THE UNIVERSITY OF WESTERN AUSTRALIA

POSITION DESCRIPTION

Position Title	Senior Research Fellow
Classification	Level C
School/Division	Oceans Institute
Centre/Section	Minderoo OceanOmics Centre at UWA
Supervisor Title	OceanOmics Centre Lead
Supervisor Position Number	322728
Position Number	821102

Your work area

Minderoo OceanOmics Centre at UWA is a collaborative initiative between UWA and Minderoo Foundation. This collaboration supports the ambitious goal of Minderoo OceanOmics Program to transform ocean conservation by advancing marine genomics and environmental DNA (eDNA) technologies. Key efforts driven by the OceanOmics Centre include developing innovative laboratory and computational approaches to optimise and scale collection, processing, and analysis of eDNA from marine environments, as well as generating a comprehensive reference library genome data for marine organisms. All data produced by the OceanOmics Centre will be subject to rigorous QA/QC and will be made publicly available through open-access repositories.

Located in the Bayliss Building on the UWA Crawley Campus, the OceanOmics Centre integrates a joint Reference Genome, eDNA and Computational Biology laboratories. These facilities are equipped with state-of-the-art high-throughput sequencing technologies, liquid handling robotics, and computational infrastructure. The OceanOmics Centre is staffed by a team of researchers and technical personnel who are also part of the UWA Oceans Institute, a multidisciplinary research institution based in the nearby Indian Ocean Marine Research Centre.

Reporting structure

Reports to: OceanOmics Centre Lead

Your role

As the appointee, you will lead research projects in marine vertebrate genomics, with a strong emphasis on leveraging genome assemblies and genomic sequencing data produced by the OceanOmics Centre's *Ocean Genomes* genome sequencing program. Your research will make a significant contribution at the national level. A central focus of your role will be driving strategic collaborations with key stakeholders to generate high-impact genomic insights that advance understanding of marine vertebrate biodiversity and inform conservation and management of marine vertebrate species.

You will be responsible for designing and executing collaborative research studies involving OceanOmics Centre academic and professional staff, UWA and visiting students and external collaborators, which use genomic approaches to investigate marine vertebrate diversity (e.g. species, population, genome. This includes coordinating and integrating field, laboratory, and computational workflows, contributing to data generation and optimisation of analytical approaches to ensure high-quality, reproducible outcomes, and producing peer-reviewed publications and reports that communicate key findings and resources. You will represent the

OceanOmics Centre, communicating activities, findings, and resources in scientific, stakeholder and public engagements.

Your key responsibilities

Liaise closely with the OceanOmics Centre Lead to represent OceanOmics Centre and its whole genome sequencing program in engagements with internal and external stakeholders, fostering strong collaborations and maximising research impact.

Collaborate with key stakeholders to coordinate and execute field sampling campaigns and sample acquisition suitable for high-quality whole genome sequencing applications.

Demonstrate significant research leadership by developing and pursuing research projects that make use of whole genome sequencing data produced by Ocean Genomes to investigate diversity (e.g. species, population, genome) of marine vertebrates, deriving insights that can inform their conservation management.

Collaborate with internal and external partners to design research studies and execute field campaigns and sample collection in line with Ocean Genomes standardised approaches.

Collect, process, and analyse whole genome sequencing data from marine vertebrates using innovative analytical approaches.

Develop and optimise workflows to maximise data and enable high-quality research outputs.

Communicate the Centre's activities, findings and resources in collaborative scientific publications, reports, and outreach material as well as presentations at national and international conferences and events.

Provide training and troubleshooting support for staff, students and visitors with protocols, procedures, methods, and analytical techniques.

Supervise students working on individual or group projects at honours, master's, and postgraduate levels.

Other duties as directed.

Your specific work capabilities (selection criteria)

Tertiary qualifications in marine biology and a PhD in a relevant discipline such as genomics, bioinformatics, computational biology, molecular ecology, molecular biology, or molecular genetics.

Proven experience in designing and leading research projects, with a focus on the development, optimisation, and application of genomic tools and technologies to marine species and ecosystems.

Experience in planning and conducting marine fieldwork, including specimen and tissue collection, sample handling, and data recording in accordance with ethical and biosafety standards.

Advanced understanding of molecular biology and high-throughput, next-generation sequencing (NGS) workflows, enabling effective collaboration with laboratory staff and the development and execution of optimised sequencing and analysis pipelines.

Demonstrated experience in deriving biological insights from large-scale genomic datasets, including whole-genome sequencing, population genomics, or transcriptomics data.

Excellent critical thinking abilities and scientific communication skills, with a strong track record of writing peer-reviewed publications, technical reports, and presenting research outcomes to diverse audiences.

Strong project coordination and management, with the ability to plan, prioritise, and deliver multiple research activities within agreed timelines, while adapting to evolving priorities and opportunities.

Proven ability to work both independently and as part of collaborative, multidisciplinary teams, showing initiative, accountability, and effective communication across diverse research and stakeholder groups.

Demonstrated evidence of training and supervising students, staff, or visiting researchers, including the ability to effectively communicate laboratory techniques and research protocols.

Comprehensive understanding of research compliance, including laboratory safety procedures, ethical conduct, and data governance in a university or research institution setting.

Knowledge of marine vertebrate biodiversity, taxonomy, field biology and sampling, and phylogeny are desirable.

Special requirements (selection criteria)

Able to fit the physical requirements of the position.

Some after-hours work may be required.

Occasional travel may be required.

Compliance

Ensure you are aware of and comply with legislation and University policies.

To learn more about the Code of Conduct, see Code of Conduct.

To learn more about Diversity, Equity and Inclusion, see Diversity, Equity and Inclusion.

To learn more about Safety, Health and Wellbeing, see Safety, Health and Wellbeing.