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To restore or not? Pond biodiversity and natural succession.

Water levels within a series of hydrologically linked, artificially created, ponds were lowered several decades ago. Through a combination of natural succession and high mineral sediment loads within the catchment, extensive areas of shallow water habitat, wetland and wet-woodland have been created. A stream, spring fed from a chalk escarpment, links the current ponds.



Sampling the main pond of the series by canoe

Plans to both restore historical water levels within the ponds and dredge accumulated soft sediments were assessed in relation to the ecological value of the current faunal assemblage.

The status of the various waterbodies was assessed using a combination of established

and bespoke methodologies. Soft sediments within the ponds meant surveying was carried out by canoe.

Survey findings indicated waterbodies typically to be of high ecological value. Two ponds met the criteria for Priority Pond status, supporting exceptionally rich macroinvertebrate assemblages.

Current hydrological conditions accompanied by high water quality has led to the development of species-rich marginal shallow water habitat. The presence of unusually high flow 'channels' within the ponds has enhanced the biodiversity of these waterbodies.



Shallow water habitat created by high sedimentation rates and lowered water levels.

Raising the water levels within the pond system is likely to limit the extent of these speciose shallow-water habitats potentially reducing overall diversity and conservation value of the site.

Late successional stage ponds support a varied fauna and can add to diversity at the landscape level. Nevertheless views over open water are important for amenity reasons.



Views over open water

Mitigation measures associated with dredging fine sediments; preventing their re-suspension and transportation and disposal of spoil in particular, would prove both complex and expensive.

Given such findings what level of restoration should be considered?



Principal project collaborators in this issue:

CORYLUS ECOLOGY LTD.