

U3A GEOLOGY REPORT Meeting on March 24th 2025

Bob Tuddenham

In March we returned to face-to-face meetings at the Witham with a very interesting meeting with talks by two experienced geologists.

In the first half, John Watkinson gave a talk about the 'Architecture of Mountain Belts and the Himalayas'. As a structural geologist, John has studied mountains all over the world. He first mentioned that early in his career he had been in Peru with the UN when a catastrophic earthquake took place. Their priority shifted from research geology, and they joined the rescue teams! John explained there are four ways of mountain building and three key measurements – the topography, the gravity and the analysis of earthquakes. The iconic Himalayas and the Tibetan Plateau have formed where the Indian plate collided with the Eurasian plate resulting in buckling and uplift of the crust. This explains the fossils and the extensive metamorphism in rocks high in the Himalayas and why Everest is still rising despite the massive weathering at over 8000m!

In the second half, Trevor Morse described three types of volcanoes. Non-violent volcanoes emit low viscosity, free flowing basaltic lava and examples are at hot spots such as on Iceland and Hawaii. In contrast, violent and cataclysmic volcanoes arise at subduction zones with continental plates where viscous felsic lava is formed. An example is the Eastern Mediterranean where, in simple terms, the African Plate is moving north and subducting beneath the Eurasian Plate. We then looked briefly at Vesuvius and then Santorini where there has been much earthquake activity recently.

Our next meeting will be at The Witham on Monday morning April 28th at 10 am. All are welcome to join us. Please contact the convenor for details.

OR

Our next meeting will be at The Witham on Monday morning May 19th at 10 am. All are welcome to join us. Please contact the convenor for details.