



ASEDA specialises in freshwater ecological surveys for conservation assessment; to monitor impacts; assess damage or recovery, flow requirements, nutrient enrichment or chemical contamination.

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### Water-crowfoot and environmental conditions



*Ranunculus* growth within partially shaded channel

A study of longitudinal and temporal trends in the growth of Stream Water-crowfoot in relation to environmental conditions was undertaken in a watercourse in the south-west of the UK.

At intervals along the watercourse, from wooded headwaters to the tidal limit, the percentage cover of aquatic macrophyte species was assessed across a number of transects over a growing season. Biomass estimates and a LEAFPACS survey were undertaken at selected sites.

Findings were assessed in relation to a variety of hydrological, geomorphological and climatic variables.

Spatial and temporal trends in the distribution of *Ranuncu-*

*lus* reflected the complex interconnectivity among abiotic and biotic variables.



Luxuriant *Ranunculus* growth in an open channel

### Catchment-scale river quality

As part of a long term study, the impacts from multiple stressors, such as metal contamination, organic enrichment, invasive alien species and habitat loss, within the catchment of a lowland river were researched.

The impacts from persistent effluents within the catchment were assessed; potential amelioration and restoration strategies investigated.

The abundance and distribution of non-native invasive species within the river corridor were assessed; legislative advice and potential treatment options provided.

Temporal patterns in aquatic macroinvertebrate assemblages within the river highlighted catchment-wide trends; a response to variability in both anthropogenic inputs and habitat availability and structure.



Metalliferous leachate entering a tributary.



Invasive non-native species Himalayan Balsam lining the river banks

Principal project collaborators in this issue:

AQUATONICS LTD.