

Monitoring Stygofauna Diversity

Biological surveys are essential for sustainable resource management, especially in areas with poorly-known biological communities or for ecological communities that have, until recently, escaped the attention of researchers. There is a growing awareness that aquifers are dynamic ecosystems containing many species of unique animals. Currently, the distribution, biological diversity, and ecology of stygofauna, the group of mostly crustacean invertebrates that live in groundwater, are poorly known outside of Western Australia. However, recent research sponsored by ALS Water Resources Group and the Australian Research Council, has uncovered rich stygofauna communities in Queensland and New South Wales. The research suggests that stygofauna probably occur in nearly all alluvial aquifers and are present in most other aquifer types as well.



Bathynellacea are a widespread group of groundwater crustacea

As demand for groundwater increases, so does the need for better groundwater management. Many stygofauna species are thought to be restricted to very small areas, so any activity impacting on aquifers has the potential to cause extinctions. Stygofauna are likely to be threatened by human activities that cause water table decline, such as mine dewatering and large-scale agricultural irrigation. Groundwater contamination is also something that could damage stygofauna communities.

ALS Water Resources Group ecologist sampling a bore in WA for stygofauna



Our services

ALS Water Resources Group has an experienced team of aquatic scientists capable of carrying out all aspects of stygofauna monitoring:

- Project design
- Compliance monitoring
- Training in stygofauna sample collection
- Field collection of biological and water quality samples from a range of groundwater habitats
- Laboratory processing and sample identification
- Interpretation and reporting of results
- Sustainable management

Minerals

Coal

Environmental

Tribology

Food & Pharmaceutical Industrial



Environmental laboratories and office locations include: Adelaide, Bendigo, Brisbane, Canberra, Geelong, Gladstone, Melbourne, Mackay, Mudgee, Newcastle, Nowra, Perth, Sydney, Townsville, Traralgon, Wangaratta and Wollongong.