

Autumn studies

October saw two meetings that drew cavers to the Yorkshire Dales, with central themes of science and electronics. Gregory Collins and Phil Murphy report.



Radio, audio and lidar

THIS autumn's Cave Radio and Electronics Group field-trip to the Yorkshire Dales took place over the weekend of 28 to 29 October, when the attendance by a dozen cavers was well up on the previous Mendip gathering which clashed with the BCRA weekend to the Gower. A rather gloomy Saturday visiting Valley Entrance in Kingsdale led by Mike Bedford and Rob Gill provided an opportunity to try out a Micro-HeyPhone alongside a standard-sized version.

Experiments to determine the acoustic properties of Valley Entrance's Roof Tunnel were also carried out by Mike and Richard Rushton using a device that can best be described as an 'audio contraption' which emits sound on various frequencies. Rob and others later conducted WSPR (Weak Signal Propagation Reporter) tests, which involved an open-source computer



CREG Journal (watch for it at: www.bcra.org.uk).

The next CREG meeting will take place sometime in the spring of 2018, when we hope to visit the mines in Shropshire – an ideal central location for people who may be interested in coming along.

Gregory Collins

The science of caves

THE School of Earth and Environment at the University of Leeds hosted the annual BCRA Cave Science Symposium on Saturday 21 October, where researchers from all walks of life and branches of science had the opportunity to present their work. As with recent symposia, building links with other scientific organisations

has been an aim and this year's meeting was a combined one with two such groups: the Yorkshire Geological Society and the Leeds Geological Association.

The morning had a Yorkshire theme with talks on sedimentology and the palaeontology of Victoria Cave, along with climate records from stalagmites across the region. The session was rounded off with a keynote address given by Tony Waltham, summing up what he had learned and what we still have to learn (a lot!) following his epic work of editing both volumes of *Caves and Karst of the Yorkshire Dales*. This was delivered in Tony's signature style and all I can say is that if you missed it, you missed a treat.

The afternoon was a more varied

affair with studies ranging geographically from Derbyshire to Indonesia via Canada, Devon, Jamaica, Libya and Wales, and topics from archaeology to hydrology and microbiology via palaeoclimate studies. The Sunday saw two post-conference field-trips, one to the caves and karst of the Appletreewick area of Wharfedale and one to Giggleswick Scar. The high attendance included a number of overseas visitors and speakers, but it was also good to see a number of young cavers interested in the science side of our sport.

The annual symposia are a vital opportunity for the scattered cave science community to meet and exchange ideas. They would not happen were it not for the hard work behind the scenes by meeting organisers such as Gina Moseley, who undertook the majority of this year's work.

Next year's meeting will be held in Bristol on 13 October and will be followed by field-trips to the local caves and karst. You do not have to be a professional scientist to attend – everyone is welcome and the talks always appeal to anyone with even a passing interest in what studying caves can tell us.

Phil Murphy



Top down: Tony Waltham speaking at the Cave Science Symposium
Photo: Phil Murphy

Mike Bedford (left) and Richard Rushton in Valley Entrance with the HeyPhone and Micro-HeyPhone, Paul Mann lidar scanning using the GeoSLAM Zeb1 in Scoska Cave, and (above) the 'audio contraption' for testing acoustic properties underground. Photos: Gregory Collins



program designed for weak signal radio communication between amateur radio operators. Saturday ended with a good meal at the Crown, followed by a drink at the nearby Golden Lion in Horton-in-Ribblesdale before retiring for the night to the Bradford PC's hut at Brackenbottom.

Sunday was, weather-wise, a vast improvement when we made our way to Arncliffe in Littondale and hence walked up to Scoska Cave. Again Mike and Richard carried out audio tests in the roomy entrance passage before Paul Mann conducted a survey using a GeoSLAM Zeb1 hand-held lidar scanner to construct a 3D image of the initial parts of the passage, the results of which should appear in December's

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