum Boola Bardip. Perth.
- Anderson, R., Morrison, P., 2020 Principles for Managing Aboriginal Underwater Cultural Heritage. Principles for Managing Aboriginal Underwater Cultural Heritage Forum. Fremantle.
- Morrison, P., Huckstep, K., Huckstep, M., 2020 Submerged Landscapes (ft. Patrick Morrison). Curiosity Killed the Rat. Podcast. Available: <https://podcasts.apple.com/au/podcast/submerged-landscapes-ft-patrick-morrison/id1494102544?i=1000491767390>
- Morrison, P., 2020 Collaborative Data Management. Climate Change and Marine Processes Forum. Perth/Zoom.
- Morrison, P., 2020 Maritime Archaeology in Western Australia: Shipwrecks to Submerged Landscapes. St Mary's Anglican Girl's School Scientist in Residence: Careers in Marine Science Presentations. Fremantle.