



Detecting nature's fingerprint using eDNA

Company Profile



EnviroDNA acknowledges the Traditional Custodians of Country throughout Australia and their connections to land, sea and community.

We recognise Traditional Owner peoples as the first scientists of Australia, having cared for and managed the land for over 65,000 years. Their knowledge and practices are seen as a valuable resource for modern science and sustainable land management.

We pay our respect to their Elders past and present and extend that respect to all Aboriginal and Torres Strait Islander peoples.

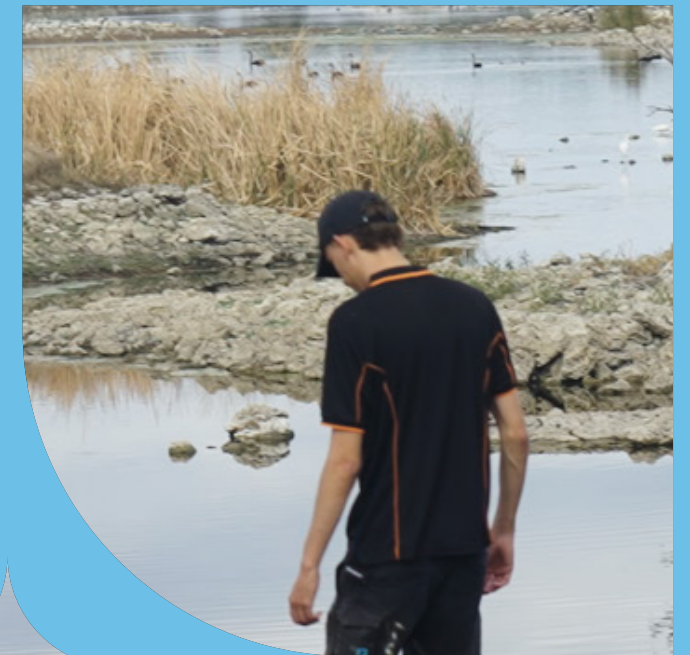


Photo taken on Gunditjmara Country.
We acknowledge the Traditional Custodians
of this land, the Gunditjmara people.

About

Founded in 2016 by research scientists Dr Andrew Weeks and Dr Paul Umina, EnviroDNA was born from a belief that

“you can’t manage what you can’t measure.”

With deep roots in agricultural and genetic conservation, the company transforms cutting-edge environmental DNA (eDNA) science into real-world solutions that help manage and protect nature. Based in Melbourne, EnviroDNA delivers insights into species and ecosystems by analysing land, water, or air samples. Our solutions transform samples into actionable intelligence for ecosystem management, supply chains, conservation, and community outcomes.



“Our vision is a world where **human impacts on nature are understood and **sustainably managed.**”**



Dr Andrew Weeks
Founder



Dr Paul Umina
Founder

**Unlock insights.
Make informed decisions.
Achieve better results.**

Our Mission

To power every nature positive decision using eDNA. Our solutions are in harmony with global trends focused on nature-related reporting.

Compared to conventional methods of environmental monitoring, eDNA is:

- Highly sensitive and is often-used solution for detecting populations at low diversities and mitigating risks associated with invasive species,
- Efficient and easily scalable,
- Easily deployed across a wide variety of habitats,
- Low cost with fast turnaround times,
- Helps you survey more frequently and decreases time-to-insight. An unmatched tool for data-driven decisions.

Who We Are

EnviroDNA brings together leading expertise across genetics, ecology, and data science.

We are a multidisciplinary unit at the forefront of global eDNA solutions and research. We bridge customer needs with business goals, ensuring we deliver real value. We provide more than data with end-to-end strategic support. Our postdoctoral experts' partner on cutting-edge collaborations and ecological consulting. Collectively we have contributed to over 250+ scientific publications.

As Australia's leading eDNA provider, we have proudly partnered with organisations nationwide and globally. EnviroDNA has analysed over 100,000 environmental samples. We have partnered with over 300 organisations spanning government agencies, conservation groups, natural resource managers, consultants, land managers, and more.

Our Technology

Environmental DNA, (eDNA) is nature's fingerprint.

It's the traces of DNA shed by all living things into the environment. By extracting DNA from samples such as soil, water or air, we can understand the distribution of life on earth.

Our projects are defined in four stages:

01 Project design

02 Environmental sampling

03 eDNA analysis

04 Reporting

Rethinking traditional survey methods

Traditional methods typically require an element of 'catch and look.' Live trapping, trawling, electrofishing, sticky nets, visual or audio surveys are commonly used techniques.

The eDNA advantage

eDNA offers the core advantage of detecting and tracking species without seeing or hearing them. This approach overcomes survey barriers, such as high costs and resources, OH&S risks and ecosystem disturbance. These limitations often impact data reliability, frequency of collection, and the capacity for scaling surveys.

eDNA is highly sensitive

A study from Lugg et al. (2018) showed that just two eDNA water samples can detect platypus with 95% accuracy, compared to 6-10 nights of net trapping surveys for similar results.

Our solutions use two key types of analysis

1 - Target species assessments

We use qPCR analysis to detect the DNA of a specific species of interest.

2 - biodiversity assessments

We use DNA metabarcoding to identify a wide range of species in a sample. This is a comprehensive approach that uses robust reference libraries we've built since 2016 for Australian and global biodiversity.

Enabling conservation like no other technology

eDNA helps to:

- Power evidence-based decisions
- Demonstrate changes in nature and species distributions over time
- Track and manage invasive species while supporting endangered wildlife recovery
- Evaluate effectiveness of conservation strategies



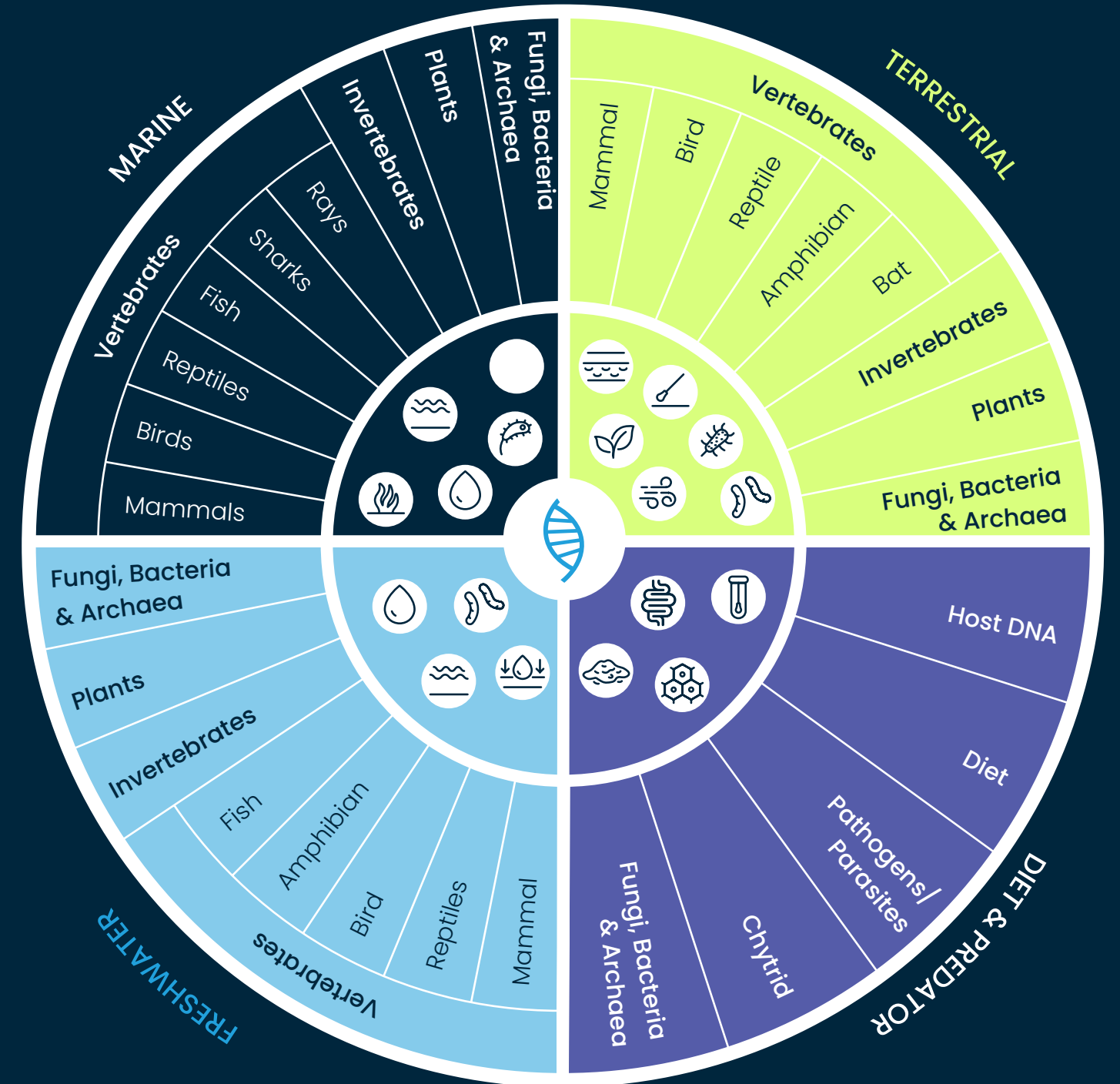
What We Do At A Glance

Applications

- Threatened species assessments
- Environmental impact assessments
- Biodiversity & ecosystem health audits
- Invasive species tracking
- Port & biosecurity monitoring
- Tracking success in conservation & nature repair
- Species' dietary studies

Clients

- Environmental consultants
- Conservation
- Government
- Extractives
- Energy
- Ports and transport
- Community
- First Nation



Sample experience:

FRESHWATER

- Water
- Sediment
- Bulk invertebrates
- Groundwater

MARINE

- Water
- Sediment
- Biofoul
- Deposition arrays
- Plankton tows

TERRESTRIAL

- Soil
- Plants
- Surface swab
- Air
- Bulk invertebrates
- iDNA

DIET & PREDATOR

- Scat
- Gut contents
- Tissue
- Swab

Service & Product Offerings

High-level service capabilities

Species & Ecosystem Monitoring

- Target**
Detect and survey target species using tailored qPCR tests from environmental samples
- Screen**
Survey specific groups of species (fish, frogs, mammals etc.) using a combination of DNA metabarcoding eDNA tests
- Atlas**
Monitor full spectrum biodiversity using a combination of DNA metabarcoding eDNA tests

Natural Capital Monitoring

Accredited methods for natural capital accounts using eDNA

Data Modelling

Structured insights for clearer forecasting and long-term nature repair programs

Nature Advisory R&D

Consulting and research partnerships with our in-house genetic and ecology PhDs

Source Contamination Tracking

Detect and track bacterial contamination in waterways

Traditional Owner Program

Indigenous-led stewardship on Country and job pathways using tailored eDNA training

Community programs

Citizen science programs that connect people with nature, conservation and science

Sampling technology products

We bring world-class environmental sampling technology to Australia. These collaborations enable access to global innovations that enhance sampling and data accuracy and streamline fieldwork.



Smith-Root
EnviroDNA brings world-class eDNA water sampling equipment to Australia & New Zealand



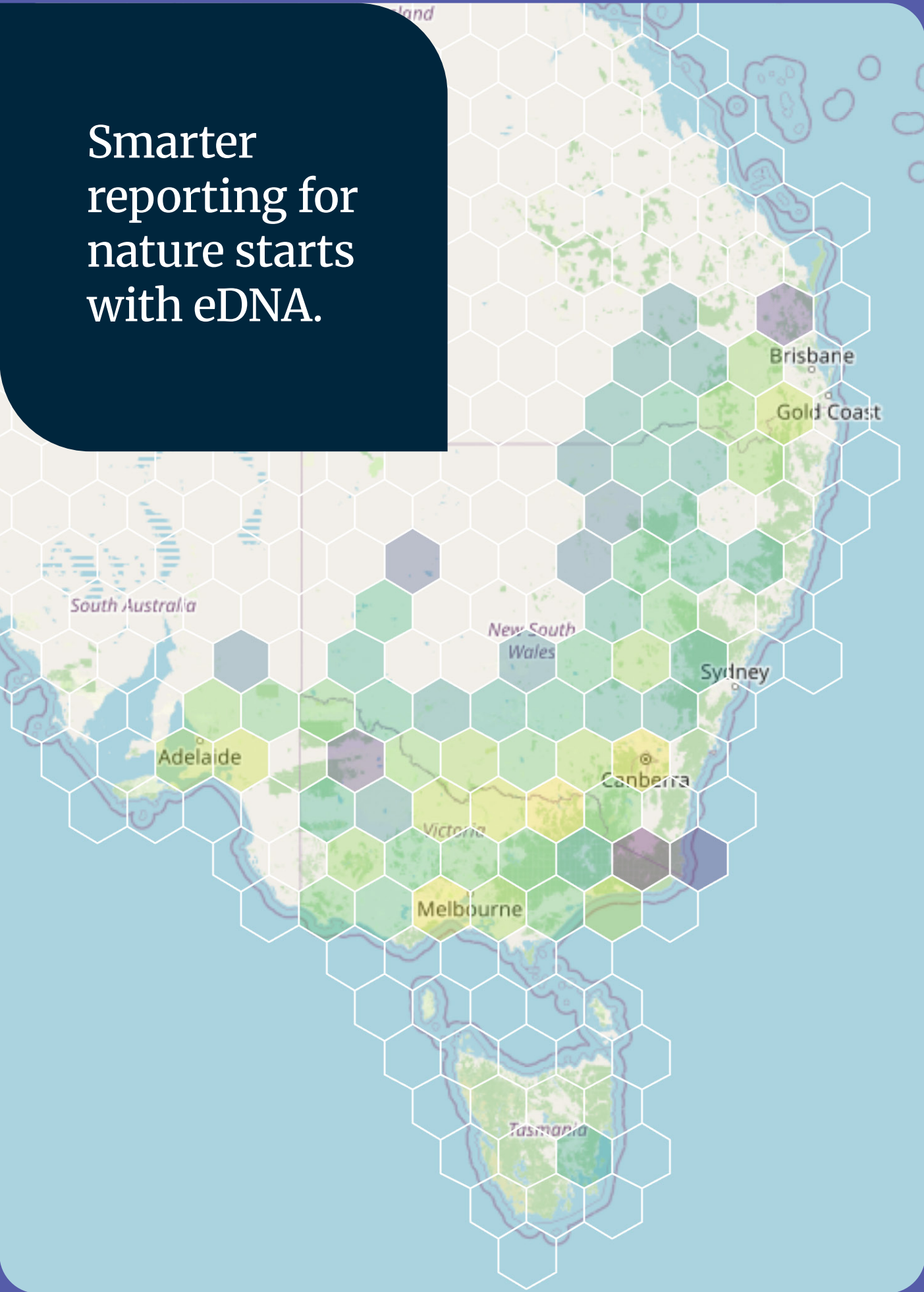
McLane Lab
EnviroDNA distributes autonomous marine sampling equipment in the Oceania region



DNAir
EnviroDNA distributes autonomous air sampling equipment in the Oceania region



Smarter reporting for nature starts with eDNA.



Case Study:

Burnett Mary Regional Group *(BMRG)*

Natural Capital Account

Overview

- Covering approximately 56,000km² of land and 11,000km² of sea, the Burnett Mary Region is internationally renowned for its ecological diversity, extensive primary production and rich cultural heritage.
- BMRG engaged EnviroDNA to undertake a biodiversity assessment for native fauna as part of a broad project developing a comprehensive environmental account of natural assets in the region.
- Measuring biodiversity across large-scale environments is difficult and costly using traditional monitoring techniques.

Results & Ongoing Collaboration

- BMRG applied EnviroDNA's method under the Accounting for Nature framework that uses eDNA to support regional-scale land management. Water samples were taken to obtain high quality baseline aquatic vertebrate biodiversity data using eDNA metabarcoding to help inform on-ground conservation strategies.
- 149 water samples with matched hydrochemical data were collected from sites within the Burnett Mary region by BMRG staff and affiliated stakeholders. At least 111 taxa were detected, with those identified to species level including 42 fish, 9 amphibians, 28 birds, 6 reptiles and 26 mammals.
- Natural capital accounting has an important role to play in recognising the value of biodiversity. EnviroDNA continues to provide eDNA analysis for natural capital accounting. BMRG will benefit through increased public and private investment that will continue to improve the environment.

“Our collaboration with EnviroDNA has not only **improved our natural capital accounting** but also **strengthened our capacity for evidence-based environmental decision-making.**”

We look forward to seeing what our long-term partnership can achieve in both measuring and building resilience into the Burnett Mary region's ecosystem.”

– **Tom Espinoza**
CEO BMRG



Our Team

Our expertise

Partner with experts in ecology, genetics and data science.

EnviroDNA brings together leading expertise across genetics, ecology, and data science. We combine deep knowledge and practical experience to help our clients address complex environmental challenges and pursue cutting-edge research and development. Beyond environmental monitoring, we leverage our strong academic foundations to deliver applied research, ecological consulting, and innovative solutions tailored to real-world needs.

Core Focus Areas

Beyond data – we offer end-to-end strategic support.

- Project and sampling design
- Field sampling surveys
- Molecular analysis for species and biodiversity
- Advanced bioinformatics, data interpretation and modelling
- Research and development in molecular ecology
- Strategic environmental consulting and stakeholder engagement



Our Facilities

Scalable sample processing without compromising precision or quality assurance.

Built for Precision and Scale

EnviroDNA operates state-of-the-art laboratories with specialised DNA sequencing and high-throughput automation systems. Our facilities support scalable sample processing without compromising precision or quality assurance.

Purpose-Built for Every Stage

We have invested in four distinct eDNA laboratory areas. Each lab is tailored to a specific stage of sample processing.

Technology That Delivers Quality

Our facilities feature DNA sequencing machines, contamination-free zones and controlled airflow systems. These help us maintain exceptional efficiency and quality throughout the process.



Why partner with us?



Australian Founded & Operated.

Leading the way in eDNA technology with local expertise and global impact.



Project Support.

Navigate your project with confidence with dedicated project managers and expert advisory.



Ground Truthed Results.

Data quality matters. We ground truth our biodiversity data to give you reliable nature intelligence.



Comprehensive Reference Libraries.

EnviroDNA have built an extensive repository of both Australia and global species since 2016.



PhD-Founded with Dedicated R&D.

Rooted in scientific rigor, we drive eDNA innovation through peer-reviewed research.

What makes our data different?

Our results are groundtruthed for quality assurance. We use additional species occurrence databases that EnviroDNA has available and leverage expert knowledge of sampling areas. These data sources include both external species records such as the Atlas of Living Australia (ALA) or the Global Biodiversity Information Facility (GBIF), and our internal database we are growing across Australia since 2016. This means your biodiversity data is validated against many, others in the sampling area.

Your trusted biodiversity monitoring partner in Australia and beyond.



A flourishing natural world
where human impacts are
sustainably managed.

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