



Portrait of Henry Thomas De la Beche (1796-1855), who named and described the white limestone formation of Jamaica in 1827, photographed in 1819 (age 23) or possibly slightly earlier (perhaps 1815). Photograph courtesy of The National Museum of Wales, Cardiff.

## Editor's preface

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'... the *white limestone formation*, which occupies such a considerable portion of Jamaica, would seem, if we only take into consideration the character of its fossil organic remains, in some measure referrible [to the Tertiary]. Still however I have many doubts upon the subject; and therefore, while I class it for the present under the above head, I wish it to be understood as merely a temporary arrangement' (De la Beche, 1827, p. 169).

Henry De la Beche would be surprised to discover that his 'temporary arrangement' has proved to be remarkably persistent and the white limestone formation (now White Limestone Group) is the oldest name of a lithostratigraphic unit in common use in Jamaica. The White Limestone Group is today correlated with the Middle Eocene to Middle/Upper Miocene on multiple biostratigraphic criteria. De la Beche's desire to make lithostratigraphic correlations between Jamaica and western Europe, particularly the British Isles, would have had him compare his White Limestone Formation with the Zechstein or Jurassic limestones of Europe. He was saved from this error by some notable 'fossil organic remains', the giant gastropod *Campanile*, which occurs in the approximately coeval rocks of the London Clay, Paris Basin and the Eocene limestones of Jamaica. This represents probably the first example, albeit grudgingly performed, of intercontinental biostratigraphic correlation.

Jamaica has one of the best known fossil records in the Antilles. Although the White Limestone Group has been largely ignored by macropalaeontologists, there is no more pervasive unit in Jamaican geology. The White Limestone Group outcrops cover more than half of Jamaica's surface (Robinson, 1994). As originally defined by De la Beche, the White Limestone Formation included all the 'Tertiary' limestones of Jamaica, but the name is now restricted to the pure Mid-Cainozoic carbonates. These limestones overlie the less pure, Eocene Yellow Limestone Group, which probably yielded De la Beche's specimens of *Campanile*. The total thickness of the carbonate platform deposits of these groups is an estimated 2.75 km.

Fortey (2000, p. 189) has recently explained the

problems of collecting from lithologically similar carbonates to the White Limestone Group, noting that, 'Collecting fossils from great cliffs of former tropical limestones can be a dispiriting experience, as your hammer bounces helplessly off the intransigent surfaces. .... You curse the fact that the limestone and [fossils] are made of the same material, calcite, as you try to lever out a block with your precious specimen somewhere in the middle.' Anyone who has collected in the White Limestone Group recognises this problem. However, perseverance by collectors in Jamaica is now beginning to reveal the fossil record of these limestones. This thematic volume, *The Mid-Cainozoic White Limestone Group of Jamaica*, outlines its sedimentology, geomorphology and aspects of the geochemistry, as well most of the principal groups of fossils, including foraminifera, sponges, scleractinian corals, brachiopods, nautiloids, crustaceans, echinoderms, fishes and trace fossils, written by an international team of invited contributing authors. It provides the monographic treatment that this unit has long required.

The only major group of macrofossils found in the White Limestone Group, but omitted from this volume, are the benthic molluscs. A short note on the benthic molluscs of the White Limestone Group in a difficult-to-find publication by Jung (1972) remains the only review of this aspect of Jamaican geology. Jung's paper provides summary tables of the distribution of all mollusc-bearing formations, but the gastropods, bivalves and scaphopods are deserving of an extended monographic study. The apparent indifference shown by malacologists to this group of formations, which strongly contrasts with the attention lavished on older and younger molluscan faunas of Jamaica, is undoubtedly influenced by the difficulty of collecting and the commonly mouldic preservation of many taxa.

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