

Species Specific eDNA testing

Simplified biomonitoring using qPCR targeted eDNA assays

In many cases environmental studies focus on a small selection of specific organisms, with reporting criteria limited to their presence or perceivable absence. In biomonitoring scenarios like this then the value in doing broad community wide eDNA analysis like that recovered with metabarcoding is reduced. Deploying a species-specific assay can be more economical.

Typically, species-specific assays are paired with quantitative PCR (qPCR), where their primer sets have been designed at a molecular level to be specific to unique sequences in target organisms. This allows a signal to amplify in positive samples and importantly they must not amplify other cohabitating organism sequences in the environmental matrix being tested.

Establishing an assay requires it to be performance tested for aspects like specificity and sensitivity, and once developed it can be applied to large number of environmental samples, quickly and economically.

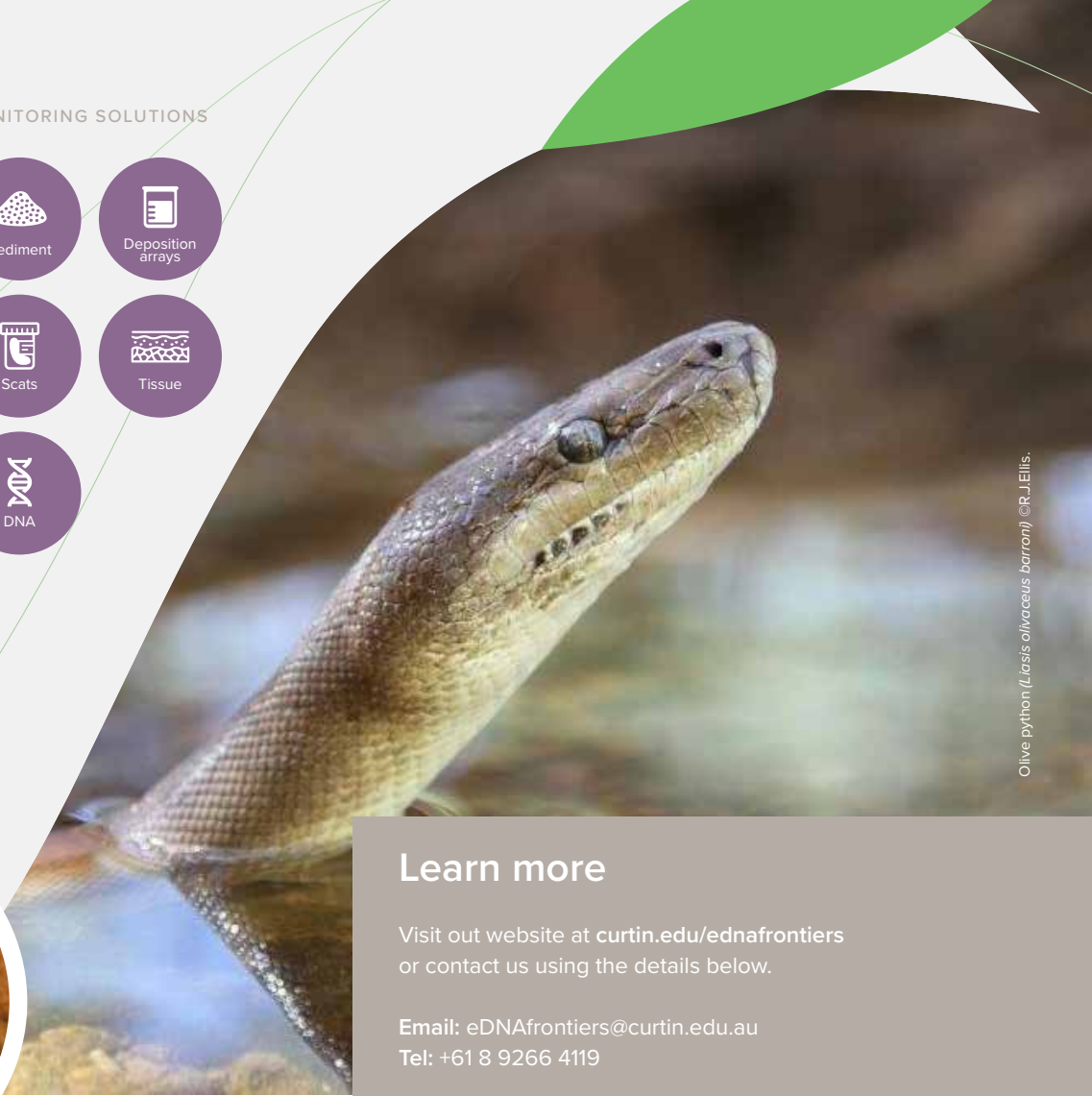
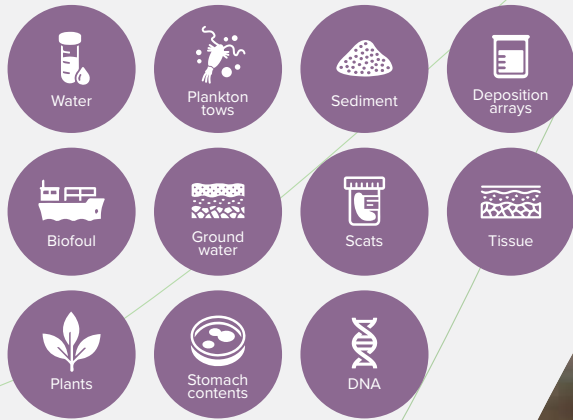
eDNA by qPCR species specific testing can achieve rapid high volume environmental screening to map locations and add to urgent knowledge based management decisions.

eDNA Frontiers can support the establishment phases of designing a species specific primer set, testing its performance and delivering high throughput testing. We have extensive experiences using a wide variety of environmental sample types and can support the design of testing regimes with both sampling guidance and methods to extract DNA for testing.

ENVIRONMENTAL DNA
BIOMONITORING SOLUTIONS

Innovative technology solving
complex environmental challenges
through biodiversity profiling





Olive python (*Liasis olivaceus barroni*) © R.J. Ellis.



Blind cave eel © M.Allen/G.Moore.

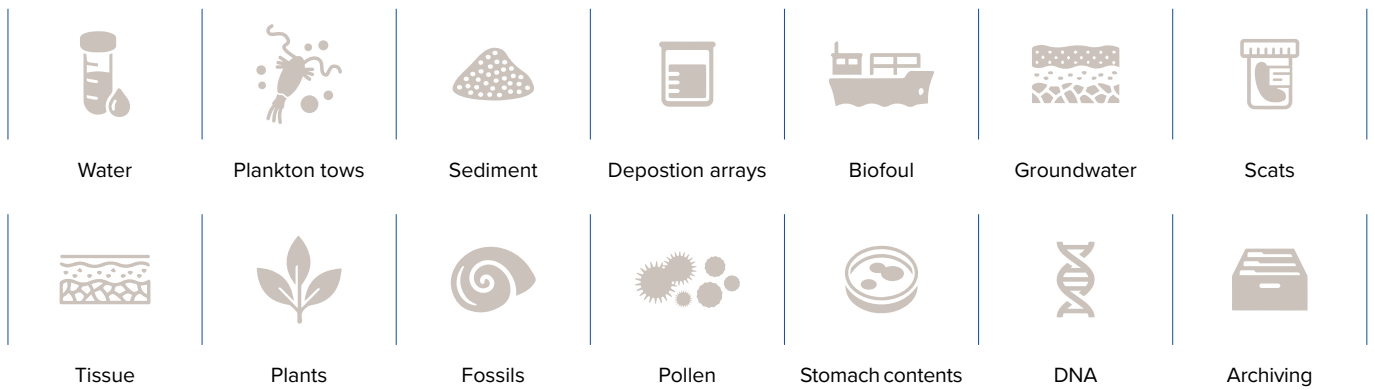
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Sample experience



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