# MERCIAN NEWS

## Fossil hunters supreme

Two EMGS members, Dave Martill and Dick Aldridge, are fast gaining international reputations as fossil hunters supreme. Both continue to fuel the considerable public interest in fossils with some exciting new discoveries over the past few months, all reported in the national press.

Dave Martill of Portsmouth University has hit the news twice recently with discoveries of the fossilised remains of giant, flying reptiles. The first was uncovered in a museum in Rio de Janeiro, and was aptly named *Arthurdactylus conan-doylei* after Sir Arthur Conan Doyle. Conan Doyle captured the imagination of readers worldwide with his famous novel *The Lost World*, which recounts the fictional discovery of living dinosaurs and pterodactyls by an expedition to a remote jungle plateau in South America. Although *Arthurdactylus conan-doylei* had a wingspan of about 6 metres, it is dwarfed in size by a more recent find in Jordan by Dave Martill and his colleague Eberhard Frey. After considerable detective work and months of searching through the archives of local museums and mine records offices in Amman, the neckbone of a long-lost specimen of a giant pterosaur was discovered, somewhat unexpectedly, at the city's university. The pterosaur, which has been named *Arambourgiana philadelphiae*, had a wingspan of about 12 metres, as large as that of a World War II Spitfire aircraft, though it probably weighed no more than an average-sized adult human. This makes it the largest flying reptile known to have existed, though still larger species may await discovery. The flying abilities of giant pterosaurs has long been the subject of considerable debate. It was once thought that such large creatures were capable only of soaring on rising air currents and, rather like hang-gliders, could take off only from the tops of cliffs. It is now more generally agreed that to survive as predators, the pterosaurs must have been much more accomplished flyers, though how such large creatures could generate sufficient ground speed or wing motion to take to the air is still poorly understood.

Last year, Dick Aldridge of Leicester University, ex-EMGS Council Member and former Editor of *Mercian Geologist*, discovered the remains of a soft-bodied marine organism, interpreted as the long sought-after 'conodont animal'. The fossil, found on a palaeontological field expedition to the Cedarberg Mountains, South Africa, was preserved in the late Ordovician Soom Shale. Like the well-known Burgess Shale of the Canadian Rockies, the Soom Shale is an organic-rich black shale notable for the unusual and exquisite preservation of soft-bodied, marine organisms. This year, on a second expedition to the Soom Shale with his co-workers Sarah Gabbott and Hannes Theron, Dick discovered the remains of a much larger, previously unrecorded soft-bodied organism over 40 centimetres long, provisionally named 'Sue'. Despite being about 450 million years old, Sue is a beautifully preserved specimen, though extremely fragile. To survive the air journey back to the UK, Sue was wrapped in Plaster of Paris and, although weighing over 50kg, was granted special dispensation to be flown as 'hand baggage'.

Sue is rather enigmatic from a taxonomic point of view, and will be the subject of intensive research over the coming months to determine her place in the evolutionary scheme of things. She appears to be most closely related to arthropods but also shows some features akin to both annelid worms and early chordates. Similar animals are preserved in the Canadian Burgess Shale but are thought to have died out about 550 million years ago, around the Precambrian/Cambrian boundary. Sue thus demonstrates that these supposedly primitive creatures continued to live alongside more highly evolved taxa until at least the end of the Ordovician period, which may have important repercussions on our understanding of the evolution of both invertebrate and vertebrate animals.

## Katrena Stanhope wins inaugural EMGS Award

The first winner of the EMGS Award Scheme, inaugurated in 1995, was Katrena Stanhope of Skegness Grammar School. The Scheme is designed to increase the awareness of geology among 18 year-old school leavers, and consists of a travel grant of £250 (and £50 for the school) to be awarded to the best submitted proposal for a field geological investigation from a pre-undergraduate student in the East Midlands region. Katrena produced a highly professional and well-illustrated report for the Society on the Geology of Anglesey, including the Precambrian Mona Complex, one of the most complex and poorly understood metamorphic terranes in the British Isles. Katrena went on to obtain three A grade 'A' levels, and is now studying geology at Royal Holloway and Bedford New College, University of London. A copy of Katrena's report is lodged with the Society. It can be viewed on written application to the EMGS Secretary (see address on inside cover of this issue), from whom application forms and further details of the EMGS Award Scheme are also available.

## Sandstone Caves of Nottingham

Tony Waltham's *Sandstone Caves of Nottingham* continues to be available from Judith Rigby, 233 Mansfield Road, Redhill, Nottingham NG5 8LS, Telephone 0115 926 7699. Dr Waltham is currently working on a revised edition, which the Society hopes to publish in early 1997.

## Late publication of Mercian Geologist

The Editorial Board apologises to members for the late publication of this issue of *Mercian Geologist*, which is due to unforeseen professional and personal commitments of members of the Board.