

# Response of testate amoebae to peatland grip blocking: implications for biomonitoring of peatland restoration efforts

Graeme Swindles, Andy Baird and Joe Holden

Peatlands are globally important habitats and carbon stores which are under threat from human activity and climate change. Over the last five decades, many upland blanket peatlands in the UK have had grips (drainage ditches) installed to lower water table levels and increase land productivity. However, gripping has been shown to have negative effects on biodiversity, hydrology and the amount of dissolved organic carbon (DOC) flux to water courses (Holden et al., 2011). It has also caused marked degradation of these important terrestrial carbon stores. To reduce these impacts there have been several attempts to block these grips with dams to restore the blanket peat. Testate amoebae are an important component of the soil microfauna and have been shown to be very sensitive environmental indicators in peatlands. In particular, they have been shown to respond rapidly to changes in water level. The aim of this project is to examine the efficacy of testate amoebae for biological monitoring of peatland grip blocking.



A successfully blocked peat grip in the Pennines

## Key reading

Holden, J, Wallage, Z.E., Lane, S.N and McDonald, A.T. 2011. Water table dynamics in drained and restored blanket peat. *Journal of Hydrology* 402, 103-114.

Swindles, G.T., Charman, D.J., Roe, H.M. and Sansum, P.A. 2009. Environmental controls on peatland testate amoebae (Protozoa: Rhizopoda) in the North of Ireland: Implications for Holocene palaeoclimate studies. *Journal of Paleolimnology* 42, 123-140.

For more information contact Dr. Graeme Swindles ([g.t.swindles@leeds.ac.uk](mailto:g.t.swindles@leeds.ac.uk))

If you are an EU citizen you can apply for a NERC Quota Award to pay for your fees and living costs (£13,590 per year). Details are available at <http://www.geog.leeds.ac.uk/?id=534>