

Scotia, and wave and water level data from the Marine Environmental Data Service of the Department of Fisheries and Oceans, Ottawa, were also used. Earlier reviews of the coastal characteristics, of part or all of the region, were published by Johnson (1925), Weisted (1974), Owens (1977), Owens and Bowen (1977), Munroe (1982), Taylor et al. (1985), and Cameron et al. (1990).

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REFERENCES

- Amos, C. L. and Long, B. F. N.**
1980: The sedimentary character of the Minas Basin, Bay of Fundy; in *The Coastline of Canada*, (ed.) S. B. McCann; Geological Survey of Canada, Paper 80-10, p. 123-180.
- Amos, C. L. and Nadeau, O. C.**
1988: Surficial sediments of the outer banks, Scotian Shelf, Canada; Canadian Journal of Earth Sciences, v. 25, p. 1923-1944.
- Amos, C. L. and Zaitlin, B.**
1985: The effect of changes in tidal range on a sublitoral macrotidal sequence, Bay of Fundy, Canada; Geomarine Letters, v. 4, p. 161-169.
- Boyd, R., Bowen, A. J., and Hall, R. K.**
1987: An evolutionary model for transgressive sedimentation on the Eastern Shore of Nova Scotia; in *Glaciated Coasts*, (ed.) D. M. FitzGerald and P. S. Rosen; Academic Press, San Diego, p. 87-114.
- Cameron, G. D. M., Taylor, R. B., Forbes, D. L., and Best, M. (comp.)**
1990: Coastal geomorphology of Eastern Canada; in *The Continental Margin of Eastern Canada*, (ed.) M. J. Keen and G. L. Williams; Geological Survey of Canada, Geology of Canada, no. 2, Fig. 4, scale 1:2 000 000 (also Geological Society of America, The Geology of North America, v. I-1).
- Canadian Tide and Current Tables**
1989a: Volume 1: Atlantic Coast and Bay of Fundy; Department of Fisheries and Oceans, Ottawa, Canada, 53 p.
1989b: Volume 2: Gulf of St. Lawrence; Department of Fisheries and Oceans, Ottawa, Canada, 41 p.
- Carter, R. W. G., Forbes, D. L., Jennings, S. C., Orford, J. D., Shaw, J., and Taylor, R. B.**
1989: Barrier and lagoon coast evolution under differing relative sea-level regimes: examples from Ireland and Nova Scotia; Marine Geology, v. 88, p. 221-242.
- Fader, G. B., Cameron, G. D. M., and Best, M. A. (comp.)**
1989: Geology of the continental margin of Eastern Canada; Geological Survey of Canada, Map 1705A, scale 1:5 000 000.
- Farquharson, W. I.**
1965: Tidal heights in Bay of Fundy; Bedford Institute of Oceanography, Report 65-7, Dartmouth, Nova Scotia, 7 p.
- Forbes, D. L. and Boyd, R.**
1989: Submersible observations of surficial sediments and seafloor morphology on the inner Scotian Shelf; in *Submersible Observations Off the East Coast of Canada*, (ed.) D. J. W. Piper; Geological Survey of Canada, Paper 88-20, p. 71-81.
- Forbes, D. L., Boyd, R., Shaw, J., Johnston, L., Heffler, D. E., and McLaren, S.**
1988: CSS Dawson operations on inner Scotian Shelf and Sable Island Bank (Cruise Report 87042); Geological Survey of Canada, Open File 2063, p. 51.
- Forbes, D. L. and Taylor, R. B.**
1987: Coarse-grained beach sedimentation under paraglacial conditions, Canadian Atlantic coast; in *Glaciated Coasts*, (ed.) D. M. FitzGerald and P. S. Rosen; Academic Press, San Diego, p. 51-86.
- Forbes, D. L., Taylor, R. B., and Shaw, J.**
1989: Shorelines and rising sea levels in eastern Canada; Episodes, v. 12, p. 23-28.

Grant, D. R.

- 1980: Quaternary sea-level change in Atlantic Canada as an indicator of crustal delevelling; in *Earth Rheology, Isostasy and Eustasy*, (ed.) N.-A. Möller; John Wiley and Sons, Chichester, p. 201-214.
- Hillaire-Marcel, C.**
1987: Composition isotopique du carbone organique des carottes du forage 85-036-016 dans le lac Bras d'Or, île du Cap-Breton, Nouvelle-Écosse; Geological Survey of Canada, Paper 87-1A, p. 859-864.

Johnson, D. W.

- 1925: *The New England - Acadian Shoreline*; John Wiley and Sons, New York, 608 p.

MacKinnon, K. and Scott, D. B.

- 1984: An evaluation of salt marshes in Atlantic Canada; Technical Report 1, Centre for Marine Geology, Dalhousie University, Halifax, Nova Scotia, 37 p.

Marine Environmental Data Service

- 1989: Canadian marine data inventory report-historical wave measuring stations; Department of Fisheries and Oceans, Ottawa, Canada, 11 p.

Markham, W. E.

- 1980: *Ice Atlas Eastern Canadian Seaboard*; Atmospheric Environment Service, Environment Canada, Toronto, 96 p.

McLaren, S. A.

- 1988: Quaternary seismic stratigraphy and sedimentation of the Sable Island sand body, Sable Island Bank, outer Scotian Shelf; Technical Report 11, Centre for Marine Geology, Dalhousie University, Halifax, Nova Scotia, 95 p.

Munroe, H. D.

- 1982: Regional variability, physical shoreline types and morphodynamic units of the Atlantic coast of mainland Nova Scotia, (ed.) R. B. Taylor, D. J. W. Piper, and C. F. M. Lewis; Geological Survey of Canada, Open File 725, 26 p.

Neu, H.

- 1982: 11-year deep water wave climate of Canadian Atlantic waters; Canadian Technical Report, Hydrography and Ocean Sciences, v. 13, 41 p.

Owens, E. H.

- 1977: Coastal environments of Canada: the impact and cleanup of oil spills; Economic and Technical Review Report EPS-3-EC-7-13, Fisheries and Environment Canada, Environmental Protection Service, Ottawa, 413 p.

Owens, E. H. and Bowen, A. J.

- 1977: Coastal environments of the Maritime Provinces; Maritime Sediments, v. 13, p. 1-31.

Pecore, S. and Fader, G. B. J.

- 1990: Surficial geology, pockmarks and associated neotectonic features of Passamaquoddy Bay, New Brunswick, Canada; Geological Survey of Canada, Open File 2213, 45 p.

Piper, D. J. W., Mudie, P. J., Letson, J. R. J., Barnes, N. E., and Iulucci, R. J.

- 1986: The marine geology of the inner Scotian Shelf off the South Shore, Nova Scotia; Geological Survey of Canada, Paper 85-19, 65 p.

Quinlan, G. and Beaumont, C.

- 1981: A comparison of observed and theoretical postglacial relative sea level in Atlantic Canada; Canadian Journal of Earth Sciences, v. 18, p. 1146-1163.

Scott, D. B., Boyd, R., Douma, M., Medioli, F. S., Yull, S., Leavitt, E., and Lewis, C. F. M.

- 1989: Holocene relative sea-level changes and Quaternary glacial events on a continental shelf edge: Sable Island Bank; in *Late Quaternary Sea Level Correlation and Applications*, (ed.) D. B. Scott, P. A. Pirazzoli, and C. A. Honig, Kluwer Academic Publishers, Dordrecht, The Netherlands, p. 105-120.

Taylor, R. B.

- 1988: Beach mobility and nearshore characteristics; in *Terrain Management Activities on Sable Island, 1982 to 1985*, (ed.) R. B. Taylor; Geological Survey of Canada, Open File 1973, p. 96-125.

Taylor, R. B., Wittmann, S. L., Milne, M. J., and Kober, S. M.

- 1985: Beach morphology and coastal changes at selected sites, mainland Nova Scotia; Geological Survey of Canada, Paper 85-12, 95 p.

Weisted, J. E.

- 1974: Morphological maps of the Fundy coast; Maritime Sediments, v. 10, p. 46-51.

de moins de deux mètres. Dans la section supérieure de la baie de Fundy, la glace de mer peut subsister pendant plus de trois mois par année. La glace joue un rôle indirect sur la modification de la côte en réduisant l'attaque des vagues sur le rivage. Elle modifie directement la morphologie de l'estran en se déplaçant et en incorporant des sédiments durant le gel. Le long de la côte atlantique externe, il se forme de la glace dans les estuaires peu profonds mais la glace ne devient un important facteur d'amortissement des vagues que lorsque de grandes concentrations de glace flottante migrent à l'extérieur du golfe du Saint-Laurent à la fin de l'hiver et au printemps. Dans ces conditions, il n'est pas rare d'observer de grandes concentrations de glace le long de la côte de l'île du Cap-Breton, concentrations qui peuvent congestionner, bien que rarement (comme en 1987), le port d'Halifax.

Les sources des données (fig. 8) utilisées pour la compilation de la présente carte sont tirées de levés effectués sur la plate-forme continentale interne à différents endroits (voir les exemples de la carte Géologie des formations en surface et propriétés physiques 9 du présent volume), de levés détaillés de la zone littorale à de nombreux sites et de séquences vidéo et de photographies aériennes obliques prises à faible altitude. On a également eu recours aux cartes publiées dans la Série nationale de référence cartographique, aux cartes bathymétriques du Service hydrographique du Canada, aux photographies aériennes verticales de la Photothèque nationale de l'air à Ottawa (Ontario) et du Land Registration and Information Service à Amherst (Nouvelle-Écosse) ainsi qu'aux données sur les vagues et le niveau marin du Service des données sur le milieu marin du ministère des Pêches et des Océans (Ottawa). Des analyses antérieures des caractéristiques de la côte, d'une partie ou de l'ensemble de la région, ont été publiées par Johnson (1925), Weisted (1974), Owens (1977), Owens et Bowen (1977), Munroe (1982), Taylor et al. (1985) et Cameron et al. (1990).

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RÉFÉRENCES

- Amos, C. L. et Long, B. F. N.**
1980: The sedimentary character of the Minas Basin, Bay of Fundy; in *The Coastline of Canada*, (ed.) S. B. McCann; Geological Survey of Canada, Paper 80-10, p. 123-180.

- Amos, C. L. et Nadeau, O. C.**
1988: Surficial sediments of the outer banks, Scotian Shelf, Canada; Canadian Journal of Earth Sciences, v. 25, p. 1923-1944.

- Amos, C. L. et Zaitlin, B.**
1985: The effect of changes in tidal range on a sublitoral macrotidal sequence, Bay of Fundy, Canada; Geomarine Letters, v. 4, p. 161-169.

- Boyd, R., Bowen, A. J., et Hall, R. K.**
1987: An evolutionary model for transgressive sedimentation on the Eastern Shore of Nova Scotia; in *Glaciated Coasts*, (ed.) D. M. FitzGerald and P. S. Rosen; Academic Press, San Diego, p. 87-114.

- Cameron, G. D. M., Taylor, R. B., Forbes, D. L., et Best, M. (comp.)**
1990: Coastal geomorphology of Eastern Canada; in *The Continental Margin of Eastern Canada*, (ed.) M. J. Keen and G. L. Williams; Geological Survey of Canada, Geology of Canada, no. 2, Fig. 4, scale 1:2 000 000 (also Geological Society of America, The Geology of North America, v. I-1).

- Canadian Tide and Current Tables**
1989a: Volume 1: Atlantic Coast and Bay of Fundy; Department of Fisheries and Oceans, Ottawa, Canada, 53 p.

- 1989b: Volume 2: Gulf of St. Lawrence; Department of Fisheries and Oceans, Ottawa, Canada, 41 p.

- Carter, R. W. G., Forbes, D. L., Jennings, S. C., Orford, J. D., Shaw, J., et Taylor, R. B.**
1989: Barrier and lagoon coast evolution under differing relative sea-level regimes: examples from Ireland and Nova Scotia; Marine Geology, v. 88, p. 221-242.

- Fader, G. B., Cameron, G. D. M., et Best, M. A. (comp.)**
1989: Geology of the continental margin of Eastern Canada; Geological Survey of Canada, Map 1705A, scale 1:5 000 000.

- Farquharson, W. I.**
1965: Tidal heights in Bay of Fundy; Bedford Institute of Oceanography, Report 65-7, Dartmouth, Nova Scotia, 7 p.

- Forbes, D. L. et Boyd, R.**
1989: Submersible observations of surficial sediments and seafloor morphology on the inner Scotian Shelf; in *Submersible Observations Off the East Coast of Canada*, (ed.) D. J. W. Piper; Geological Survey of Canada, Paper 88-20, p. 71-81.

- Forbes, D. L., Taylor, R. B., and Shaw, J.**
1989: Shorelines and rising sea levels in eastern Canada; Episodes, v. 12, p. 23-28.

- Forbes, D. L., Boyd, R., Shaw, J., Johnston, L., Heffler, D. E., et McLaren, S.**

- 1988: CSS Dawson operations on inner Scotian Shelf and Sable Island Bank (Cruise Report 87042); Geological Survey of Canada, Open File 2063, p. 51.

- Forbes, D. L. et Taylor, R. B.**

- 1987: Coarse-grained beach sedimentation under paraglacial conditions, Canadian Atlantic coast; in *Glaciated Coasts*, (ed.) D. M. FitzGerald and P. S. Rosen; Academic Press, San Diego, p. 51-86.

- Forbes, D. L., Taylor, R. B., et Shaw, J.**

- 1989: Shorelines and rising sea levels in eastern Canada; Episodes, v. 12, p. 23-28.

- Grant, D. R.**

- 1980: Quaternary sea-level change in Atlantic Canada as an indicator of crustal delevelling; in *Earth Rheology, Isostasy and Eustasy*, (ed.) N.-A. Möller; John Wiley and Sons, Chichester, p. 201-214.

- Hillaire-Marcel, C.**

- 1987: Composition isotopique du carbone organique des carottes du forage 85-036-016 dans le lac Bras d'Or, île du Cap-Breton, Nouvelle-Écosse; Geological Survey of Canada, Paper 87-1A, p. 859-864.

- Johnson, D. W.**

- 1925: *The New England - Acadian Shoreline*; John Wiley and Sons, New York, 608 p.

- MacKinnon, K. et Scott, D. B.**

- 1984: An evaluation of salt marshes in Atlantic Canada; Technical Report 1, Centre for Marine Geology, Dalhousie University, Halifax, Nova Scotia, 37 p.

- Marine Environmental Data Service**

- 1989: Canadian marine data inventory report-historical wave measuring stations; Department of Fisheries and Oceans, Ottawa, Canada, 11 p.

- Markham, W. E.**

- 1980: *Ice Atlas Eastern Canadian Seaboard*; Atmospheric Environment Service, Environment Canada, Toronto, 96 p.

- McLaren, S. A.**

- 1988: Quaternary seismic stratigraphy and sedimentation of the Sable Island sand body, Sable Island Bank, outer Scotian Shelf; Technical Report 11, Centre for Marine Geology, Dalhousie University, Halifax, Nova Scotia, 95 p.

- Munroe, H. D.**

- 1982: Regional variability, physical shoreline types and morphodynamic units of the Atlantic coast of mainland Nova Scotia, (ed.) R. B. Taylor, D. J. W. Piper, and C. F. M. Lewis; Geological Survey of Canada, Open File 725, 26 p.

- Neu, H.**

- 1982: 11-year deep water wave climate of Canadian Atlantic waters; Canadian Technical Report, Hydrography and Ocean Sciences, v. 13, 41 p.

- Owens, E. H.**

- 1977: Coastal environments of Canada: the impact and cleanup of oil spills; Economic and Technical Review Report EPS-3-EC-7-13, Fisheries and Environment Canada, Environmental Protection Service, Ottawa, 413 p.

- Owens, E. H. et Bowen, A. J.**