

Quarterly Journal of Engineering Geology and Hydrogeology

The journal is abstracted and/or indexed in Current Contents, ASCA, Science Citation Index, Groundwater On-Line, Geological Abstracts, International Civil Engineering Abstracts, Petroleum Abstracts, Geotechnical Abstracts, GeoArchive, GeoRef and Geobase.

Advertising sales: Please contact Jonathan Knight, Century One Publishing Limited, Alban Row 27–31 Verulam Road, St. Albans, AL3 4DG, UK (tel: 01727 893894; direct line: 01727 739193; e-mail: jonathan@centuryonepublishing.ltd.uk)

CONTENTS – Volume 48, Part 1, February 2015

Editorial

E. Bromhead & N. Koor

3

Research articles

Velocity and runout determination of a debris flow based on energy conservation: the Dongwopu debris flow in Tianjin, China

W. Zhang, J. Chen, Q. Wang, J. Yan, S. Guan, X. Chen & F. Wang

5

Laboratory testing of non-standard original historic building materials and related implications for conservation

A. Erkal & D. D'Ayala

15

Mapping landslides at different scales

J.S. Griffiths, A.E. Mather & M. Stokes

29

Pyritiferous mudstone–siltstone: expansion rate measurement and prediction

B.A. McCabe, É.P. McKeon, R.J. Virbukiene, P.J. Mannion & A.M. O'Connell

41

Anomalous buried hollows in London: development of a hazard susceptibility map

V.J. Banks, S.H. Bricker, K.R. Royse & P.E.F. Collins

55

Discussion

Discussion on 'An investigation of the basement complex aquifer system in Lofa county, Liberia, for the purpose of siting boreholes' *Quarterly Journal of Engineering Geology and Hydrogeology*, Vol. 47, 2014. pp. 159–167

71

Book reviews

73

Quarterly Journal of Engineering Geology and Hydrogeology (ISSN 1470-9236) is published in February, May, August and November by the Geological Society Publishing House for the Geological Society, London. The Geological Society, Burlington House, Piccadilly, London W1V 0JU.

Subscription rates 2015 (volume 48, 4 parts). More information about subscription options can be found at <http://www.geolsoc.org.uk/LyellCollection>. Journal Subscriptions Department, Geological Society Publishing House, Unit 7, Brassmill Enterprise Centre, Brassmill Lane, Bath, UK, BA1 3JN (tel 01225 445046; fax 01225 442836; e-mail: sales@geolsoc.org.uk). The subscription prices for 2015 to institutions and non-Fellows is: UK, £453+VAT (online only), £546+VAT (online + print); EU, £507+VAT (online only), £611+VAT (online + print); Rest of World, £507 (online only), £611 (online + print).

Outside Europe, the Journal is dispatched by various forms of airspeeded delivery. Airfreight and mailing in the USA by agent named Air Business Ltd, c/o Worldnet Shipping Inc., 156–15, 146th Avenue, 2nd Floor, Jamaica, NY 11434, USA. Periodicals postage paid at Jamaica NY 11431. US Postmaster: send address corrections to the Quarterly Journal of Engineering Geology and Hydrogeology, Air Business Ltd, c/o Worldnet Shipping Inc., 156–15, 146th Avenue, 2nd Floor, Jamaica, NY 11434, USA. Back numbers are normally dispatched by surface mail.

© The Geological Society of London 2015. No reproduction, copy or transmission of all or part of this publication may be made without the prior written permission of the publisher. In the UK, users may clear copying permissions and make payment to The Copyright Licensing Agency Ltd, Saffron House, 6–10 Kirby Street, London EC1N 8TS, UK, and in the USA to the Copyright Clearance Center, 222 Rosewood Drive, Danvers, MA 01923, USA. Other countries may have a local reproduction rights agency for such payments. Full information on the Society's permissions policy can be found at www.geolsoc.org.uk/permissions

Publishing disclaimer: www.geolsoc.org.uk/pub_ethics

Inclusion of advertising in this publication does not constitute a guarantee or endorsement of the quality or value of such product or of the claims made of it by its manufacturer.

Cover Photograph. The cover image shows a dislocation in one span of the now disused railway viaduct at Lagonegro, Basilicata, southern Italy (40° 07' 08"N, 15° 45' 58" E). This 200m long viaduct reaches a height of 76 m above a fault-controlled valley which it crosses with 6 main arches and some small sections at the southern end as beams, and runs between two tunnels in different parts of the *Unità Lagrone* (*Triassic*) at each end. It was constructed in reinforced concrete in c. 1915, but in 1952 and subsequently, deformations were experienced that led eventually to the closure of this part of the line, and later abandonment of the whole railway link. These deformations have been concentrated in one arch span (shown) at the northern end of the viaduct and not in the other arches. For the past half-century, the viaduct has stood as mute testimony to the nature of ground movements in this locality, which on the basis of mapping by Professor L. Coppola, appear to be movements of a massive olistolithic block of organogenic limestone at the north end of the viaduct.

Photograph by: E.N. Bromhead.