



Date: Tuesday 8 March 2016

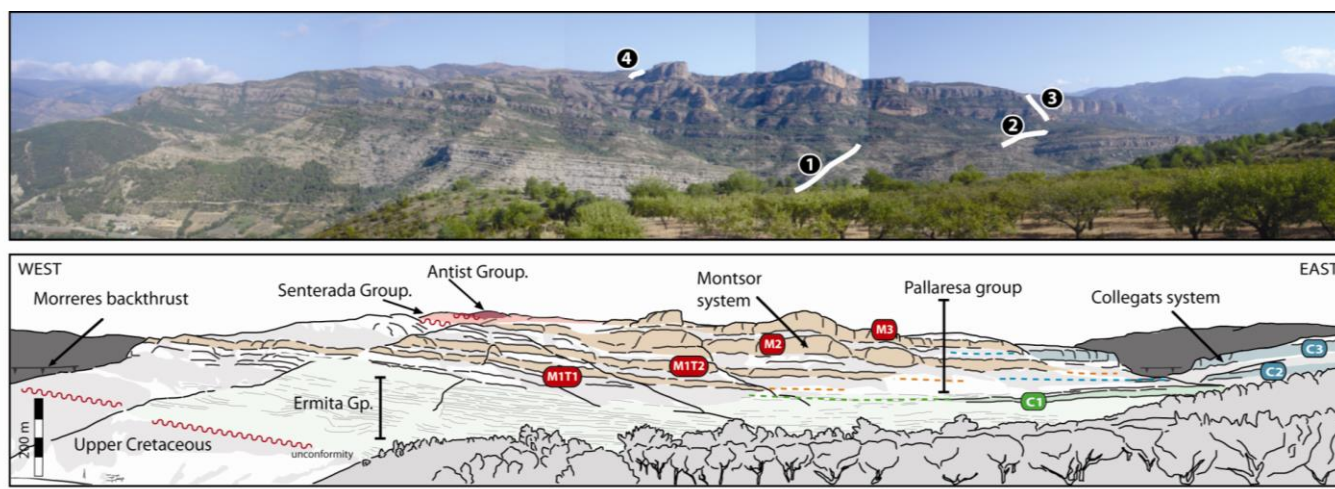
Location: The Bell Inn, Godstone,

18:00 for 18.30 start

How sensitive are sediment routing systems and stratigraphy to tectonics and climate?

By Dr Alex Whittaker

The sedimentary record is fundamentally controlled by sediment routing systems, which transfer sediment from upland source catchments to depositional sinks. Consequently, to decode the stratigraphic archive effectively, we need to understand the behaviour, response and sensitivity of the landscape to both tectonics and climate. This talk explores how far we have come in addressing this grand challenge. Alex will examine how geomorphic, sedimentological and numerical modelling techniques can be used to constrain how the earth surface processes are influenced by tectono-climatic boundary conditions, and how they govern the production of stratigraphy. Field examples from California and the Mediterranean explore the extent to which we can now quantitatively “invert” stratigraphy for tectonic or climatic forcing, but also highlight some of the problems that still remain.



Above: Eocene sediment routing systems in the Poble Bas, Spanish Pyrenees.

Dr Alex Whittaker firstly studied at Cambridge before completing a PhD at the University of Edinburgh. He then moved to Imperial College to complete his Post-Doc and start his career lecturing. He is currently Senior Lecturer in Tectonics in the Earth and Planets division of the Department of Earth Science and Engineering at Imperial College. His research addresses the interaction of active tectonics, particularly in rift settings, with erosion, sediment transport and deposition. Currently he is working on the dynamics of sediment routing systems both in small mountain catchments and also in larger-scale river systems. He is particularly interested in the tectonic, climatic and lithological controls on the timing, mode and size distribution of sediment delivered to fluvial networks, and the implications this has for depositional stratigraphy on a variety of spatial scales.

LOCATION: The Bell Inn, Godstone, Surrey, RH9 8DX.

Details of this and other events are provided on the SERG section of the Geology Society website: <http://www.geolsoc.org.uk/serg>

Please let us know if you plan to attend so that we have an idea for numbers for catering.

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