Geophysical Research Abstracts
Vol. 12, EGU2010-5883, 2010
EGU General Assembly 2010

Investigating the potential role of the aquatic plant, Sparganium erectum, in accelerating channel adjustment in channelised and restored river reaches

Angela Gurnell (1), Matthew O'Hare (2), Judith O'Hare (1), Thomas Liffen (1), Natasha Bankhead-Pollen (3), and Andrew Simon (3)

(1) Queen Mary, University of London, Department of Geography, Mile End Road, London E1 4NS, UK (a.m.gurnell@qmul.ac.uk), (2) Centre for Ecology & Hydrology, Bush Estate, Penicuik, Midlothian, EH26 0QB, UK, (3) National Sedimentation Laboratory, PO Box 1157, Oxford, MS 38655, USA

Riparian vegetation, particularly trees and shrubs, can play a crucial role in the construction and turnover of fluvial landforms, but aquatic plants may also act as river ecosystem engineers. This paper reports on research on the potential physical engineering of river systems by Sparganium erectum, a very widely-occurring emergent macrophyte in northern temperate areas.

After proposing a conceptual model of the way in which this species may engineer river channels, preliminary observations of the model components are presented based on local to national (England and S. Scotland) scale investigations.

Whilst the research is concerned with one particular species, the concepts are transferable to other macrophyte species and to their potential roles in accelerating channel adjustment, particularly in channelised and restored reaches of low-energy river systems.