

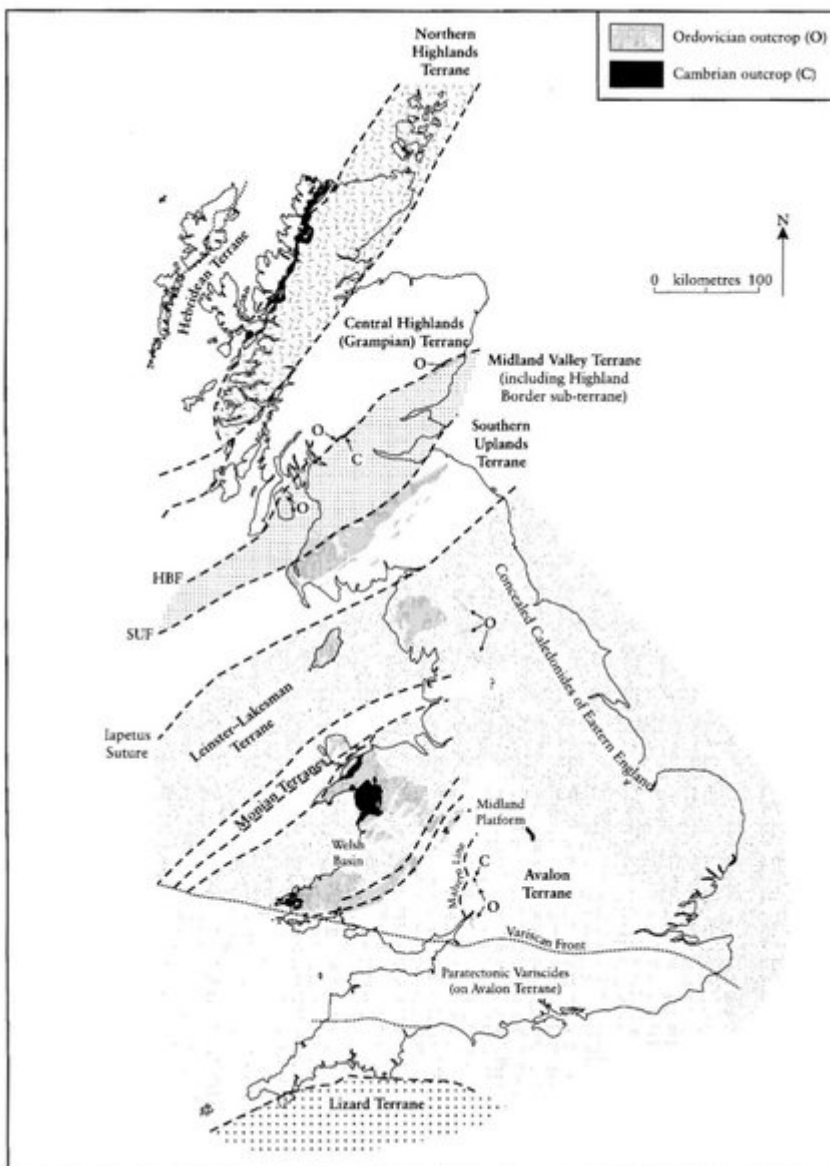
Chapter 13 Scotland: Cambrian and Ordovician of the Grampian Terrane and Highland Border Sub-terrane

A. W. A. Rushton and A. W. Owen

Introduction

Two sites of palaeontological importance fall on the boundary of the Grampian Terrane and the Highland Border Sub-terrane (Figure 1.1), (Figure 12.1) and (Figure 12.2); they are crucial to the arguments on the geological relationships between the Dalradian Supergroup of the Central Highlands Terrane and the Midland Valley Terrane. A wide variety of rock types of the Highland Border Complex is preserved as a series of narrow slivers along the Highland Border fault zone from Stonehaven in the north-east to Arran in the south-west, and thence into the north-west of Ireland (Bluck *et al.*, 1984, 1992; Curry *et al.*, 1984). Leny Quarry is the source of the only satisfactory Cambrian faunas along the Highland Boundary Fault complex, but it is still debated whether it is on the edge of the Grampian Terrane and forms an upper part of the Dalradian Supergroup or is part of the Highland Border Sub-terrane (or a separate suspect terrane). Limestone from Lime Craig Quarry contains a fauna of Cassinian age (equivalent to mid-Arenig) that is the best-dated fauna from the Highland Border Sub-terrane.

References



(Figure 1.1) Distribution of Cambrian and Ordovician rocks in the principal terranes in Great Britain, after Bluck et al. (1992). HBF, Highland Boundary Fault; SUF, Southern Upland Fault.



(Figure 12.1) Distribution of Cambrian and Ordovician rocks in Scotland, showing the general location of key sites.

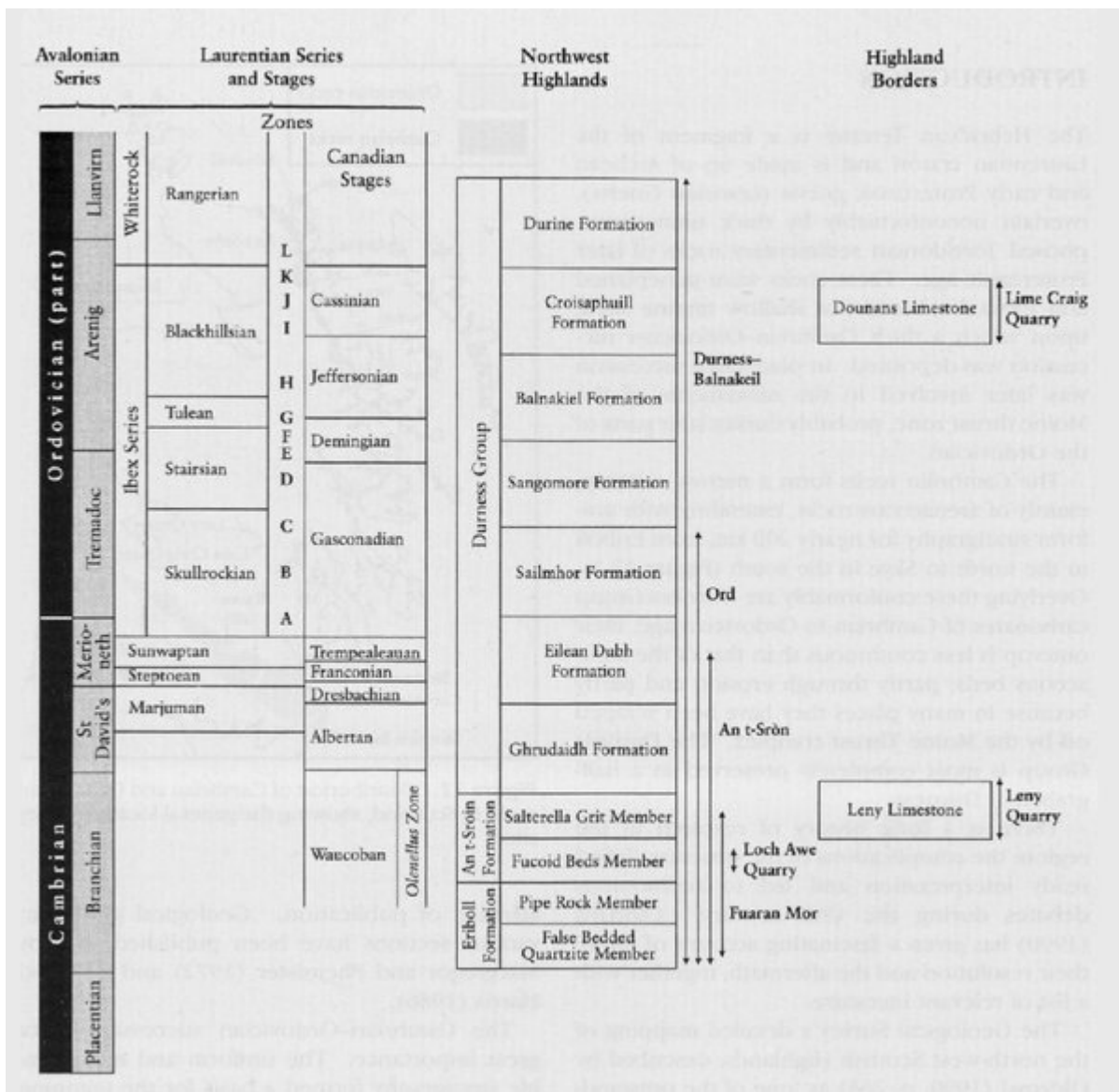


Figure 12.2 Stratigraphical succession in the north-west Highlands of Scotland, correlated with Laurentian (North American) chronostratigraphy; the scheme for the Ibex and Whiterock follows Ross et al (1997), the older stages of the Canadian Series being retained for reference to the succession of cephalopod faunas. The Avalonian standard is also shown for comparison. The Leny and Dounans limestones occur along the Highland Boundary fault complex, and their stratigraphical settings are discussed in the text.