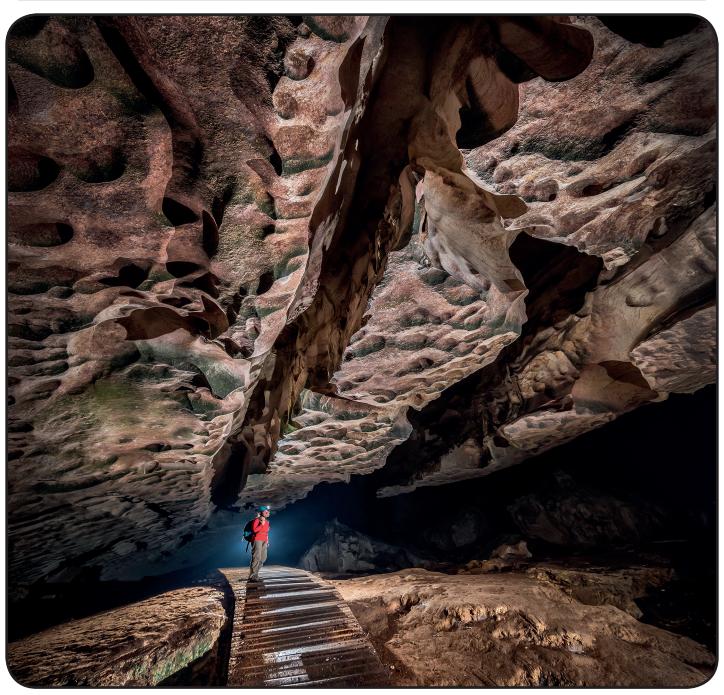
# Cave and Karst Science

The Transactions of the British Cave Research Association



Volume 52 Number 3 December 2025



Speleogenesis based on the deglacial studies of Arthur Raistrick and Arne Grønlie Speleothem origin and chronology in a Lewisian gneiss cave, Iona, Scotland A U-series date and its implications for valley incision; Nidderdale, UK Piston-like response of karst groundwater to heavy rainfall events Caves in the historical record of Sarawak, prior to 1963 Cave fauna from the Bau area, southwestern Sarawak Forum (Abstracts and Notes for Authors)

#### Cave and Karst Science — Notes for Contributors

#### Scope of articles

Authors are encouraged to submit articles for publication in *Cave and Karst Science* – the *Transactions of the British Cave Research Association* – to one or both editors via the editorial addresses shown on the Contents page. Submissions fall into five broad categories...

**Papers**: Scientific papers, normally up to 6,000 words but may be longer subject to editorial agreement, on any aspect of karst or speleological science, including archaeology, biology, chemistry, conservation, geology, geomorphology, history, hydrology and physics. Manuscript papers, which should be of a high standard, will be subject to peer review by two referees.

**Reports**: Shorter contributions, normally 500–3,000 words, on aspects of karst or speleological science, as listed above, or more descriptive material, such as caving expedition reports and technical articles. The Editorial Board will review manuscripts unless the subject matter lies outside their fields of expertise, in which case assessment by an appropriate expert will be sought.

**Features**: Articles of appropriate length (by editorial agreements) for the core topic that do not fall readily into either the Paper or Report categories but are longer than normal Forum contributions (see below). Such items might include, for example, new translations of historical milestone publications, appreciations of the work of major contributors to the many cave and karst science fields, or considerations of past activities and/or future ways forward in the cave and karst sciences.

**Forum:** Personal statements, normally up to 1,000 words, on topical issues; discussion of published papers, and book reviews. Where appropriate, statements should put forward an argument and make a case, backed-up by examples used as evidence.

**Abstracts**: Authors (or supervisors) of undergraduate or postgraduate dissertations on cave or karst themes are encouraged to submit abstracts for publication. Please indicate whether the thesis is available *via* inter-library loan. Abstracts of papers presented at BCRA (and related) conferences or symposia are also welcome. Normally, **Abstracts** appear as part of **Forum**.

Prospective authors are welcome to contact the editors (see the Contents page for current addresses), who will be pleased to advise on manuscript preparation.

**Photo Feature**: Introduced in 2022, this is intended to encourage cavers to submit one to three photographs together with a brief explanation of their scientific significance.

#### Open access

In 2024 the BCRA Council agreed that all articles accepted for publication in *Cave and Karst Science* will be Open Access, meaning that the article can be downloaded freely, and will be marked as meeting the open access requirements of **UKRI.org**. However, the BCRA Council encourages those submitting a paper to *make a donation* towards the costs of publication, particularly if they are affiliated to an academic institution

The following notes are intended to help authors prepare their material in the most advantageous way. Time and effort are saved if the guidelines below are followed. Queries regarding the content or format of the material should be made before submitting the manuscript. On publication, authors will be provided with access to downloadable digital copies of their contributions.

#### Manuscript style

**Text:** Material should be presented in a style as close as possible to that adopted by *Cave and Karst Science* since 1994. Subheadings within an article should follow the system used in *Cave and Karst Science*. A consistent set of primary, secondary and, if necessary, tertiary subheadings should be indicated clearly.

**Abstract**: Submitted material should normally be accompanied by an abstract, stating the essential results of the investigation or the significance of the contribution, for use by abstracting, library and other services.

References to previously published work should be given in the standard format used in *Cave and Karst Science*. In the text author's name and date (and page number *if appropriate*) should be cited in parentheses – (Smith, 1969, p.42). All text citations should be referenced in full, in alphabetical order, at the end of the manuscript, thus: Smith, D E, 1969. The speleogenesis of the Cavern Hole. *Bulletin of the Yorkshire Caving Association*, Vo1.7, 1–63. Periodical titles must be written in full. Books should be referenced by author (or Editor), date, title, place of publication and publisher, in the form: Braithwaite, C J R, 2005. *Carbonate Sediments and Rocks*. [Dunbeath: Whittles Publishing.] 164pp. Failure to provide full and unambiguous references can delay publication.

Acknowledgements: Any person or organization that has given a grant or helped with the investigation or with preparation of the article should be acknowledged. Contributors in universities and other institutions are reminded that grants towards publication costs may be available, and that they should make related enquiries as early as possible. Some expedition budgets include an element to help publication, and the editors should be informed of this.

**Speleological expeditions** have a moral obligation to produce reports (contractual in the case of expeditions supported by Ghar Parau Foundation awards). These should be concise and cover the results of the expedition as soon as possible after the return from overseas, so that later expeditions are informed for their planning. Personal anecdotes should be kept to a minimum, but useful advice such as location of food supplies, medical services, *etc.*, may be included, preferably as appendices.

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#### Submission media

Unless a suitable alternative is agreed in advance with the Editor(s), manuscripts should be sent by email, with the Text and Tables as separate Word documents and with each figure and photograph as a separate jpg or tif file. If the file attachments exceed 20Mb they should be sent to one or both of the editorial addresses shown on the Contents page, using a file-transfer service such as WeTransfer.

File naming: Files can be difficult to track. The editors advise that all related file names (including photos and graphics files) should begin with the same character string, e.g. lead author's surname. If submitting a large number of files it is especially helpful to include an index – a file containing a list of file names and their contents.

# **Manuscript format**

Text: The text should be Microsoft Word (Doc) [NOT Docx, because this is not recognized by our current publishing software], preferably compiled using the Times New Roman font. Please do not include tables, graphics or photos within text files, but supply them separately, as detailed below.

**Layout**: Material should be compatible with the *Cave and Karst Science* 'house style' regarding headings, *etc.*, but do not attempt to match the layout. Text should be in a single column and 'double-spaced'. Character formatting (bold, italic, sub- and superscript) can be used, but please do **not** apply paragraph formatting, which will be stripped out during DTP.

Symbols: Special symbols, including accented Roman characters, Greek letters, fractions, mathematical symbols, and some icons, can be generated using the MS Word character map accessible via Insert/Symbol. If the required symbol is not available here, please check for an alternative in the Symbol font. To avoid confusion and assist the editors, authors who employ special symbols should provide an explanatory list (digitally) of the nature, meaning and font of the characters used. Tables, graphics and photos: Tables and Figures (both diagrams and photographs) should be referred to in the text, where necessary, as (Table 4), (Fig.3), etc. Preferred approximate positions of tables, graphics and photos can be indicated by, e.g., <Insert Figure 1>. A full list of captions should be submitted at the end of the manuscript, after a hard page break. Photo captions should include the photographer's name unless the photographer is also the sole author. Any material not created by the author(s) must acknowledge that permission is granted for its use.

Avoid submitting composite illustrations containing mixed photos, diagrams, charts, etc. It is inefficient and time-consuming to optimize them for printing or viewing and overall outcomes can be inferior to using separate figures at appropriate sizes. The large footprint needed to ensure legibility of full-page composites also reduces options for appropriate positioning of illustrations among the text. If composite figures are considered essential or advantageous, and if approved by the editors, please submit separate high-resolution copies of all components and a template of the required layout.

**Tables** should be submitted in a separate MS Word (Doc) file, numbered in sequence and provided with captions. Use a simple table design that is easy to edit. For example, use tabs or table cells rather than spaces to separate data, and merge table cells only where strictly necessary. For submission, separate each table using a **hard** page break.

Graphical illustrations should be designed to make maximum use of page space. Preferred final widths are 1-column, 1.5-columns or 2-columns (90mm, 143mm or 188mm respectively); these might be adjusted to make best use of available space during layout. Maximum column height is 267mm but, if designing a potentially full-page illustration, remember to allow for caption space below. Maps (and cave surveys) must have bar scales only. When submitting graphics, bear in mind that referees may request revisions, so submission of a draft version is advised.

Various digital graphics formats are acceptable, but some are not recommended – e.g. MS Word's built-in facilities (auto-shapes, text boxes and MS Draw) can cause problems. Charts generated within MS Excel are becoming increasingly popular. For these to retain their initial clarity during production it is best to provide each chart removed from its parent data and saved as a separate, appropriately named, sheet within an Excel workbook file.

Remember that graphics, photos and tables might have to be reduced (or, more rarely, enlarged) from the size envisaged during compilation, to fit the column heights and widths described above. Lettering should be of a suitable size to be readable at the anticipated dimensions of use; generally use of a simple sanserif typeface such as "Arial" (or a closely similar font) is preferred.

**Photographs** should be provided at full resolution. **Do not sharpen**. Tif or larger size jpg files are currently the preferred formats. Other formats might be acceptable or adaptable; please check with the editors if in doubt.

## Cave and Karst Science

Transactions of the British Cave Research Association Volume 52, Number 3, December 2025



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#### Cover photographs [all images by Chris Howes]:

With one Paper and one Report in this Issue relating to the caves, karst, and cave faunas of various parts of Sarawak (Malaysia), it seemed an ideal opportunity to choose a selection of photographs from there to adorn both of the covers. Once again we are pleased to thank **Chris Howes** for providing a fine and wide-ranging collection from which to choose the images featured on the front and rear covers.

The **Front Cover** image shows Judith Calford on part of the Boardwalk in Niah Cave, a site mentioned repeatedly in a Paper by Martin Laverty in this Issue, wherein he discusses the early (pre-Malaysia) history of cave and karst exploration in southwestern Sarawak. Deep solutional pocketing of the cave ceiling, prominent in the photograph, is suggestive of a phreatic origin for the cave, but – alternatively – might reflect a secondary overprint related to dissolution induced by the nitrification of biogenic ammonia derived from the microbial decay of bird and bat guano.

Relating to aspects of a short Report by Phil Chapman, which describes aspects of the cave fauna of the Bau area of southwestern Sarawak, the **rear cover** collage includes six images illustrating examples of the prolific, diverse and fascinating fauna observed within the wider context of the caves of Sarawak as a whole. Brief background and available details of the six images are provided below.

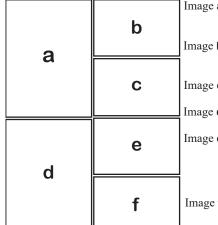


Image **a** A cave swiftlet (Aerodramus sp) photographed in Niah Cave, Sarawak, in April 2019. Both the blacknest swiftlet (Aerodramus maximus) and the mossy-nest swiftlet (Aerodramus salangana) are reported as nesting in the Niah caves. See also Image F.

Image **b** Head of a cave racer snake (Orthriophis taeniurus), with its tongue extended, "smelling"/"tasting" the air, a repetitive act that helps the snake to be aware of its environment and, particularly, to sense the presence and location of potential prey or threats. Photographed in Racer Cave, Mulu, Malaysia, April 2019.

Image c Huntsman spider (Family Sparassidae; ?Heteropoda sp.) with its egg sack. Photographed in Stone Horse Cave, Mulu, Malaysia, April 2019.
 Image d Female Receptus on (a large cribellate - orb-weaving - spider) with part of its characteristic web.

Image **d** Female Psechrus sp. (a large cribellate – orb-weaving – spider) with part of its characteristic web. Photographed in Deer Cave, Mulu, Sarawak, Malaysia, in November 2022.

Image e Whip scorpion (unidentified Uropygid) with folded pedipalps ("pincers"), photographed in Stone Horse Cave, Mulu, Malaysia, in November 2022. Almost all whip scorpion species have eight eyes, the exceptions being a tiny minority of (blind) cave-dwelling species reported in the southern USA. Whether surface-or cave-dwelling their eyesight is, however, generally poor and – especially when hunting – they rely upon their highly sensitive, elongated, antennae-like, first pair of legs, which function as sensory organs.

Image f Young swiftlets (Aerodramus sp.), possibly the Black-nest Swiftlet – Aerodramus maximus – still in the nest and with their eyes not yet open. Photographed in Lagang's Cave, Mulu, Malaysia, in April 2019. See also Image A.

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# **EDITORIAL**

## John Gunn and David Lowe

As we closed our Editorial for Issue 52(2) we looked forward to Britain's most important annual meetings of cavers, *Hidden Earth* at Llangollen and the *BCRA Annual Cave Science Symposium* – held this year at Bristol University. Both proved to be highly enjoyable and well attended events, and abstracts of the papers and posters presented at the symposium form part of the contents of this Issue. We hope that some of them will become full articles, submitted to *CaKS* in due course.

Our previous Editorial also appealed for photographs suitable for the front and back covers, and we are grateful to Chris Howes, who has provided some excellent images for the current edition. However, our plea for contributions to the 'Photo Feature' have not yet been successful and, consequently, there is no feature in this Issue. Surely there must be some amongst our readers who have an interesting photograph (or up to 3 photos) that they would like to share with others?

Moving to the Contents of this Issue, we are pleased to report that these include 4 papers and 2 reports, relating to several widely differing topics, both within the British Isles and across the globe. In their order of appearance within the journal these include:

- Mike Rogerson, Vasile Ersek, and Jo White, examine some of the responses of groundwater to heavy inputs of meteoric water related to storm events, based upon studies in the Peak District of Derbyshire, UK;
- Martin Laverty documents the results of a study of available information related to aspects of caves and karst as described by many authors within relevant surviving historical records of Sarawak from before the formation of Malaysia in 1963;
- Trevor Faulkner considers the relationships between glaciation/deglaciation and speleogenesis, with particular emphasis on the significance of research carried out by Arthur Raistrick in the Yorkshire Dales, UK, and by Arne Grønlie in Norway;
- Phil Murphy, Kang Xie, and Chris Fox report on a recent U-series date from a speleothem sampled in Canal Cave, Nidderdale, UK, with discussion of the date's implications for the history of local valley incision;
- Philip Chapman presents historical results concerning elements of the cave fauna collected in the Bau area of Sarawak during 1980, including details of the many international authorities who contributed time and expertise to the project by providing determinations of his sampled specimens.
- Kang Xie, Martin Lee, Cristina Persano, and John Faithfull describe a cave developed in Precambrian gneiss on the island of Iona (western Scotland) and discuss the local and broader implications of a U–Th isotopic date obtained from a calcite speleothem sampled in the cave.

The remainder of the Issue is occupied by a *Forum* section that, as mentioned above, comprises mainly the abstracts of papers and posters presented at this year's (36th) *BCRA Annual Cave Science Symposium*. One more *Forum* page is dedicated to another Abstract, this one relating to a recently successful PhD defence, and prefaced by a slightly different treatment of our traditional Editorial plea for successful research candidates to share and publicise their achievements by finding the time to submit their abstracts for publication in *CaKS*. As also mentioned above, there is no Photo Feature in this Issue, and the final *Forum* page presents a Note for Authors, in the form of a "lament" and advice concerning some of the more common authoring issues that many reviewers and editors of scientific papers find irritating...

Being the third Issue of the Volume, it is now our pleasure to acknowledge the contributions of those photographers whose images have been provided freely for use on the front and back covers of the journals, and those experts – in many fields – who have delivered reviews of submissions made to *Cave and Karst Science*. Unusually in Volume 52, the front and back cover images of each Issue were provided by the same photographer. Phil Wolstenholme provided all the cover material for 52(1), John Gunn for 52(2) and Chris Howes for this Issue – 52(3). Thank you all for your support, your expertise and your time.

Whereas a proportion of submissions were reviewed by the editors or by members of our *Editorial Advisory Board*, most reviews have depended, as usual, upon the good will, knowledge and time provided by specialists – scientists, historians and more – scattered around the world. So, in alphabetical order, we recognize and thank the following reviewers, with the "\*" symbol indicating review of more than one contribution: Augusto Auler, Donovan Blissett, Andrew Chamberlain\*, Phil Chapman, Rosi Crane, Jo DeWaele, Ian Fairchild\*, Michal Filippi, Hans Friederich, Francis Howarth, Chris Hunt, Joyce Lundburg, Don McFarlane, Bogdan Onac, Gheorghe Ponta, Roger Portell, Richard Walters, and Wookey. Your efforts are invaluable to the ongoing success of *CaKS*, and all of your contributions are deeply appreciated.

Readers will remember that, after several years of relative stagnation, the *CaKS Editorial Advisory Board* has recently been rationalized and revitalized. Depending upon the nature of the submissions that we receive, we hope that in the future we will be able to include members of the Board more regularly in the wider editorial process. Meanwhile, all Board members are thanked again for agreeing to remain in post.

As usual, we also thank Phil Wolstenholme, our Graphics Advisor and third member of the Editorial team, for continuing his essential and dedicated contribution, optimizing the journal covers and internal illustrations to obtain the best possible quality of print reproduction and on-line clarity. Your skills, efforts, patience and understanding really are greatly appreciated Phil.

Finally, we are delighted to close this Editorial with a 'stop-press' announcement. On 12 November 2025, the 43rd Session of the UNESCO General Conference, meeting in Samarkand, Uzbekistan, made an official proclamation concerning the establishment of an *International Day of Caves and Karst (IDCK)*, to be celebrated annually on 13 September!

The proposal, which was submitted by the Slovenian Government, was developed by, and involved substantial input from, the International Speleological Union under the leadership of its former President, Nadja Zupan Hajna. The BCRA and the BCA sent a joint letter of support for the proposal and, in view of the outcome, we can all look forward to celebrating the first *IDCK* in September 2026.