



Alpine Structures of Southern England (ALP-STR-SE)

Block Description

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Introduction

In late Mesozoic times (c. 230–65 million years ago, Ma), that part of the Earth's crust destined to become 'Europe' was affected by compressional forces from the south. The Tethys Ocean which had separated 'Europe' from 'Africa' through much of Mesozoic time began to narrow as its ocean crust was subducted, and this ocean is now represented by mere remnants of oceanic crust in the eastern Mediterranean area. The Alpine Orogeny is the result of the convergence and collision of 'Africa' with 'Europe', closing the western part of the Tethys Ocean during the Tertiary Sub-Era (c. 65 to 2 Ma). For further details of the palaeogeography, **see Palaeogene (PGN) and Tertiary Igneous (TER-IGN).**

The most obvious features of this episode of Earth history are the European Alps, the result of uplift and compression. In the UK, the effects of the Alpine Orogeny are less obvious than those of the Variscan, the major Alpine collision zone being some 1000 km south of Dorset. However, the knock-on effects of the Alpine Orogeny have formed large structures gently deforming the Mesozoic rocks of the south coast of England, such as the monocline affecting the Isle of Wight and southern Dorset.

Alpine effects in Britain were probably magnified as a result of the opening of the Atlantic Ocean in early Tertiary times. **See Tertiary Igneous (TER-IGN).**