

A NEW TERTIARY BASIN IN NORTH DEVON — A PROGRESS REPORT

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Investigations around Orleigh Court, south of Bideford, have established that the Eocene flint gravels are overlain by a series of clays and silts of probable Late Palaeogene age. The sole outcrop known hitherto is diminutive, but present topography suggests that it is an erosional remnant of a much larger basin formed along part of the Sticklepath-Lustleigh Fault Zone. Mapping of the area around Orleigh Court suggests that the area of outcrop of the flint gravels has been significantly over-estimated in the past.

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INTRODUCTION

Orleigh Court in North Devon, to the south of Bideford, has long been known for the occurrence of flint gravels (Figure 1). The first detailed report on these was by Rogers and Simpson (1937) and various workers have subsequently examined these gravels (e.g. Edmonds *et al.*, 1979; Freshney *et al.*, 1979). Hancock (1969) examined the collection of fossils from the flints of Orleigh Court in the Barnstaple Museum and concluded that the latest fossils there were of Late Campanian age. He suggested that the gravels accumulated as the Chalk cover was stripped off Cornubia in the Palaeogene and suggested the gravels were comparable with those atop the Haldon Hills to the west of Exeter.

Cope (2004) suggested that the Orleigh Court gravels might instead have been derived from the north-west. These would have been produced by erosion of a domed area of Chalk in Barnstaple Bay that resulted from Eocene uplift of the Lundy area occasioned by the injection of a thick dolerite sheet in the upper crust (Brooks and Thompson, 1973) before intrusion of the Lundy granite.

The new idea on the derivation of the Orleigh Court gravels prompted the late Roland Goldring to contact me. He recalled that he had spent some time at Orleigh Court in 1950 when he and his brother were working on a university vacation project on the beach at Westward Ho! and during this time visited Barnstaple Museum where they met Inkerman Rogers, a retired local watchmaker and jeweller, who had collected fossils from the Orleigh Court Gravels and co-authored the paper with Simpson (Rogers and Simpson, 1937). He suggested to the Goldring brothers that they get hold of an auger and investigate the Orleigh Court area further. An auger was duly obtained and the brothers visited the abandoned and overgrown ruin that was Orleigh Court. Here the story becomes rather vague, as Roland was unable to recall where the auger holes were made, but did say that one was within sight of the front door of the house. He said he recalled finding some sand and a lilac-coloured clay, but unfortunately neither their field notes nor the samples had survived.

I immediately suggested that we should re-investigate the area, to which he keenly assented and said he would involve members of the Reading Geological Society. He set to work to contact the owner of the main house at Orleigh Court and together with David Ward of the Reading Geological Society

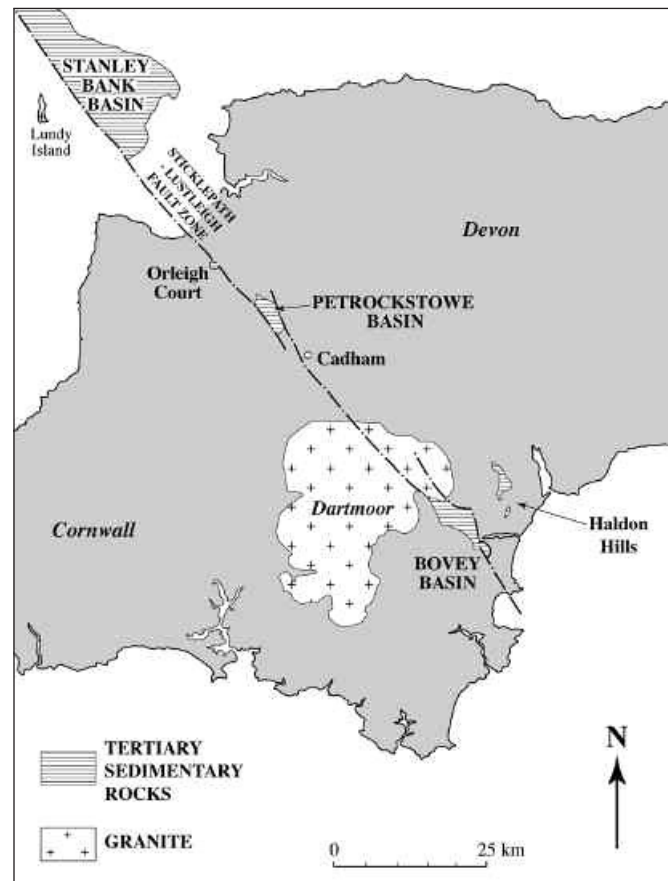


Figure 1. The distribution of Tertiary rocks in Devon (modified after Tappin *et al.*, 1994).

agreed some sites where we could auger in September 2005. Unfortunately Roland's untimely death in August 2005 put the project in jeopardy, but on contacting the Reading Geological Society I found they were keen to continue with the work.