



Figure 2

Figure 2: Moraines overlain by mussel reefs

Figure 3: Flow transverse sediment bedforms on moiraine

Figure 4: Dumlins with long axes oriented west-east to west-southwest-east-northeast

INTRODUCTION

The Bay of Fundy, located on the east coast of Canada between the provinces of New Brunswick and Nova Scotia, is a macrotidal estuarine environment (Ames et al., 1980) with the highest recorded tides in the world of 17 m (O'Reilly et al., 2006; Bishop, 2006).

DESCRIPTIVE NOTES

Multi-beam sonar water depth data were collected by the Canadian Hydrographic Service, the Geological Survey of Canada, and the University of New Brunswick. The survey systems used a ship beam sonar with a swath of about 130° across the ship's track and operated in either a narrow aspect of beam sonar or a wide aspect of beam sonar.

BATHYMETRIC DATA DISPLAY

The multi-beam sonar bathymetric data are presented at 5 m per pixel horizontal resolution. The shaded-relief image is presented with a vertical exaggeration of the bathymetry of 10 times and an artificial illumination of the relief by a virtual light source positioned 45° above the horizon at an azimuth of 315°.

BAY OF FUNDY GEOMORPHOLOGY

The Bay of Fundy is a north-south trending, funnel-shaped bay, 155 km long that is 70 km wide at its entrance and tapers to 48 km wide at its northern end where it bifurcates into Chignecto Bay and Minas Channel (Fig. 1). The floor of the bay is relatively flat, with a bathymetric profile that is generally flat from north to south.

Geological history

Geomorphological features revealed through mapping of the Bay of Fundy seafloor reflect the geological history of the region. The Bay of Fundy is situated in the Carboniferous to Mesozoic tectonic zone (Gardiner, 1984; Goff, 1984; and Goff and Goff, 1984) and is underlain by Precambrian to Mesozoic igneous, sedimentary, and metamorphic rocks.

Geomorphology of the Bay of Fundy

A series of dated maps at a scale of 1:25 000 (Fig. 2-4) highlights Bay of Fundy geomorphological features. The maps show the bathymetry of the central Bay of Fundy, including North Mountain, North Strait, and the southern portion of the bay.

References

Ames, C.L., and Zaitlin, B.A., 1985. The effect of changes in tidal range on a subtidal macrotidal system, Bay of Fundy, Canada. Geomorphology, v. 1, p. 101-118.

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REFERENCES

Ames, C.L., and Zaitlin, B.A., 1985. The effect of changes in tidal range on a subtidal macrotidal system, Bay of Fundy, Canada. Geomorphology, v. 1, p. 101-118.

MAP 2182A SHADED SEAFLOOR RELIEF BAY OF FUNDY, SHEET 9 OFFSHORE NOVA SCOTIA-NEW BRUNSWICK Scale 1:50 000/Echelle 1/50 000. Includes author names (B.J. Todd, J. Shaw, and D.R. Parrot), map scale, projection information, and a grid of sheet numbers.

