



DAY 3: RINGASKIDDY CORK & WATERFORD FIELD EXPEDITION SEPTEMBER 24 2012



Shoreline, south of Ringaskiddy.



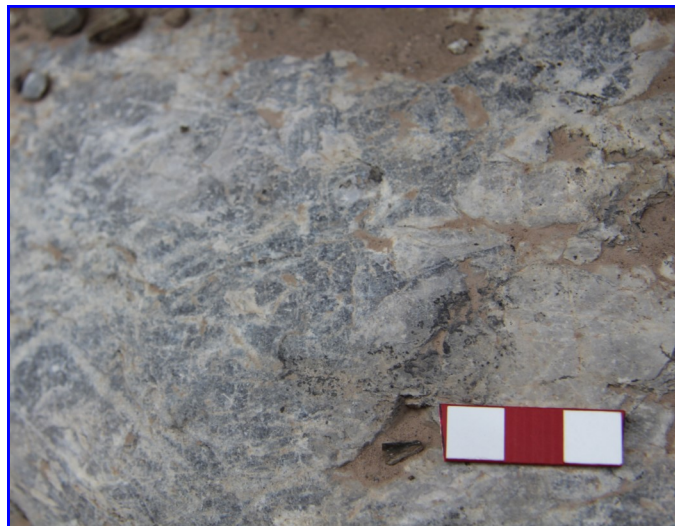
Ken (red jacket) talks about till.



Zach standing beside one of the larger clasts.

Following two [mostly] glorious, sunny days exploring the Copper Coast of County Waterford and Church Bay area of Cork Harbour, day three loomed with leaden skies and rain in the air. The weather forecast was far from cheery and we prepared for a wet day. A short drive from Cork City, we arrived at a small car park off the L2545 near the village of Ringaskiddy where we met up with our guide for the day, Professor Ken Higgs, and some members of the Cork Geological Association.

After a bit of transport shuffle Ken treated us to a very comprehensive brief of the geography and geology of the Cork area pointing out the local landmarks and in particular the town of Cobh (pronounced Cove) the port from where the Titanic set sail on its maiden and fateful voyage across the north Atlantic.





We learnt that the area consists of a sequence of synclines and anticlines running approximately East - West. The folding occurred during the Variscan Orogeny with Old Red Sandstone forming the hills and Carboniferous Limestone lining the intervening valleys. The City of Cork sits in a syncline on top of 200 metres of glacial gravel deposits. In the 1850's Professor JB Dukes did much work interpreting the rivers and drainage of the Cork area. The rivers running into Cork's natural harbour took advantage of a topography long lost to erosion and faulting in the area enabling them to run in a north - south, cutting perpendicularly across the series of synclines and anticlines.

Conversation turned to the Lower Cretaceous gas fields that Ireland has which are about to run out. The good news for the ailing Irish economy is that new reserves have recently been discovered off the NW coast and another field off the southern coast, near Cork.

The first outcrop the group looked at was the Ringaskiddy Quaternary till composed of a range of Old Red Sandstone and Limestone clasts that are locally derived and suspended in a soft bolder clay matrix.

The clasts ranged in size from small pebbles to ones the size of our minibus. Striations etched on the clasts were evident, the result of glacial action. We learnt that Cork was the meeting place of two ice sheets that ended their lives about 40 kya and that the till we were looking at was from the



Western ice sheet. The till from the North ice sheet has a totally different composition with granite clasts from the Wicklow mountains along with chalk and shell fragments.

Time was running out for us with the tide turning and threatening to cut off our planned route. We made our way across a difficult slime covered boulder ridden sea shore to a rock outcrop dipping in a Southerly direction. This outcrop comprised of Flaser (sandstone) and Linsen (mudstone) bedding from the Kinsale Formation (early Carboniferous) and was the result of shallow marine (sand) and deep marine (mud) deposits.

The topic of conversation moved onto Ken's speciality, Palynology – the study of fossil spores. Ken has done much research on these beds and we had a very interesting



input on microfossils, spores versus seeds, that the spores would have required a wet environment with the uplands being barren

with lots of run-off and erosion. The spores from ancient plants such as ferns and Lycopods are very resistant to destruction and can be present in both marine and fresh water sediments. Seeds were a later plant development, required less water and led to the uplands being colonized.

We continued our walk through the Geological succession with the deposits becoming more calcareous and eventually grading up to Limestone. This Mudstone / Limestone sequence is part of the Ballysteen Formation. Ken pointed out a thin band of fossiliferous mudstone that contains Brachiopods, Bivalves, Bryozoans and some rare Trilobites. We had an opportunity to exercise the geological hammer on this outcrop and were rewarded with locating some Bryozoans.

A short walk further South brought us to an outcrop of Waulsortium Limestone, a fine grained micrite with crinoids on the flank facies. We were also introduced to some stromatactis structures which are derived from collapsed gas bubbles from microbial gas.

Our Ringsaskiddy geological musings ended at a sandy beach along which we walked to meet up with our minibus. We returned to Cork for lunch and were then treated to a tour of the University College Cork (UCC) campus. UCC was formerly called Queens College, founded in 1845 following an Act allowing Queen Victoria to endow new colleges in Ireland. The site is thought to have a connection with the patron saint of Cork, Saint Finbarr and the University motto 'Where Finbarr Taught Let Munster Learn' continues to reflect this association. Geology remained a strong theme of this tour with Ken pointing out to us that the buildings contained a mix of the local Old Red Sandstone and limestone. The Glucksman Gallery contained some very fine crinoid fossils in the limestone floor and the student centre was an impressive mix of glass and limestone. Other buildings were entirely Old Red Sandstone and the mix of colours makes for a very impressive campus.

All too quickly time evaporated along with the threat of any rain. We bid farewell to Ken and to Cork vowing to return soon to explore more of Ireland's Geology.

**filed by
Doug Foster.**

