

## REVIEWS

CAVE CONSERVATION POLICY National Caving Association. NCA, London, 1995. 32pp.  
4 b&w photographs, softback, A4. £5 ISBN 0 9525520 0 0  
(Reviewed by Andy Farrant)

This document is without doubt one of the most important caving related publications to be written in the last several years. Its aim is to provide a factual statement of the NCA's policy towards cave conservation. As such it is not intended to provide light bedtime reading, but should be high on the reading list for any active caver who cares about the cave environment. The document explains why caves should be conserved and outlines many of the threats, both internal and external, to the cave environment. This is perhaps the section of especial interest to most cavers. Although many of the external threats such as quarrying, mineral extraction and waste disposal are immediately obvious, many cavers are less aware of the internal damage caused by cavers themselves through over-use, digging, graffiti, litter and inappropriate sampling for scientific purposes. The clear policy statements contained within this document provides useful guidelines for active cavers to abide by when underground. Furthermore, they provide an important step in countering threats to caves from outside sources such as planning authorities.

It then goes on to document a series of conservation initiatives which can and should be implemented by the caving community and land owners. Key to this is the publication of a condensed version of this policy document which should be accessible to most cavers. In addition to this it is proposed to publish a Cave Conservation Handbook to go with this document, which should be available by the time this review is published. This contains over 26 detailed appendices on many relevant topics such as how to repair broken formations, models to set up 'cave conservation plans' and the responsibilities of planning authorities, National Parks and councils. The second major initiative proposed is the formation of voluntary conservation plans for specific caves, similar to that the UBSS and the Charterhouse Caving Company have drawn up for GB and Charterhouse Caves in consultation with the Somerset Wildlife Trust.

The final section details the role of the statutory bodies such as English Nature and the Countryside Commission for Wales in cave conservation. Specifically it outlines how sites of special scientific interest (SSSI's) are selected, notified and protected through the identification of 'potentially damaging operations'. Cavers who remember the Priddy Caves SSSI fiasco of a few years ago when many of the major caves were closed following notification of the SSSI, will be particularly interested in this section. Although most cavers are aware of SSSI's, they are probably ignorant of the 'RIGS' scheme. This aims to bring attention to 'Regionally Important Geological/geomorphological Sites', (including cave and karst features) which are deserving of at least some protection. Both Somerset and Avon have local RIGS groups which include cave sites not covered by an existing SSSI. The policy document also contains a section on the statutory archaeological conservation bodies, and how important archaeological sites in caves are protected.

Although rather formal, the NCA Cave Conservation Policy document is clear, concise, well laid out and, most importantly, readable. The price may deter many cavers from buying their own copy, but as every club was sent one free, there should be no excuse for not being able to see one. This policy document represents a milestone on the path to providing suitable

protection for Britain's caves, which are increasingly under threat from development and over-use. It should help caving to be perceived as a more 'responsible' sport. I would firmly encourage all members to find a copy, read it and act on it. Otherwise it will be us, cavers, who lose out when our caves are ruined or destroyed.

BROWN A G (Ed), 1995, *Geomorphology and Groundwater*, John Wiley & Sons, Chichester, 213pp hardback £45.00 ISBN 0-471-95754-2  
(Reviewed by Steve Hobbs)

*Geomorphology and Groundwater* is the result of a joint meeting of the British Geomorphological Research Group and the Hydrogeology Research Group of the Geological Society, held in 1993. Ten papers presented at the meeting are included in the book covering a range of topics broadly organised around three themes: aquifers in Pleistocene sediments, surface water groundwater interactions, and groundwater and landforms including karst. The papers are as follows:

1. *Geomorphology and Groundwater: Convergence and Diversification* by A.G. Brown and C. Bradley. pp. 1-20
2. *Groundwater Flow and Quality in an Alluvial Aquifer Recharged from River Bank Infiltration, Torgau Basin, Germany* by T. Grischek, J. Dehnert, W. Nestler, P. Neitzel and R. Trettn. pp. 21-36
3. *Shallow Groundwater Modelling and the Overbank Contribution to a Small Floodplain Bog* by C. Bradley and A.G. Brown. pp.37-52
4. *Assessing River-Aquifer Interactions within the Hyporheic Zone* by I.P. Maddock, G.E. Petts, E.C. Evans and M.T. Greenwood. pp.53-74
5. *Landform-Groundwater Interactions in the Gwenlais Karst, South Wales* by P. Hardwick and J. Gunn. pp. 75-92
6. *The Origin and Age of Karstic Depressions in the Darwin-Koolpinyah Area of the Northern Territory of Australia* by M.J. McFarlane, S. Ringrose, L. Giusti and P.A. Shaw. pp.93-120
7. *Karst and Pseudokarst: An Artificial Distinction?* by P.L. Younger and J.M. Stunell. pp.121-142
8. *Bils and the Barind Aquifer, Bangladesh* by K.M. Ahmed and W.G. Burgess. pp.143-156
9. *Groundwater Recharge and Outflow Patterns in a Dunefield of North east Nigeria* by R.C. Carter. pp.157-176
10. *Hydrogeological Provinces in Central Sudan: Morphostructural and Hydrogeomorphological Controls* by J.J. Burke. pp.177-208

Only papers 5, 6 and 7 concern Karst and will be considered here.

Hardwick and Gunn discuss the geology, geomorphology and hydrogeology of the "Gwenlais Karst". This 1.9 km<sup>2</sup> area of Carboniferous Limestone lies on the northern side of the north crop of the Carboniferous Limestone on the margin of the South Wales Coalfield. Recharge to the area is dominantly dispersed, although some concentrated recharge has been identified; conduit flow is evident in the area as indicated by dye traces which yield minimum