

Chapter 5 Hampshire Basin: Isle of Wight localities

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Introduction

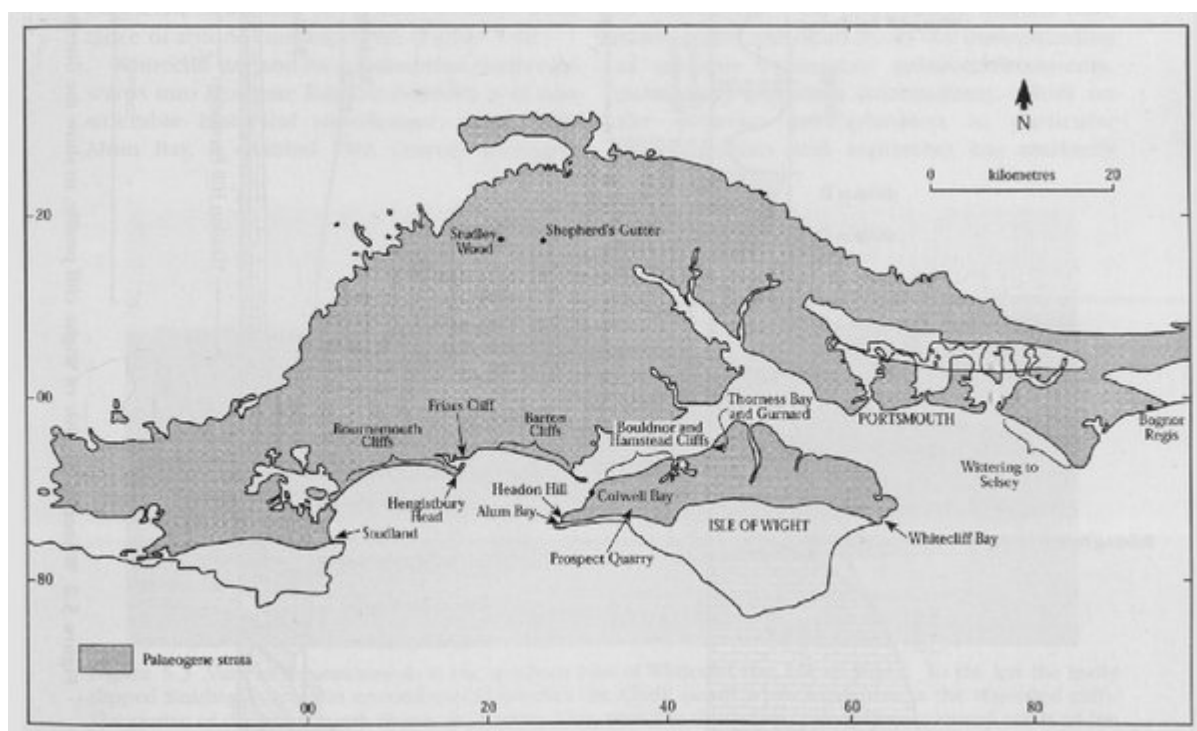
There can be little doubt that the Palaeogene localities of the Isle of Wight (Figure 5.1) are the most spectacular and, from a variety of standpoints, the most scientifically revealing of present-day Palaeogene sites in Britain. Their stratigraphical range is greater than those on the mainland and represent strata from Palaeocene to Oligocene age. Indeed, it is only on the Isle of Wight that marine Oligocene strata are preserved in Britain.

Of the sites recognized, Whitecliff Bay and Alum Bay, with its extension in Headon Hill, are the most impressive. They represent the two most stratigraphically extensive 'continuous' sections in north-western Europe. Together, the sites have a varied and extensive fossil fauna and flora and sedimentary facies, and their contribution to biostratigraphy, lithostratigraphy and, in some cases, magnetostratigraphy is considerable. Furthermore, their study has contributed significantly to our understanding of Palaeogene environments, and in the case of the younger strata, have provided the only evidence we have for conditions in the southern British area during the latest part of the Eocene and the early Oligocene.

The lithostratigraphical terminology used is essentially that of Edwards and Freshney (1987b) for the lower part of the succession and that of Insole and Daley (1985) for the upper part. Because of the difficulty locally of formally applying and justifying the lithostratigraphical terminology recently introduced by Ellison *et al.* (1994) for early Palaeogene strata in the London Basin and East Anglia, this has only been adopted for the Palaeogene of the Isle of Wight and other parts of the Hampshire Basin at 'group' level.

Seven Palaeogene sites are recognized to be of stratigraphical importance on the Isle of Wight (see (Figure 5.1)) and it is significant that their scientific value is reiterated by their inclusion in other GCR volumes on fossil plants (*Mesozoic to Tertiary Palaeobotany* (Cleal and Thomas, in prep.)) and/or those on different vertebrate fossils (Benton and Spencer, 1995; Benton *et al.*, in prep.; Dineley and Metcalf, 1999).

References



(Figure 5.1) Map to show the location of Palaeogene stratigraphy GCR sites in the Hampshire Basin.