



## **The Quaternary of the British Isles: factors forcing environmental change**

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This paper considers the processes that have controlled cool temperate latitude terrestrial environments over the last c. 3 million years, with particular reference to the British Isles. A scheme is proposed that is based on the processes that act on the land over any given period of time and are the product of climate modulated by rock type (the resisting agent) and relief (determined by tectonics and antecedent relief-forming factors). Climate is generalized in terms of the range and rates of climate change determined by orbital forcing. During precession cycles climate change was small and insolation levels were forced by chemically- and biologically-driven processes. The period of obliquity cycles is characterised by patterns of climate change in which physical processes became effective and high magnitude fluvial and slope processes were re-enforced by periglaciation and glaciation in susceptible regions. Eccentricity cycles include climate extremes of longer duration, and glaciation and periglaciation were the major contributors to landscape change, sediment transfer and sediment mixing. These climate-forced processes produce distinctive landform, sediment and soil assemblages characteristic of particular episodes of Quaternary time. The lags between the successive systems are identified.