

**Pleistocene structures and environments at Redruth, Cornwall.** *H.C.L. James, University of Reading, Bulmershe Court, Earley, Reading RG6 1HY.*

A 200m east-west section cut into local "Killas" bedrock south of Redruth is described. A number of sedimentary units are identified in the 4m deep terraced section. Discussion of the sedimentological characteristics of the units reveal complexities of source and origin at this location. Preliminary results of analysis of pollen obtained from a silty clay unit are considered. Post-depositional structures and their environmental implications are examined. Finally, there is a brief consideration of the possible chronology of the site.

**The Somerset Environmental Records Centre.** *H.C. Prudden, 2 Yeovil Road, Montacute, Somerset.*

Conservation of both geological sites and data is important for all geologists. Three important developments are presented:

-Somerset Environmental Records Centre at Hestercombe House near Taunton now has record sheets of important sites throughout most of the County. The Centre is also compiling a list of geologists with research interests in the County.

-A start has been made in selecting Regionally Important Geological Sites (RIGS) in Somerset. This is an idea promoted by NCC to recognise sites which are locally important but do not qualify for SSSI status.

-The National Geosciences Data Centre have produced a 'temporary section recording form'. Hopefully, this will encourage the recording and dissemination of much information which is now lost or buried in private files.

**Interpretation of aerial views of the Taw-Torridge Estuary.** *D.J.C. Laming, Treehayes, Crabb Lane, Alphington, Exeter EX2 9JD.*

No abstract submitted.

**A synthesis of Sheets 355/356 including the Start Metamorphic Complex, South Devon.** *M. Cole, Hillcrest, 3 Springfield Drive, Kingsbridge, Devon TQ7 1HG.*

The Start Metamorphic Complex comprises a suite of mica, composite and green schists separated from the Lower Devonian, Meadfoot and Dartmouth Slates by a fault. The Variscan Orogeny responsible for the deeper level of burial and higher temperatures causing the schists to form, means that estimates of age and assessment of way up have been, so far, inconclusive. This presentation provides a photographic summary of the highlights.

**A stratigraphical revision of the Trevone Basin, north Cornwall and its structural implications.** *O. Smith, Department of Geology, University of Exeter, EX4 4QE.*

Geological mapping at 1:10,000 of the St. Minver Syncline for the Trevoze Head - Camelford Sheet (335 & 336) has clearly defined the structure as a shallow dipping, south facing, tight F1 fold. It trends WNW for 18km, with a wavelength >5km, complete with closure to the ESE. A continuous, conformable sequence of Middle to Upper Devonian basinal sedimentary rocks and associated volcanics can be traced from the northern margin, around the closure and along the southern margin. The cross-section of this structure is exposed along the Camel Estuary, from which Gauss and House (1972) described the northern and southern limbs in terms of two successions, Pentire and Trevone respectively. These may now be ascribed to one, the Trevone succession, with lateral lithological variations reflecting facies changes within the Trevone Basin. The Padstow Confrontation, where a change in F1 facing direction occurs across a tectonic boundary at Trebetherick on the southern limb, thus becomes intrabasinal in status.

## Abstracts of posters displayed at the Annual Conference, January 1990

**A new *Aulopora* from the Devonian of south-west England and its significance.** *C.T. Scrutton, Department of Geology, The University, Newcastle upon Tyne NE1 7RU (present address: Department of Geological Sciences, South Road, Durham DH1 3LE).*

A new species of the simple tabulate coral genus *Aulopora*, from the Chercombe Bridge Limestone (Eifelian) of the Lemon Valley near Newton Abbot, South Devon, is free living. Its presence was detected in serial sections and its three-dimensional form reconstructed by computer. Members of this genus not occurring as weathered out encrusting material are probably much more common than recorded but usually escape detection. Characteristic features are only more apparent in sections cut in the plane of bedding, whilst most working sections are cut perpendicular to bedding.

The protocorallite of this new species shows the development of a macrospine in the plane of bilateral symmetry. Such a structure has not previously been described in a tabulate coral, but suggests comparison with the first formed counter-cardinal septal plate of rugose corals. In addition, the serial sections yield new information on the mode of origin of new corallites in the aulopodid colony.

The pattern of offsetting compares closely with that seen in the genus *Eofletcheria* rather than with the mode typical of most tabulate corals. This supports an earlier deduction that *Aulopora* evolved from *Eofletcheria* in the Middle Ordovician, rather than the Russian view of *Aulopora* as ancestral to all tabulate corals (Scrutton 1984, 1990).

Scrutton, C.T. 1984. Origin and early evolution of tabulate corals. *Palaeontographica americana*, 54, 110-118.

Scrutton, C.T. 1990. Ontogeny and astogeny in *Aulopora* and its significance, illustrated by a new non-encrusting species from the Devonian of southwest England. *Lethaia*, 23, 61-75.

**A late Gedinnian - early Siegenian palynomorph assemblage from the Dartmouth Beds of north Cornwall.** *P.G. Davis, Department of Geology, University of Exeter, North Park Road, Exeter EX4 4QE.*

Using new scanning electron microscope (SEM) based palynological techniques (Dean 1989a, b) the age of the pteraspis fish-bearing strata of the Dartmouth Beds in Watergate Bay, near Newquay, north Cornwall were examined. The low grade metamorphic, fish-bearing slates yielded a palynomorph assemblage of an uppermost Gedinnian to lowermost Siegenian age. This stimulates the need to replace the poor biostratigraphy of the Dartmouth Beds (based at present on fragmentary, deformed pteraspis fish remains) with a high resolution biostratigraphy such as SEM based palynology.

Dean, A. 1989a. Palynomorphs from deformed low-grade metamorphic rocks: an S.E.M. based technique. *Journal of the Geological Society, London*, 146, 597-599.

Dean, A. 1989b. A new assemblage of palynomorphs from the low grade Upper Devonian metamorphic rocks of east Cornwall. *Proceedings of the Ussher Society*, 7, 180-182.