

**Post-glacial sea level change in Newfoundland as deduced
from the distribution of radiocarbon dated marine shells**

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Previous reconstructions of post-glacial sea level change in Newfoundland have mostly relied on a careful examination of data from a single site. Recent compilations of radiocarbon dates has allowed regional patterns of sea-level change to be deduced. A coast that has shown consistently falling sea-level since deglaciation (a type-A sea level curve) should allow collection of marine shells from above current sea level, showing a range of ages up to the present. A coastline that had sea level initially higher than present but subsequently falling below present (a type-B sea level curve) will provide shell dates ranging from deglaciation to the point at which sea-levels fell below present. One hundred ten radiocarbon dates on marine shells found above current sea levels are available for the island of Newfoundland. The chronological distribution of these dates shows a strong bias towards older ages, with dates <7000 B.P. found only at the northern

extreme of the island. The dates show a strong trend with latitude, with the range of dates progressively increasing towards the north. These distributions are best explained by most of the island having a type-B sea-level curve, with the age of transition to sea levels below present increasing to the south. The tip of the Northern Peninsula may show a type-A or modified type-B curve. Examination of geomorphological evidence of raised sea levels corroborates these results. The data allows a prediction of the time of emergence-submergence transition over the island, and these results compare well with those from well-defined sea level curves from specific sites. These patterns suggest that most of Newfoundland is experiencing rising sea-levels at present, making low elevation coastal sites particularly susceptible to any rise in global sea-levels.