Case Study: Stockgrove Country Park

RIGS leaflet ***Stockgrove Country Park: Ice Age Landforms***

Introduction

Stockgrove Country Park lies in Heath & Reach, on the western tip of the Greensand Ridge. It is open to the public, providing a glimpse into Bedfordshire's geology as well as a valuable conservation area. The park covers an area of approximately 80 acres and includes a variety of habitats including broadleaved woodland, a lake and marshes, grassland, heathland and conifer plantations.

These habitats are linked to the underlying rocks and landscape which have been created over many millions of years by a series of geological events. More recently some have been affected by human activities.

Geological History

About 100 million years ago Stockgrove was an estuary at the edge of a warm shallow sea. Rivers running south from what is now Yorkshire deposited sediments (sand grains, eroded bits of rock and occasional fragments of wood from forests of cycads) in this estuary. The layers of sediment were later buried under clay and chalk as sea levels rose and fell. Eventually wind, water and ice removed these more recent sediments, exposing the Greensand for us to see. Some of the sands are cemented by iron and silica to form *sandstone*; although there are no natural exposures of sandstone here, there is a sundial made of sandstone from a local quarry.

In addition to exposing the Greensand, the glaciers left more concrete evidence of their presence. As the ice moved across the landscape it scraped and pulverised the underlying rocks. The resulting mix of ground rock, known as *till*, was left behind when the ice melted. Much of Bedfordshire is covered by till, including some hilltops in Stockgrove. It is recognisable as an unsorted mass of pebbles, sands and clays. Stockgrove also includes a *dry valley*, a landform characteristic of the environment near a glacier. The processes that created the valley exposed the Jurassic clay under the Cretaceous Greensand, giving rise to springs and marshes.

Stockgrove Country Park today

At Stockgrove the vegetation clearly indicates the rocks from which the soil was derived. For example, gorse and heather grow in sandy, free-draining areas, while nettles prefer places where the soil is moist and rich in nutrients (particularly phosphate).

Modern Stockgrove is carefully managed to balance the needs of people, wildlife – and the preservation of our geological history.

Fieldwork and further study ideas

- Local geology and the ice age
- Properties of local rocks and soils
- Investigate local habitats linking to soil type
- Visitor pressure and management

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