

What lies beneath?

By Steve Sandham

What lies beneath Richmond Park's magnificent landscape was explored by more than 20 Friends of Richmond Park when they joined the Geodiversity Partnership, and other geologists, for a Geotrail walk during Earth Science Week last October. The 7km circular route started at Kingston Gate, passing by Pembroke Lodge, Pen Ponds and part of the Capital Ring. **This walk will be repeated on 20 May 2017.**



Towards Pen Ponds by Anne Ross

The area is interesting geologically as several different rock types occur here. It is for this reason that it has been put forward as a Locally Important Geological Site.

London Clay, thought to be about 51 million years old, underlies Richmond Park. This includes the sandier layers at the top, known as the Claygate beds. They were laid down at a time when the temperature was significantly higher than the present, and the London Clay environment has been compared with Malaysia today: hot and wet but with some seasonality. During this time the African continent collided with Europe and the Alps were pushed up. Even as far as southern England the effects of this were felt with the Weald of Kent and Sussex pushed up into an anticline and the London Basin down-folded into a syncline.

Other types of rocks are comparative newcomers to Richmond Park and were carried here about 400,000 years ago by

the melting of the Anglian Ice Sheet which reached as far as Finchley in North London. As the ice melted, it released pebbles and rock fragments into the engorged River Thames and deposited them over a wide flood plain, including the area which is now Richmond Park.

Rocks from the Anglian Ice Sheet include Black Park gravel which caps the high grounds near Kingston Gate and Pembroke Lodge. This type of gravel underlies all of the high plateau areas in this part of London and is composed predominantly of flint pebbles. Other pebbles from the Anglian ice sheet have come from much further away: Triassic 'Bunter' sandstone pebbles have been found that have been brought here from the Midlands. The rounded nature of some of the Black Park Gravel and Bunter pebbles indicates a long period of erosion by flowing water.

For a much more detailed report on the geology of the Park see www.bit.ly/Geotrails