ABSTRACT. Recent observations in the Vestfirðir area of Iceland have revealed a wealth of raised marine features from ca 70 m a.s.l. to 1m a.s.l. that may reveal a different isostatic uplift pattern from that of the rest of Iceland. At 8.5 m a.s.l. at Hvitahöf, microplankton-rich marine silts are capped by a peat layer with a radiocarbon age of 6,910 B.P. At Smáhámrar nearby, a suite of raised beaches between ca 70m a.s.l. and present sea level are older than 8,875 B.P. It appears that sea-level dropped rapidly from 70m to 1m some time before ca 10,000 B.P. However, a rise of sea-level to 8.5m occurred at about 9,000 B.P., and peat began to accumulate on beaches at about 8,800 B.P. The ensuing regression was temporarily halted at 6,900 B.P. by a high energy marine event, possibly caused by waves from the 7,000 B.P. Storegga landslide, which deposited a beach ridge full of marine taxa on top of freshwater peats at ca 6m a.s.l. As new regional deglaciation chronologies emerge for Iceland, there is a need to re-evaluate the relative sea-level histories of these regions.

1. INTRODUCTION

Interpretations of the patterns and rates of ice-recession and sea-level change in Iceland have traditionally been based on what might be called a Vatnajökull-centric view. These
interpretations have assumed a process of isostatic adjustment during Late Weichselian and early Holocene times controlled largely by wastage of the Vatnajökull ice sheet, and resulting in a sequence of raised shorelines inferred to tilt more-or-less uniformly to the north and west (Einarsson and Albertsson, 1988). Such interpretations make little allowance for the effects of secondary ice caps in the northwest of the country in spite of suggestions that, during the Weichselian, Vestfjörður very probably supported an independent ice cap (Einarsson, 1968, 1978; John, 1977; Sigurvinsson, 1983). The most recent synthesis (Fig.1) is that of Einarsson and Albertsson (1988) and shows ice recession from its maximum extent at ca 18,000 B.P. to leave Vestfjörður essentially ice-free by the Álfanes stage at ca 12,000 B.P. with no readvance during the Búði stage (11-10,000 B.P., but recently suggested by Hjartarson and Ingólfssoon (1988) to be Preboreal ca 9,500 B.P.).

These interpretations seem to contradict the evidence from the Vestfjörður peninsula itself. Apart from the existence, even today, of the remnant Drangajökull ice-cap (Fig. 1), there is an abundance of well-defined valley moraines indicating previously far more