# BIBLIOGRAPHY

## Melville Peninsula - Southampton Island Study Area

### NORTH HALF

## GENERAL REFERENCES


Brown, R.J.E. 1972. Permafrost in the Canadian Arctic Archipelago. National Research Council of Canada. Division of Building Research, Ottawa. Technical Paper No. 379, pp. 103-130.

Fenco Consultants Ltd. and F.F. Slaney & Company Ltd. 1978. An Arctic Atlas: Background information for developing marine oilspill countermeasures. Arctic Marine Oilspill Program Report EPS-9-EC-78-1. Fisheries and Environment Canada, Ottawa.

Freeman, Milton, Research Ltd. 1976. Inuit Land Use Occupancy Project. 3 Vols. Department of Indian and Northern Affairs, Ottawa.

Nettleship, D.N. and Smith, P.A. (eds.) 1975. Ecological sites in Northern Canada. Canadian Committee for the International Biological Programme, Conservation Terrestrial Panel 9, Ottawa. 330 p.

Peterson, E.B. 1978. Possible environmental disruptions from an Arctic Islands gas pipeline. Indian and Northern Affairs. Environmental-Social Program, Northern Pipelines, Ottawa. ESCOM No. AI-10.

Sam, K., Macpherson, J. and Thompson, G., 1977. Polar Gas and the International Biological Programme. Nature Canada. 6(3): 2-3, 33-37.

Smith, T.G. 1980. How Inuit trapper-hunters make ends meet. Canadian Geographic. Vol. 99, No. 3, pp. 56-61.


## ECOLOGICAL REFERENCES


ANDERS, G. 1965. Northern Foxe Basin : An Area Economic Survey. Dept. of Northern Affairs and National Resources. Chapter II : Physical Geography. pp. 5-29. Chapter III : Flora and Fauna of the Area. pp. 30-46 (with Vegetation List, pp. 30-31 by B. Fredskild, Nat. Mus. Denmark). Ottawa. 139 p.

BIRD, J.B. 1953. Wager Bay and Adjacent Areas in Keewatin - 1952. Dept. Mines and Tech. Surv., Geographical Br., Ottawa. (Mimeo).

BLACKADAR, R.G. 1963. Additional Notes to Accompany Map 3-1958 (Fury and Hecla Strait Map-Area). Geol. Surv. Can. Paper 62-35. 23 p.

BOLTON, T.E., B.V. SANDFORD, M.J. COPELAND, C.R. BARNES, and J.K. RIGBY. 1977. Geology of Ordovician Rocks Melville Peninsula and Region, Southeastern District of Franklin. Geol. Surv. Can. Bull. 267. 137 p.

BOREALIS EXPLORATION LTD. 1983. The Socio-Economic Impacts of the Borealis Roche Bay Magnetite Project. 175 p. and appendices.

__________. 1982. Addenda to the Initial Environmental Evaluation. 100 p. and appendices.

__________. 1981. Initial Environmental Evaluation. 153 p. and appendices.

BRONHOFER, M. 1957. Field Investigations on Southampton Island and Around Wager Bay, Northwest Territories, Canada, 1936. Rand Corporation Report No. RM-1936. Part IV Wager Bay Area. pp. 181-224.

BURNS, C.A. and A.E. WILSON. 1952. Geological Notes on Localities in James Bay, Hudson Bay, and Foxe Basin Visited During an Exploration Cruise, 1949. Geol. Surv. Can. Paper 52-25. 17 p.

CODY, W.J. 1950. Plants Collected by B. John Woodruff on the West Coast of Melville Peninsula, Franklin District, N.W.T. Canada. Can. Field Nat. 64:90-92.

CRAIG, B.G. 1965. Notes on Moraines and Radiocarbon Dates in Northwest Baffin Island, Melville Peninsula, and Northeast District of Keewatin. Geol. Surv. Can. Paper 65-20.

__________. 1961. Surficial Geology of Northern District of Keewatin, Northwest Territories. Geol. Surv. Can. Paper 61-5.

FALCONER, G., J.D. IVES, O.H. LOKEN and J.T. ANDREWS. 1965. Major End Moraines in Eastern and Central Arctic Canada. Geogr. Bull. 7(2):137-153.

FRASER, J.K. 1953. The Islands in Foxe Basin. Geogr. Bull. 4:1-32.

FRISCH, T. 1982. Precambrian Geology of the Prince Albert Hills, Western Melville Peninsula, Northwest Territories. Geol. Surv. Can. Bull. 346. 70 p.

FRISCH, T. and N. GOULET. 1975. Geological Studies in Western Melville Peninsula, District of Franklin.. Geol. Surv. Can. Paper 75-1. (720070).

HEYWOOD, W.W. 1966a. Geological Notes Northeastern District of Keewatin and Southern Melville Peninsula, District of Franklin, Northwest Territories (Parts of NTS 46, 47, 56, 57). Geol. Surv. Can. Paper 66-40 and Map 14-1966. 20 p.

__________. 1966b. Geological Notes on Operation Wager, Northwest Territories. Geol. Surv. Can. Paper 66-10. 7 p.

JAQUES, D. 1983. Biophysical (Ecological) Land Classification Using LANDSAT Imagery, Melville Peninsula, Northwest Territories. Report to Canadian Wildlife Service. Edmonton. Ecosat Geobotanical Surveys, Inc. 60 p.

__________. 1982. Flora and Vegetation of the Roche Bay Area, Melville Peninsula, Northwest Territories, Canada. Report to Borealis Exploration Ltd. Ecosat Geobotanical Surveys, Inc. 26 p.

LEWIS, M. and D. BELYEA. 1977. The Vegetation of Scarpa Lake, N.W.T. Biology Dept. York University.

MANNING, T.H. 1943. Notes on the Coastal District of the Eastern Barren Grounds and Melville Peninsula from Igloolik to Cape Fullerton. Can. Geogr. J. 28:84-105.

MATHIASSEN, T. 1933. Contributions to the Geography of Baffin Island and Melville Peninsula. Report of the Fifth Thule Expedition 1921-24, Vol. 1(3). 102 p.

MAXWELL, J.B. 1981. Climatic Regions of the Canadian Arctic Islands. Arctic 34(3):225-240.

McGILL UNIVERSITY. 1963a. A Report on the Physical Environment of the Quoich River Area, Northwest Territories, Canada. Rand Corporation Report No. RM-1997.

__________. 1963b. A Report on the Physical Environment of Northern Baffin Island and Adjacent Areas, Northwest Territories, Canada. Rand Corp. Report No. RM-2706.

PORSILD, A.E. 1964. Illustrated Flora of the Canadian Arctic Archipelago. Nat. Mus. Can. Bull. No. 146. 128 p.

SIM, V.W. 1960a. A preliminary account of late Wisconsin Glaciation in Melville Peninsula, N.W.T. Can. Geogr. 17:21-34.

__________. 1960b. Maximum post-glacial marine submergence in northern Melville Peninsula. Arctic 13:178-193.

__________. 1960c. Maximum post-glacial marine submergence in south Melville Peninsula. Arctic 13:241-244.

__________. Physiography of Melville Peninsula, N.W.T. Geographical Branch Draft Memoir. Dept. Mines and Tech. Surveys. Ottawa. 307 p. Unpublished.

TRETTIN, H.P. 1975. Investigations of Lower Paleozoic Geology, Foxe Basin, Northeastern Melville Peninsula, and Parts of Northwestern and Central Baffin Island. Geol. Surv. Can. Bull. 251.

__________. 1974. Lower Paleozoic Geology of Foxe Basin, Northeastern Melville Peninsula, and Parts of Northern and Central Baffin Island. Geol. Surv. Can. Paper 74-1. Part A:361.


## COASTAL INFORMATION


Bird, J.B., 1967. The Physiography of Arctic Canada with special reference to the area south of Parry Channel. John Hopkins Press Baltimore.

Bird, J.B., 1953. Southampton Island. Geographical Branch Memoir No. 1, Dept. Mines and Tech. Surveys. 84 p.

Bird and Bronkofer, 1956. Geographic Factors Affecting Choice of Airfields Sites on Southampton Island. N.W.T. Research Memorandum RM-1631; Rand Corporation, Santa Monica, California. 27 p. and appendices.

Canadian Hydrographic Service, 1982. Sailing Directions - Arctic Canada, Vol. I and Vol. II. Third edition, Dept. of Fisheries and Oceans, Ottawa.

________,1979. Sailing Directions Labrador and Hudson Bay. Fourth edition, Dept. of Fisheries and Oceans.

Canadian Hydrographic Service , 1983. Canadian Tide and Current Tables, Vol. 4, Arctic and Hudson Bay. Dept. of Fisheries and Oceans. Various dates. Nautical charts of the area, Dept. of Fisheries and Oceans.

Fenco & Slaney, 1978. An Arctic Atlas, Background Information for Developing Marine Oilspill Countermeasures. EPS-9-EC-78-1. Environmental Protection Service, Environment Canada.

Fraser, J.K., 1953. The Islands in Foxe Basin. Geographical Bulletin No. 4.

Leslie, R.J., 1963. Sedimentology of Hudson Bay, District of Keewatin 34, 44, 54. GSC Paper 63-48, Department of Mines and Technical Surveys.

McGill University, 1963. A Report of the Physical Environment of North Baffin Island and Adjacent Areas, Northwest Territories, Canada. Memorandum RM-2706-1-PR, Rand Corporation, Santa Monica California.

________,1963. A Report on the Physical Environment of the Quoich River Area, Northwest Territories, Canada. Memorandum RM-1997-1-PR, Rand Corporation, Santa Monica, California.

Owens, E.H., 1977. Coastal Environments of Canada: The Impact and Clean-up of Oilspills. EPS-3-EC-77-13, Environmental Protection Service. Environment Canada.

Sadler, H.E., et. al., 1979. The Oceanography of Fury and Hecla Strait. TM-79-11, Defence Research Establishment Pacific, Victoria, B.C.

*Note: Consult references for Terrestrial Overview for additional information.


## WILDLIFE


Anders, G. 1965. Northern Foxe Basin: An area economic survey. A.E.S.R. 65/2. Industrial Division, Northern Administration Branch, Dept. of Northern Affairs and National Resources, Ottawa. 139 p.

Anderson, R.M. 1935. Mammals of the Eastern Arctic and Hudson Bay. In: Canada's Eastern Arctic, Dept. Int., Ottawa. pp. 67-93.

Banfield, A.W.F. 1954. Preliminary investigation of the barren-ground caribou. Part I: Former and present distribution, migrations and status. Wildl. Serv., Dept. Northern Affairs and National Resources, Ottawa. 79 p.

Banfield, A.W.F. 1974. The mammals of Canada. Univ. of Toronto Press, Toronto. 438 p.

Banfield, A.W.F. and R.D. Jakimchuk. 1980. Analyses of the characteristics and behaviour of barren-ground caribou in Canada. Rep. prep. for Polar Gas Project. 141 p.

Beaubier, P.H. 1970. The hunting pattern of the Iglulingiut: with emphasis on the marine mammals. M.A. thesis, Dept. of Geography, McGill Univ., Montreal. 248 p.

Beaubier, P.H., M.J. Bradley and J.G. Vestey. 1970. Human ecological studies - Igloolik, N.W.T. Final report submitted to International Biological Program, Human Adaptability Project. 180 p.

Bellrose, F.C. 1976. Ducks, geese and swans of North America. Stackpole Books, Harrisburg, Pa., U.S.A. 54 p.

Bennett, P.M. 1940. The British Canadian Arctic expedition. Geographical Journal 95(2): 109-120.

Boreal Institute of Northern Studies. 1975. Canadian Arctic renewable resources mapping project. Rep. Prep. for Inuit Tapirisat of Canada. Boreal Institute for Northern Studies, Univ. of Alberta, Edmonton. 232 p. and map volume.

Bowden, E., and A. Helmer. 1974. Melville Peninsula calving ground survey May-June 1974. Progress Rep. No. 3 of the Melville Peninsula Project. N.W.T. Wildl Serv., unpubl. rep. 22 p.

Boyd, D.H., R.K. Schmidt, W. Hayden and I. W. Dickson. 1978. Possible effects of the proposed Polar Gas Pipeline Project on living resource use in the Eastern Arctic. AIPP Preliminary Report 1977. ESCOM Report No. AI-02. Prepared by Interdisciplinary Systems Ltd. for Environmental-Social Program, Northern Pipelines. Indian and Northern Affairs, Ottawa. 238 p.

Bray, R. 1943. Notes on the birds of Southampton Island, Baffin Island and Melville Peninsula. (with comments by T.H. Manning). Auk 60: 504-536.

Brown, R.G.B., D.N. Nettleship, P. Germain, C.E. Tull and T. Davis. 1975. Atlas of Eastern Canadian seabirds. Can. Wildl. Serv., Ottawa. 220 p.

Calef, G.W. 1979. The population status of caribou in the Northwest Territories. N.W.T. Wildl. Serv. Prog. Rep. No. 1. Yellowknife, N.W.T. 30 p.

Calef, G.W. and D.C. Heard. 1975. Reproductive success of peregrine falcons and other raptors at Wager Bay and Melville Peninsula, Northwest Territories. Auk 96(4):

Calef, G.W. and D.C. Heard. 1980. The status of three tundra wintering caribou herds in Northeastern Mainland, Northwest Territories. AIPP ESCOM Report No. AI-44. Prepard by the N.W.T. Wildlife Service for Environmental-Social Program, Northern Pipelines, Indian and Northern Affairs, Ottawa. 22 p.

Calef, G.W. and D.C. Heard. 1981. Reproductive success of peregrine falcons and other raptor at Wager Bay and Melville Peninsula, Northwest Territories. AIPP ESCOM Report No. AI-45. Prepared by the N.W.T. Wildlife Service for Environmental-Social Program, Northern Pipelines. Indian and Northern Affairs, Ottawa. 26 p.

Calef, G.W. and A. Helmer. 1981. Population estimate for the Melville Peninsula caribou herd in 1976. AIPP ESCOM Report No. AI-42. Prepared by the N.W.T. Wildlife Service for Environmental-Social Program, Northern Pipelines. Indian and Northern Affairs, Ottawa. 16 p.

Canadian Wildlife Service. 1972. Arctic ecology map series. Rep. prep. for the Canadian Wildlife Service by Renewable Resources Consulting Services Ltd., Calgary, Alberta. 324 p. and 35 maps.

Crowe, K.J. 1969. A cultural geography of northern Foxe Basin, N.W.T. Northern Science Research Group, Dept. of Indian Affairs and Northern Development, Ottawa. 130 p.

Dagg, I.A. and C.A. Campbell. 1974. Historic changes in the distribution and numbers of wolverine in Canada and northern U.S. Can. Wildl. Serv. unpubl. manu. rep. CWSC 1569. 21 p.

Degerbol, M. and P. Freuchen. 1935. Report of the Fifth Tule Expedition 1921-24. Zool. I, Mammals. Vol. 2, No. 4-5. 278 p.

Donaldson, J.L. 1981. Population and recruitment estimates for the Lorillard and Wager caribou herds in 1977. AIPP ESCOM Report No. AI-43. Prepared by the N.W.T. Wildlife Service for Environmental-Social Program, Northern Pipelines. Indian and Northern Affairs, Ottawa. 50 p.

Elliot, R.C. and C.E. Elliot. 1982. Report of Environmental Fieldwork for 1981-1982. Report prepared by Elliot Environmental Research and Consulting for Borealis. 100 p.

Ellis, D.V. 1956. Observations on the migration, distribution and breeding of birds in the Canadian Arctic during 1954 and 1955. Dansk Ornith. Foren. tidsskr. Vol. 50: 207-230.

Ellis, D.V. and J. Evans. 1960 Comments on the distribution and migration of birds in Foxe Basin, N.W.T. Can. Field-Nat. 74: 59-70.

Freeman, M.M.R. 1976. Inuit land use and occupancy project. 3 Volumes. Vol. 1: Land use and occupancy. Vol. 2: Supporting studies. Vol. 3: Land use atlas. Prepared by Milton Freeman, Res. Ltd. for Indian and Northern Affairs, Ottawa. 287 p., 273 p. and map volume.

Fyfe, R. 1969. The peregrine falcon in northern Canada. p. 101-113 In: J.J. Hichey (ed.) Peregrine falcon populations: their biology and decline. Univ. of Wisconsin press. Madison, Milwaukee. 596 p.

Godfrey, W.E. 1966. The birds of Canada. Nat. Mus. Canada Bull. No. 203. 428 p.

Hall, C.F. 1864. Life with the Esquimaux: The narrative of Captain Charles Francis Hall, of the whaling barque "George Henry", from the 29th May, 1860, to the 13th September, 1862. Sampson, Low, Son, Marston, London. Vols. 1 and 2.

Heard, D.C., G.W. Calef and S. Cooper. 1981. Numbers, distribution and productivity of caribou in Northwestern Keewatin District, N.W.T. AIPP ESCOM Report No. AI-39. Prepared by the N.W.T. Wildlife Service for Environmental-Social Program, Northern Pipelines. Indian and Northern Affairs, Ottawa. 29 p.

Heard, D.C., T.M. Williams and K. Jingfors. 1983. Precalving distribution and abundance of barren-ground caribou on the northeastern mainland of the Northwest Territories. N.W.T. Wildl. Serv. unpubl. rep. Yellowknife. 20 p.

Horing, R. 1937. Report of the Fifth Thule Expedition, 1921-24. Zool. II, Birds, Copenhagen. 134 p.

Hone. E. 1934. The present status of the muskox. American Committee for International Wildlife Protection. Special publication No. 5. 87 p.

Johnsgard, P.A. 1975. Waterfowl of North America. Indiana Univ. Press, Bloomington, Indiana, U.S.A. 575 p.

Kelsall, J.P. 1981. Status report on the wolverine, (Gulo gulo), in Canada in 1981. Rep. prep. for the Committee on the Status of Endangered Wildlife in Canada. 47 p.

Kortright, F.H. 1942. The ducks, geese and swans of North America. Wildl. Manage. Inst., Washington, D.C. 476 p.

Lyon, G.F. 1824. The private journal of Captain G.F. Lyon, of H.M.S. "Helca", during the recent voyage of "Discovery" under Captain Parry. J. Murray. London. 468.pp.

Lyon, G.F. 1825. A brief narrative of an unsuccessful attempt to reach Repulse Bay. Through Sir Thomas Row's "Welcome" in His Majesty's ship "Griper" in the year MDCCCXXIV. J. Murray. London. 198 p.

Macpherson, A.H. 1961. Observations on Canadian arctic Larus gulls and on the taxonomy of L. thayeri Brooks. Arctic Inst. of North Am. Tech. Pap. No. 7. Montreal. 39 p.

Macpherson, A.H. 1964. A northward range extention of the red fox in the Eastern Canadian Arctic. J. Mammal. 45: 138-140.

Macpherson, A.H. 1969. The dynamics of Canadian arctic fox populations. Can. Wildl. Serv. Rep. Ser. No. 8. Ottawa.

Macpherson, A.H. 1977. The origin of diversity in mammals of the Canadian arctic tundra. Systematic Zool.: 153-173.

Mair, W.W. 1954. Summary report on data obtained during the northern inspection flight, April 3-22, 1954. Can. Wildl. Serv. manu. rep.

Manning, T.H. 1943. Notes on the coastal district of the eastern barren-grounds and Melville Peninsula from Iglolik to Cape Fullerton. Can. Geog. J. 26:84-105.

Montgomerie, R.D., R.V. Cartar, R.L. McLaughlin and B. Lyon. 1982. Birds and mammals at Sarcpa Lake, Melville Peninsula, Northwest Territoires. Manu. Rep. Ecology and Evolutionary Biology Group, Biology and Mathematics Departments, Queen's University, Kingston, Ontario. 55 p.

Montgoverie, R.D., R.V. Cartar, R.L. McLaughlin and B. Lyon. 1983. Birds of Sarcpa Lake, Melville Peninsula, Northwest Territories: Breeding phenologies, densities and biogeography. Arctic 36(1): 65-75.

Nettleship, D.N. 1980. A guide to the major seabird colonies of Eastern Canada - identity, distribution and abundance. Seabird Research Unit, Can. Wildl. Serv., Bedford Inst. of Oceanography, Dartmouth, Nova Scotia. 133 p.

Nourse, J.E. 1879. Narrative of the second Arctic expedition made by Charles F. Hall: His voyage to Repulse Bay, sledge journeys to the straits of Fury and Hecla and to King William's Land and resident among the Eskimos during the years 1864-69. Washington, D.C. 644 p.

Palmer, R.S. 1962. Handbook of North American birds. Vol. I. Yale Univ. Press, New Haven, Conn.

Palmer, R.S. 1976. Handbook of North American birds. Vols. 2 and 3. Yale Univ. Press, New Haven, Conn.

Parry, W.E. 1824. Journal of a second voyage for the discovery of an North-West Passage from the Atlantic to the Pacific performed in the years 1821-22-23 in His Majesty's ships "Fury" and "Hecla". John Murray, London. 571 p.

Rae, John. 1850. Narrative of an expedition to the shores of the Arctic Sea in 1847. T. & W. Boone, London. 248 p.

Rasmussen, K. 1927. Across Arctic America. Narrative of the Fifth Thule Expedition. New York. 388 p.

Reed, A. and P. Dupuis. 1980. A preliminary report on greater snow goose and atlantic brant investigations near Foxe Basin and Northern Baffin Island, N.W.T., August 1980. Can. Wildl. Serv. unpubl. rep 25 p.

Reed, A., P. Dupuis, K. Fisher and J. Mosher. 1980. An aerial survey of breeding geese and other wildlife in Foxe Basin and Northern Baffin Island, Northwest Territories, July 1979. Can. Wildl. Serv. Progress Notes No. 114. 21 p.

Smith, N.G. Evolution of some arctic gulls (Larus): An experimental study of isolating mechanisms. The American Ornithologist's Union. Orn. Monog. No. 4. 99 p.

Snyder, L.L. 1957. Arctic birds of Canada. Univ. of Toronto Press, Toronto. 310 p.

Stirling, I., 1980. The biological importance of polynyas in the Canadian Arctic. Arctic 33(2): 303-315.

Stirling. I., and H. Cleator. 1981. Polynyas in the Canadian Arctic. Can. Wildl. Serv. Occ. Pap. No. 45. Ottawa. 73 p.

Taverner, P.A. 1936. Birds of the Eastern Arctic. p. 113-128. In: Canada's Eastern Arctic, its history, resources, population, and administration. Assembled by W.C. Bethune for the Northwest Territories Council.

Urquhart, D.R. 1982. Muskox: Life history and current status of muskoxen in the N.W.T. N.W.T. Wildl. Serv. Rep. 40 p.

Usher, P.J. 1971. Mammals, land use, resource management on Baffin Island, Melville Peninsula and other areas. Report NSRG 71-4, Northern Science Research Group, Department of Indian Affairs and Northern Development. Ottawa. 180 p.

Usher, P.J. 1975. Historical statistics approximating fur, fish, and game harvests within Inuit lands of the N.W.T. and Yukon, 1915-1974, with text. In: Nelson J. (eds.) Ren. Res. Project Vol. 3, Inuit Tapirisat of Canada, Ottawa. 71 p. and tables.

Wright, J.G. 1944. Economic wildlife of Canada's Eastern Arctic caribou. Can. Geog. J. 29(4): 184-195.


## MARINE MAMMAL INFORMATION


Anders, G. (eds.) 1965. Northern Foxe Basin; an area economic survey. Canada Department of Northern Affairs and National Resources. AESR 65-2: 139 p.

Anderson, R.M. 1934. Mammals of the eastern Arctic and Hudson Bay, p. 67-108. In Canada's Eastern Arctic - Its History, Resources, Population and Administration. Department of the Interior.

Beaubier, P.H. 1970. The hunting pattern of the Iglulingmiut: with emphasis on the marine mammals. Unpublished master's thesis, McGill University, Montreal. 248 p.

Braham, H., B. Kragman, S. Leatherwood, W. Marquette, D. Rugh, M, Tillman, I. Johnson, and G. Carroll. 1979. Preliminary report of the 1978 spring bowhead whale research program results. In Int. Whal. Comm. Rep. Comm. 29: 291-306.

Brodie, P.F. 1971. A reconsideration of aspects of growth reproduction and behavior of the white whale (Delphinapterus leucas), with reference to the Cumberland Sound, Baffin Island, population. J. Fish. Res. Board Can. 28: 1309-18.

Brodie, P.F., J.L. Parsons, and D.E. Sergeant. 1981. Present status of the white whale (Delphinapterus leucas) in Cumberland Sound, Baffin Island. In Int. Whal. Comm. Rep. Comm. 29: 291-306.

Burns, J.J. 1981. Bearded seal, (Erignathus barbatus), p. 145-170. In S.H. Ridgeway and R.J. Harrison (ed.) Handbook of marine mammals, Vol. 2: Seals. Academic Press, New York.

Crowe, K.J. 1969. A cultural geography of northern Foxe Basin, N.W.T. NSRG 69-2. Dept. of Indian Affairs and Northern Development, Ottawa. 130 p.

Davis, R.A., and K.J. Finley. 1979. Distribution, migration, abundance and stock identity of eastern Arctic white whales. Paper SC/31/Doc. 57 presented to the Scientific Committee, International Whaling Commission, Cambridge, June 1979. 55 p.

Davis, R.A., K.J. Finley, and W.J. Richardson. 1980. The present status and future management of Arctic marine mammals in Canada. Unpublished report prepared by L.G.L. Ltd. for Science Advisory Board of N.W.T. 3: 93 p.

Degerbol, M., and P. Freuchen. 1935. Mammals. Part II. Field notes and biological observations. Report of fifth Thule expedition, 1921-1924. Vol. 2(4-5): 68-278.

Donaldson, J.L., and D.C. Heard. 1981. Summer polar bear observations around Wager Bay, Northwest Territories. Canada Department of Indian Affairs and Northern Development, Environmental-Social Program Northern Pipelines. A.I.P.P. Rep. 14 p.

Fay, F.H. 1981. Walrus (Odobenus rosmarus), p. 1-21. In S.H. Ridgeway and R.J. Harrison (ed.) Handbook of marine mammals, Vol. 1: the walrus, sea lions, fur seals and sea otter. Academic Press, New York.

Fay, F.H. 1982. Ecology and biology of the Pacific walrus, Odobenus rosmarus divergens Illiger. U.S. Dept. Int., Fish and Wildl. Service, North American Fauna, No. 74: 279 p.

Fay, F.H., H.M. Freder, and S.W. Stoker. 1977. An estimation of the impact of the Pacific walrus population on its food reserves in the Bering Sea. National Technical Information Series. MMC75-06, MMC74-03: 38 p.

Finley, K.J., G.W. Miller, M. Allard, R.A. Davis, and C.R. Evans. 1982. The belugas (Delphinapterus leucas) of northern Quebec: distribution, abundance, stock identity, catch history and management. Can. Tech. Rep. Fish. Aquat. Sci. 1123: v + 57 p.

Fraker, M.A., C.D. Gordon, J.W. McDonald, J.K.B. Ford, and G. Chambers. 1979. White whale (Delphinapterus leucas) distribution and abundance and the relationship to physical and chemical characteristics of the Mackenzie Estuary. Can. Fish. Mar. Serv. Tech. Rep. 863: v + 56 p.

Freeman, M. 1976. Inuit Land Use and Occupancy Project. Vol. I: Land use and occupancy. Prepared by Milton Freeman Research Ltd. for Department of Indian and Northern Affairs. 263 p.

Frost, K.J., and L.F. Lowry. 1981. Ringed, baikal, and caspian seals - Phoca hispida, Phoca sibrica, and Phoca caspica p. 29-55. In S.H. Ridgeway and R.J. Harrison (ed.) Handbook of marine mammals, Vol. 2: Seals. Academic Press, New York.

Furnell, D., and D. Oolooyuk. 1980. Polar bear predation on ringed seals in ice-free water. Can. Field Nat. 94: 88-89.

Gates, C.C. 1981. Management of polar bears in the western Hudson Bay; a review with recommendations. Government of the Northwest Territories, Wildlife Service. Unpublished Report. 35 p.

Gurevich, V.S. 1980. Worldwide distribution and migration patterns of the white whale (beluga). Int. Whaling Comm. Rep. Comm. 30: 465-480.

Harington, C.R. 1964. Polar bear study - Southampton Island, Northwest Territories, 1963. Can. Wildl. Serv. Rep. 57 p.

Harington, C.R. 1966. Extralimital occurrences of walruses in the Canadian Arctic. J. Mammal. 47: 506-513.

Harington, C.R. 1968. Denning habits of the polar bear (Ursus maritimus). Can Wildl. Serv. Rep. Ser. 5: 506-513.

Hay, K.A. 1983. Population biology of the narwhal in the eastern Canadian arctic. Ph. D. Thesis. McGill University, Quebec, P.Q. 243 p.

Heard, D.C., and J.L. Donaldson. 1981. Distribution and abundance of ringed and bearded seals in Wager Bay, Northwest Territories. Canada Department of Indian Affairs and Northern Development, Environmental-Social Program Northern Pipelines. A.I.P.P. Rep. 14 p.

Inuit Tapirisat of Canada. 1975. Canadian Arctic Renewable Resource Mapping Project. Vol. 2. Prepared by Boreal Institute for Northern Studies, University of Alberta. 239 p.

Johnson, L., E.M. Levy, E.B. Bennett, A.W. Mansfield, and T.G. Smith. 1982. Assessment of the effects of oil on Arctic marine fish and marine mammals. Unpublished manuscript. 44 p.

Kemper, J.B. 1980. History of use of narwhal and bealuga by Inuit in the Canadian Eastern Arctic including changes in hunting methods and regulations. Int. Whaling Comm. Rep. Comm. 30: 481-492.

Kenyon, K.W. 1978. Walrus, p. 179-183. In D. Haley (ed.) Marine mammals. Pacific Search Press, Washington, D.C.

Loughrey, A.G. 1959. Preliminary investigation of the Atlantic walrus Odobenus rosmarus rosmarus. Wildl. Manage. Bull. Ser. I. 14: 123 p.

Low, A.P. 1906. Report on the Dominion Government Expedition to Hudson Bay and the Arctic Islands on board the D.G.S. Neptune 1903-04. Government Printing Bureau, Ottawa. 355 p.

Manning, T.H. 1942. Remarks on the physiography, Eskimo, and mammals of Southampton Island. Can. Geogr. J. 24(1): 17-33.

Manning, T.H. 1943. Notes on the coastal district of the eastern barren grounds and Melville Peninsula from Igloolik to Cape Fullerton. Can. Geogr. J. 26(2): 84-105.

Mansfield, A.W. 1958. The biology of the Atlantic walrus, Odobenus rosmarus (Linnaeus) in the eastern Canadian Arctic. Fish. Res. Board Can. Manuscr. Rep. 653: 146 p.

Mansfield, A.W. 1959. The walruses in the Canadian Arctic. Fish. Res. Board Can. Circ. 2: 1-13.

Mansfield, A.W. 1963. Seals of arctic and eastern Canada. Fish. Res. Board Can. Bull. 137: 30 p.

Mansfield, A.W. 1966. The walruses in Canada's arctic. Can. Geogr. J. 73(3): 88-95.

Mansfield, A.W. 1967. Seals of arctic and eastern Canada. Fish. Res. Board Can. Bull. 137: 35 p.

Mansfield, A.W. 1971. Occurence of the bowhead or Greenland white whale (Balaena mysticetus) in Canadian Arctic waters. J. Fish. Res. Board Can. 28: 1873-1875.

Mansfield, A.W., T.G. Smith, and B. Beck. 1975. The narwhal, Monodon monoceros, in eastern Canadian Waters. J. Fish. Res. Board Can. 32: 1041-1046.

Marquette, W.M. 1978. Bowhead whale, P. 71-81. In D. Haley (ed.) Marine mammals. Pacific Search Press, Washington, D.C.

McLaren, I.A. 1958a. Some aspects of growth and reproduction of the bearded seal, Erignathus barbatus (Erxleben). J. Fish. Res. Board Can. 15: 219-227.

McLaren, I.A. 1958b. The biology of the ringed seal (Phoca hispida) in the eastern Canadian Arctic. Fish. Res. Board Can. Bull. 118: 97 p.

McLaren, I.A. 1962. Population dynamics and the exploitation of seals in the eastern Canadian Arctic, p. 168-183. In E.D. LeCren and M.W. Holdgate (ed.) The exploitation of natural animal populations. (Symp. Br. Ecol. Soc. 2).

McLaren, P.L., and R.A. Davis. 1982. Winter distribution of arctic marine mammals in ice-covered waters of eastern North America. L.G.L. Ltd. OLABS Program Report. xiii + 151 p.

Miller, E.H. 1982. Herd organization and female threat behavior in Atlantic walruses Odobenus rosmarus rosmarus (L). Mammalia 46(1): 29-34.

Miller, G.W., and M.A. McLaren. 1983. Late summer wildlife observations in offshore Hudson Bay, 1982. Prepared by L.G.L. Ltd. for Canadian Occidental Petroleum Ltd. vii + 67 p.

Milne, A.R., and B.D. Smiley. 1978. Offshore drilling in Lancaster Sound: possible environmental hazards. Institute of Ocean Sciences, Sidney, BC. 95 p.

Mitchell, E. 1975. Trophic relationships and competition for food in northwest Atlantic whales. Canadian Society of Zoology, Proceedings of Annual Meeting. p. 123-33.

Mitchell, E., and R.R. Reeves. 1981. Catch history and cumulative catch estimates of initial population size of cetaceans in the eastern Canadian Arctic. Int. Whaling Comm. Rep. Comm. 31: 645-682.

Mitchell, E.D., and R.R. Reeves. 1982. Factors affecting abundance of bowhead whales Balaena mysticetus in the eastern arctic of North America, 1915-1980. Biol. Conserv. 22: 59-78.

Nature Conservancy Council. A world review of cetacea. 390 p.

Nero, R.W. 1971. The great white bears. Manitoba Department of Mines, Resources and Environmental Management, Winnipeg, Manitoba. 15 p.

Newman, M.A. 1978. Narwhal, p. 139-144. In D. Haley (ed.) Marine mammals. Pacific Search Press, Washigton, DC.

Parry, W.E. 1824. Journal of a Second Voyage for the Discovery of a Northwest Passage...in the Years...1821-22-23.... John Murray, London. 571 p.

Perry, R. 1967. The world of the walrus. Cox and Wyman Ltd., Great Britain. 162 p.

Reeves, R.R. 1978. Atlantic walrus (odobenus rosmarus rosmarus): a literature survey and status report. Wildl, Res. Rep. 10: 41 p.

Reeves, R., E. Mitchell, A. Mansfield, and M. McLaughlin. 1983. Distribution and migration of the bowhead whales, Balaena mysticetus, in the eastern North American Arctic. Arctic 36 (1): 5-64.

Ronald, K., and J.L. Dougan. 1982. The ice lover - Biology of the harp seal (Phoca groenlandica). Science (Wash., DC) 215(19): 928-933.

Ronald, K., and P.J. Healey. 1981. Harp seal (Phoca groenlandica), p. 55-87. In S.H. Ridgeway and R.J. Harrison (ed.) Handbook of marine mammals, Vol 2. Seals. Academic Press, New York.

Ross, W.G. 1974. Distribution, migration, and depletion of bowhead whales in Hudson Bay, 1860 to 1915. Arct. Alp. Res. 6: 85-98.

Sergeant, D.E. 1962. The biology and hunting of beluga or white whales in the Canadian Arctic. Fish. Res. Board Can., Arctic Unic Circ. 8: 15 p.

Sergeant, D.E. 1965. Migrations of harp seals, Pagophilus groenlandicus (Erxleben) in the northwest Atlantic. J. Fish. Res. Board Can. 22: 433-464.

Sergeant, D.E. 1968. Whales, p. 388-396. In C.S. Beals (ed.) Science, history and Hudson Bay, Vol. 1. Canada Department of Energy, Mines and Resources, Ottawa.

Sergeant, D.E. 1973a. Biology of white whales (Delphinapterus leucas) in western Hudson Bay. J. Fish. Res. Board Can. 30: 1065-1090.

Sergeant, D.E. 1973b. Feeding, growth and production of northwest Atlantic harp seals (Pagophilus groenlandicus). J. Fish. Res. Board Can. 30: 17-29.

Sergeant, D.E. 1976. History and present status of populations of harp and hooded seals. Biol. Conserv. 10: 95-118.

Sergeant, D.E. and P.F. Brodie. 1975. Identity, abundance, and present status of populations of white whales, Delphinapterus leucas, in North America. J. Fish. Res. Board Can. 32: 1047-1054.

Silverman, H.B. 1979. Social organization and behavior of the narwhal, Monodon monoceros L. in Lancaster Sound, Pond Inlet, and Tremblay Sound, Northwest Territories. Unpublished master's thesis, McGill University. 147 p.

Smith, T.G. 1973. Population dynamics of the ringed seal in the Canadian eastern Arctic. Fish Res. Board Can. Bull. 181: 1-55.

Smith, T.G. 1976. Predation of ringed seal pups (Phoca hispida) by the arctic fox (Alopex lagopus). Can. J. Zool. 54(10): 1610-1616.

Smith, T.G. 1980. Polar bear predation of ringed and bearded seals in the land-fast sea ice habitat. Can. J. Zool. 58(12): 2201-2209.

Smith,T.G. 1981. Notes on the bearded seal, Erignathus barbatus, in the Canadian Arctic. Can. Tech. Rep. Fish Aquat. Sci. 1042: 49 p.

Smith, T.G., and I. Stirling. 1975. The breeding habit of the ringed seal (Phoca hispida): The birth lair and associated structures. Can. J. Zool. 53(9): 1297-1305.

Stirling, I., and W.R. Archibald. 1977. Aspects of predation of seals by polar bears. J. Fish. Res. Board Can. 34: 1126-1129.

Stirling, I., W.R. Archibald, and D. DeMaster. 1977. Distribution and abundance of seals in the eastern Beaufort Sea. J. Fish. Res. Board Can. 34: 976-988.

Stirling, I., H. Cleator, and T. Smith. 1981. Marine mammals, p. 45-58. In Polynyas in the Canadian Arctic Environment. Can. Wildl. Serv. Occas. Pap. 45.

Stirling, I., and E.H. McEwan. 1975. The caloric value of whole ringed seals (Phoca hispida) in relation to polar bear (Ursus maritimis) ecology and hunting behavior. Can. J. Zool. 53: 1021-1029.

Stirling, I., R.E. Schweinsburg, W. Calvert, and H.P.L. Killiaan. 1978. Polar bear population ecology - Arctic Islands pipeline route. Fisheries and Environment Canada, ESCOM Report Al-24: 93 p.

Stirling, I., and T.G. Smith. 1977. Interrelationships of Arctic Ocean mammals in the sea ice habitat, II-129 - II-136. In Proceedings of the circumpolar conference on northern ecology, September 15-18, 1975, Ottawa. National Research Council of Canada, Ottawa.

Sutton, G.M., and W.J. Jr. Hamilton. 1932. The mammals of Southampton Island. Mem. Carnegie Mus. XII, Part II, Section I. 111 p.


PERSONAL COMMUNICATIONS

Kaunak, G. Assistant Fisheries Officer, Department of Fisheries and Oceans, Repulse Bay.

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## FISHERIES REFERENCES


Able, K.W., and D.E. McAllister. 1980. Revision of the snailfishes, genus Liparis, from Arctic Canada. Can. Bull. Fish. Aquat. Sci. 208: 52 p.

Anders, G. 1968. Northern Foxe Basin, an area economic survey. Department of Indian and Northern Affairs. A.E.S. Report #65-2, 139 p.

Bain, H., and A.D. Sekerak. 1978. Aspects of the biology of Arctic cod Boreogadus saida, in the central Canadian Arctic. L.G.L. Limited for Polar Gas Project. 104 p.

Bernier, J.E. 1912. Report on the Dominion Government Expedition to the northern waters and Arctic archipelago of the D.G.S. "Arctic" in 1910. Department of Marine and Fisheries. 161 p.

Borealis Explorations Ltd. 1983. Environmental evaluation of the proposed Borealis Explorations Ltd. iron mine development on Melville Peninsula. Draft Report.

Brack, D.M. 1962. Southampton Island area economic survey, with notes on Repulse Bay and Wager Bay. Department of Northern Affairs and National Resources. Ottawa. 96 p.

Bradstreet, M.S.W. 1982. Occurrence, habitat use and behaviour of seabirds, marine mammals, and Arctic cod at the Pond Inlet ice edge. Arctic 35(1): 28-40.

Bradstreet, M.S.W., and W.E. Cross. 1982. Trophic relationships at high Arctic ice edges. Arctic 35(1): 1-12.

Brice-Bennett, C. 1976. Inuit land use in the east-central Canadian Arctic, p. 63-82. In: M.M.R. Freeman (ed.) Inuit land use and occupancy project, Vol. 1. Department of Indian and Northern Affairs, Ottawa.

Brody, H. 1976. Inuit land use in north Baffin Island and northern Foxe Basin, p. 153-171. In: M.M.R. Freeman (ed.) Inuit land use and occupancy project, Vol. I. Department of Indian and Northern Affairs, Ottawa.

Bursa, A.S. 1968. Marine life of Hudson Bay, part I: Marine Plants, p. 343-351. In: C.S. Beals (ed.). Science, history and Hudson Bay. Department of Energy, Mines, and Resources, Ottawa.

Craig, P.C., W.B. Griffiths, L. Haldorson, and H. McElderry. 1982. Ecological studies of Arctic cod (Boreogadus saida) in Beaufort Sea coastal waters, Alaska. Can. J. Fish. Aquat. Sci. 39(3): 295-406.

de March, L., B. de March, and W. Eddy. 1977. Limnological, fisheries and stream zoobenthic studies of Stanwell-Fletcher Lake, Canada. Department of Indian and Northern Affairs - ESCOM Report Al-04: 84 p.

Dewar, D., L. Johnson, M. Layton, and K.E. Marshall. 1983. A bibliography of the Arctic species of the Gadidae, to 1982. Can. Tec. Rept. Fish. Aquat. Sci. 1141: iv + 29 p.

Dunbar, M.J. 1982. Oceanographic research in Hudson and James bays. Naturaliste Can. 109: 677-683.

Freeman, M.M.R. (ed.). 1976. Inuit land use and occupancy, Vol. III. Department of Indian and Northern Affairs, Ottawa. XXIII p. + 145 maps.

Freeman, R.S., and J. Jamieson. 1976. Parasites of Eskimos at Igloolik and Hall Beach, p. 306-315. In: R.J. Shephard and S. Itoh (eds.) Circumpolar Health Proceedings of the 3rd International Symposium, Yellowknife, N.W.T. Univ. of Toronto Press, Toronto.

Grainger, E.H. 1968. Marine life of Hudson Bay, part II. Invertebrate animals, p. 351-360. In: C.S. Beals (ed.). Science, history and Hudson Bay. Department of Energy, Mines and Resources, Ottawa.

Gyselman, E.C. 1983. Seasonal movements of anadromous Arctic charr at Nauyuk Lake, Northwest Territories, Canada. In: L. Johnson et al. (eds.) Proceedings of the International Symposium on Arctic Charr. (in press).

Henn, A.W. 1982. The exploration of Southampton Island, Pt. 2, Zoology, Sec. 3 - Some fishes of Southampton Island. Mem. Carnegie Museum 12: 1-3.

Hildebrand, S.F. 1939. An annotated list of the fishes collected on the several expeditions to Greenland, the Foxe Basin Region, and the coast of Labrador by Captain R.A. Bartlett, from 1925 to 1935. Medd. om Gronland 125(1): 1-12.

Hunter, J.G. 1968. Marine life of Hudson Bay, part III: Fish and fisheries, p. 360-378. In: C.S. Beals (ed.) Science, history and Hudson Bay. Department of Energy, Mines and Resources. Ottawa.

Hunter, J.G., S. Leach, D.E. McAllister, and M. Steigerwald. 1983. Distribution atlas of the marine fishes of Arctic Canada. in press. 15 manuscript pages, 21 plates of 4 maps each.

Inland Waters Directorate. 1983. Surface water data: Yukon and Northwest Territories, 1982. Water Survey of Canada, Ottawa. 100 p.

Johnson, L. 1976.s), Arctic char (S. alpinus), and associated species in unexploited lakes of the Canadian Northwest Territories. J. Fish. Res. Board Can. 33(11): 2459-2488.

Johnson, L. 1980. The arctic charr, Salvelinus alpinus, p. 15-98. In: E.K. Balon (ed.) Charrs, salmonid fishes of the genus Salvelinus. Dr. W. Junk Publishers, The Hague.

Kristofferson, A.H., D.R. Leroux, and J.R. Orr. 1982. A biological assessment of Arctic charr, Salvelinus alpinus (L.), stocks in the Gjoa Haven-Pelly Bay area of the Northwest Territories, 1979-1980. Can. Data Rep. Fish. Aquat. Sci. 1591: vi + 51 p.

Kristofferson, A.H., and D.K. McGowan. 1981. Data on Arctic charr, Salvelinus alpinus (Linnaeus), collected from test fisheries in the Baffin Region, Northwest Territories, 1975-79. Can. Data Rep. Fish. Aquat. Sci. 255: vi + 43 p.

Lantz, A.W. 1965. Fish cannery in the Northwest Territories, Trade News 18(4): 12-13.

Lantz, A.W., and D.G. Iredale. 1972. Canadian Northwest Territories fish and mammal processing plant. Can. Inst. Food Sci. Technol. J. 5(1): A15-A18.

Lowry, L.F., and K.J. Frost. 1981. Distribution, growth, and foods of Arctic cod (Boreogadus saida) in the Bering, Chukchi, and Beaufort seas. Can. Field-Nat. 95(2): 186-191.

MacDonald, G., and D.B. Stewart. 1980. Arctic Land Use Research Program 1979: a survey of the aquatic resources of the central Keewatin Region of the Northwest Territories. Department of Indian Affairs and Northern Development, Environmental Studies No. 17: 111 p.

Manning, T.H. 1942. Notes on some fish of the eastern Canadian Arctic. Can. Field-Nat. 56: 128-129.

Manual of Fisheries Acts and Regulations. 1983. Section 16: Northwest Territory fishery regulations. Department of Fisheries and Oceans, Ottawa. 55 p.

Martin, N.V., and C.H. Olver. 1980. The lake charr, Salvelinus namaycush, p. 205-277. In: E.K. Balon (ed.) Charrs, salmonid fishes of the genus Salvelinus. Dr. W. Junk publishers. The Hague.

McAllister, D.E. 1959. The origin and status of the deepwater sculpin, Myoxocephalus thompsonii, a nearctic glacial relict. Nat. Mus. Can. Bull. 172: 44-65.

McAllister, D.E. 1963. Systematic notes on the sculpin genera Artediellus, Icelus, and Triglops on Arctic and Atlantic coasts of Canada. Nat. Mus. Can. Bull. 185: 50-59.

McAllister, D.E., and J. Aniskowicz. 1976. Vertebral number in North American sculpins of Myoxocephalus quadricornis - complex. J. Fish. Res. Board Can. 33(12): 2792-2799.

Pfaff, J.R. 1937. Fishes. In: Report of the 5th Thule Expedition 1921-1924, 2: 1-19.

Prinsenberg, S.J. 1982. Time variability of physical oceanographic parameters in Hudson Bay. Naturaliste Can. 109: 685-700.

Richardson, Sir J. 1855. Account of the fish, p. 347-376. In: Captain Sir Edward Belcher, the last of the Arctic voyages; being a narrative of the expedition in H.M.S. Assistance under the command of Captain Sir Edward Belcher, C.B., in search of Sir John Franklin, during the years 1852-53-54, Volume II. Lowell Reeve, London.

Schindler, D.W., J. Kalff, H.E. Welch, G.J. Brunskill, H. Kling, and N. Kritsch. 1974. Eutrophication in the high arctic - Meretta Lake, Cornwallis Island (75N lat.). J. Fish. Res. Board Can. 31(5): 647-662.

Scott, W.B., and E.J. Crossman. 1973. Freshwater fishes of Canada. Fish. Res. Board Can. Bull. 184: 195 p.

Stewart, D.B., and L.M.J. Bernier. 1983. An aquatic resource survey of King William and Victoria islands, and the northeastern District of Keewatin, Northwest Territories. Lands Directorate of Environment Canada and Northern Environment Directorate of Indian and Northern Affairs Background Report, in press.

Stewart, D.B., and L.M.J. Bernier. 1984. An aquatic resource survey of Melville Peninsula, Southampton Island, and the northeastern District of Keewatin, Northwest Territories. Lands Directorate of Environment Canada and Northern Environment Directorate of Indian and Northern Affairs, Background Report, in prep.

Stewart, D.B., and G. MacDonald 1981. An aquatic resource survey of Devon, Cornwallis, Somerset and northern Baffin islands, District of Franklin, Northwest Territories, 1980. Department of Indian and Northern Affairs, Environmental Study 20: 84 p.

Vladykov, V.D. 1934. Biological and oceanographic conditions in Hudson Bay. 9. Fishes from the Hudson Bay Region (except the Coregonidae). Contrib. Can. Biol. Fish. n.s. 8(2): 13-61.

Welland, T. 1976. Inuit land use in Keewatin District and Southampton Island, p. 83-114. In: M.M.R. Freeman (ed.) Inuit land use and occupancy Project, Vol. I. Department of Indian and Northern Affairs, Ottawa.

Yaremchuk, G., and B. Wong. 1983. Commercial harvest of eight fish species from the Northwest Territories, 1945-1982. Can. Data Rept. Fish. Aquat. Sci., in press.


PERSONAL COMMUNICATIONS

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## HUNTING AND TRAPPING


Anders, G. 1975. Northern Foxe Basin, an area economic survey. Department of Northern Affairs and National Resources, Ottawa. 139 p.

Beals, C. (ed.). 1968. Science, history and Hudson Bay, 2 Vols. Department of Energy, Mines and Resources, Ottawa. 1,057 p.

Brack, D. 1962. Southampton Island area economic survey. Department of Northern Affairs and National Resources, Ottawa. 33-45.

Calef, G. 1979. The population status of caribou in the Northwest Territories. Northwest Territories Wildlife Service Progress Report No. 1, Yellowknife. 30 p.

Calef, G. and A. Helmer. 1981. Population estimate for the Melville Peninsula caribou herd in 1976. Environmental-Social Program Report No. Al-42, Ottawa. 16 p.

Calef, G. and D. Heard. 1981. The status of three tundra wintering caribou herds in northeastern mainland Northwest Territories. Northwest Territories Wildlife Service File Report No. 18, Yellowknife. 25 p.

Donaldson, J., D. Heard and G. Calef. 1981. Summer polar bear observations around Wager Bay, Northwest Territories. Northwest Territories Wildlife Service File Report No. 12, Yellowknife. 20 p.

Donaldson, J. 1981. Population and recruitment estimates for the Lorrillard and Wager caribou herds in 1977. Northwest Territories Wildlife Service File Report No. 13, Yellowknife. 50 p.

Fish, fur and game for the future. 1981. Science Advisory Board of the Northwest Territories Working Paper No. 4, Yellowknife. 28 p.

Fish, fur and game in the Northwest Territories. 1980. Science Advisory Board of the Northwest Territories Report No. 2, Yellowknife. 55 p.

Freeman, M. (ed.). 1976. Inuit land use and occupancy project. Department of Indian and Northern Affairs. Vol. 1: 63-66, 87-91, 94-96, 1108-114; Vol. 2: 23-28, 47-60, 153-168, 193-226; Vol. 3: 45-48, 91-94, 95-98, 129-131, 149 and 153.

Furnell, D. 1981. Summer polar bear snaring at Wager Bay, Northwest Territories, 1978. Northwest Territories Wildlife Service File Report No. 19, Yellowknife. 33 p.

Heard, D. and J. Donaldson. 1981. Distribution and abundance of ringed and bearded seals in Wager Bay, Northwest Territories. Northwest Territories Wildlife Service File Report No. 12, Yellowknife. 20 p.

Heard, D., G. Calef and S. Cooper. 1981. Numbers, distribution and productivity of caribou in northeastern Keewatin District, Northwest Territories in 1976. Northwest Territories Wildlife Service File No. 14, Yellowknife. 27 p.

Land Use Information Series. Environment Canada and Indian And Northern Affairs Canada:
1980. Map Set 8, Wager Bay-Back Lowland: 55 O; 56 B, G.
1981. Map Set 9, North Bafin Island Region: 47 E, F.

McCart, P. and J. DenBeste. 1979. Aquatic Resources of the Northwest Territories. Science Advisory Board of the Northwest Territories Report, Yellowknife. 55 p.

Polar Gas Project Environmental Reports, Toronto:
Series A - Biophysical:

Alliston, W. 1976. A summary of research on birds, marine mammals and marine ecology in the Districts of Franklin and Keewatin, N.W.T., 1974 and 1975. 90 p.

Alliston, W. and L. Patterson. 1978. A preliminary study of peregrine falcon populations in the Polar Gas Area, Districts of Franklin and Keewatin, N.W.T. 112 p.

Banfield, A. and R. Jakimchuk. 1980. Notes on caribou distribution, abundance and use in the Northwest Territories, 1933-1949. 57 p.

________,1980. An overview of five major herds of barren-ground caribou in Canada. 84 p.

________,1980. Disturbance to barren-ground caribou: A review of effects and implications of human developments and activities. 141 p.

Collins, D.H. 1977. Palaeontological sites and areas within the vicinity of the Polar Gas Route. 192 p.

Davis, R., et al. 1975. Studies of the numbers and distribution of birds in the Central Canadian Arctic 1974: a preliminary interim report. Vol. 1, 98 p., Vol. 2, 238 p.

Davis, R., et al. 1975. Studies of the numbers and distribution of birds and marine mammals in the Central Canadian Arctic, 1974. A supplement completing the interim report. 205 p.

Davis, R., et al. 1973. Present ornithological knowledge and suggested research programs for the Polar Gas Pipeline Project. Vol. 1, 245 p., Vol. 2, 43 p.

Finley, K. 1976. Studies of the status of marine mammals in the Central District of Franklin, N.W.T., June-August, 1975. 183 p.

Fischer, C. and E. Duncan. 1976. Ecological studies of caribou and muskoxen in the Arctic Archipelago & Northern keewatin, 1975. 194 p.

Fischer, C., et al. 1977. Ecological studies of caribou on the Boothia Peninsula and in the District of Keewatin, N.W.T., 1976. 239 p.

Gubbe, D. (ed.). 1976. Landscape survey. District of Keewatin, N.W.T., 1975. 227 p.

Hatfield, C., et al. 1977. Survey of selected living aquatic resources along the proposed Polar Gas Pipeline route from Spence Bay, N.W.T., to Longlac, ontario 1976. Vol 1, 103 p., Vol 2, 105 p. and Vol 3, 271 p.

Hatfield, C., et al. 1978. Survey of selected living aquatic resources along the proposed Polar Gas Pipeline route from Melville Island, N.W.T. to Longlac, Ontario. 1977. Vol. 1, 110 p., Vol. 2, 106 p., and Vol. 3, 205 p.

Jakimchuk, R. 1980. Caribou and muskoxen on Victoria Island. 93 p.

Land Use Atlas. Melville Island, Northwest Territories to Longlac, Ontario. 1977. 91 p.

McLaren, P., et al. 1976. Studies of the numbers and distribution of birds in the District of Keewatin, N.W.T. June-August, 1975. 2 Vols., 591 p.

McLaren, P., et al. 1977. Numbers and distribution of birds during migration in the District of Keewatin, Northern Manitoba and Northwestern Ontario, 1976. 283 p.

Polar Gas Study Plan: Freshwater resources. 1973. 39 p.

Preliminary land mammal study. 1973. 123 p.

Schledermann, P. 1978. Distribution of archaeological sites in the vicinity of the proposed Polar Gas Pipeline and staging areas, N.W.T. 335 p.

Schledermann, P. and J. Helmer. 1980. Archaeological overview: Proposed Polar Gas Combined Pipeline System. 269 p.

Schledermann, P. and R. Nash. 1977. Archaeological overview of the regions along the proposed Polar Gas Pipeline Route. 192 p.

Thomson, D. 1974. Marine Ecology. Preliminary interim report. 27 p.

Waltz, D. and L. Thibodeau. 1973. Ecological vegetation study. 239 p.

Williams, G., G. Smith and C. Hatfield. 1981. Survey of selected living aquatic resources along the proposed Polar Gas Pipeline route on Victoria Island, N.W.T., 1980. 120 p.

Polar Gas Project Environmental Reports, Toronto:
Series B - Socio-economic:

Freyman, A. and I. Wilson. 1977. Mineral exploration and development in the Central Arctic-Keewatin Region. Recent trends and future situation with and without the Polar Gas Project. 177 p.

Gourdeau, E. 1973. Notes on the human setting in the area to be traversed by a proposed Polar Gas Pipeline going from Ellef Ringnes Island to Southern Markets. 54 p.

Goveir, G. and R. Mayne. 1977. Settlements of the Central Arctic-Keewatin Region: Community Profiles and Regional Hierarchies. 2 Vols. 462 p.

Levson, V. and R. Kabzems. 1981. Renewable resource harvesting along the proposed Polar Gas Combined Pipeline System in Manitoba and Ontario. 334 p.

McEachern, J. 1978. A survey of resource harvesting, Eskimo Point, N.W.T. 1975-1977. 268 p.

McIlveen, D. 1978. Preliminary study of resource harvesting in areas along the Polar Gas Route in Northeastern Manitoba and Northwestern Ontario, 1977. 123 p.

Taunton, G. and R. Fenton. 1977. Background information on the resource harvesting economy in the Polar Gas study region, Northwest Territories, 1976. 57 p.

Selection and evaluation of preliminary areas and sites in Region 28, The Southampton Plain. 1981. Parks Canada, 72 p.

Smith, T. 1980. How Inuit trapper-hunters make ends meet. Can. Geogr. 99(3): 56-61.

Usher, P. 1976. Evaluating country food in the northern native economy. Arctic 29(2): 105-120.

Wager Bay - A natural area of Canadian significance. 1978. Parks Canada, 13 p.


## HISTORICAL INFORMATION


Back, G. 1837. On the north-east shore of Southampton Island. Royal Geographical Society Journal. V. 7: 460-66.

Barratt, G. 1976. Rae's Fort Hope. Beaver, V. 306 N. 3: 9-15.

Bennet, P.M. 1940. British Canadian Arctic Expedition. Geographical Journal. V. 95: 109-120.

Bird, J.B. 1953. Southampton Island. Canada. Department of Mines and Technical Surveys. Geographical Branch. Memoir, No. 1, 1953.

Burwash, L.T. 1931. Canada's Western Arctic. Report on investigations 1925-26, 1928-29, and 1930. Canada. Department of the Interior, Ottawa.

Canada, 1907. Royal North-West Mounted Police. "Patrol report, Constable L.E. Seller, Fullerton to Lyon Inlet". Canada. Sessional Papers, N. 28, 1907: 116-127.

Canada, 1909. Royal North-West Mounted Police. "Report of Sergeant D. McArthur patrol, Fullerton to Wager Bay". Canada. Sessional Papers, N. 28, 1909: 265-267.

Canada, 1912. Royal North West Mounted Police. "Patrol Report, Constable J.G. Jones, September 26, 1910". Canada. Sessional Papers, N. 28, 1912: 260-264.

Canada, 1915. Royal North-West Mounted Police. "Patrol Report, Sergeant W.G. Edgenton, Fullerton Detachment, October 31, 1913". Canada. Sessional Papers, N. 28, 1915: 261.

Comer, G. 1910. A geographical description of Southampton Island and notes upon the Eskimo. American Geographical Society of New York. Bulletin, V. 42: 84-90.

Cooke, A. and Holland, C. 1978. The exploration of northern Canada. 500 to 1920. A chronology. The Arctic History Press, Toronto.

Crowe, K.J. 1970. A cultural geography of northern Foxe Basin, N.W.T. NSRG. Department of Indian Affairs and Northern Development, Ottawa.

Devine, M. ed. 1983. N.W.T. data book 1982-83. Outcrop Ltd., Yellowknife.

Dodge, E.S. 1961. Northwest by sea. Oxford University Press, New York.

Foxe, L. 1635. North-west Fox, or, Fox from the North-west Passage.... London. Printed by B. Alsop and Tho. Fawcet, 1635. (Reprinted by S.R. Publishers Ltd. and Johnson Reprint Corporation, 1965.)

Horwood, H. 1977. Bartlett, the great Canadian explorer. Doubleday, Toronto.

Kenyon, W.A. ed. 1980. The journal of Jens Munk 1619-1620. Royal Ontario Museum, Toronto.

Low, A.P. 1906. Report on the Dominion Government expedition to Hudson Bay and the Arctic Islands on board the D.G.S. Neptune 1903-1904. Government Printing Bureau, Ottawa.

Lubbock, B. 1955. The arctic whalers. Glasgow. Brown, Son, and Ferguson.

Lyon, G.F. 1825. A brief narrrative of an unsuccessful attempt to reach Repulse Bay, through Sir Thomas Rowe's "Welcome", in His Majesty's Ship "Griper". John Murray, London.

Manning, T.H. 1936. Some notes on Southampton Island. Geographical Journal, V. 88: 232-242.

Manning, T.H. 1943. Remarks on the physiography, Eskimo, and mammals of Southampton Island. Canadian Geographical Journal, V. 24, N. 1: 17-33.

Manning, T.H. 1943a. Notes on the coastal district of the Eastern Barren Grounds and Melville Peninsula from Igloolik to Cape Fullerton. Canadian Geogrpahical Journal, V. 26, N. 2: 84-105.

Mathiassen, T. 1933. Contributions to the geography of Baffin Land and Melville Peninsula. Report of the Fifth Thule Expedition, V. 1, N. 3. Gyldendalske, Copenhagen.

Mathiassen, T. 1945. Report on the Expedition. Report the Fifth Thule Expedition, 1921-24, V. 1, N. 1. Gyldendalske, Copenhagen.

Munn, H.T. 1919. Southampton Island. Geographical Journal, V. 54, N. 1: 52-55.

Munn, H.T. 1932. Prairie trails and Arctic by-ways. London, Hurst and Blackett, Ltd.

National Atlas of Canada, 1974. Development of northern settlements. MacMillan, Toronto; with the Department of Energy, Mines and Resources and Information Canada.

Nourse, J.E. 1879. Narrative of the second Arctic expedition made by Charles F. Hall: his voyage to Repulse Bay, sledge journeys to the straits of Fury and Hecla and to King William's Land, and residence among the Eskimos during the years 1864-69. Government Printing Office, Washington, D.C.

Parry, W.E. 1824. Journal of a second voyage for the discovery of a North-West Passage from the Atlantic to the Pacific; performed in the years 1821-22-23 in His Majesty's Ships Fury and Hecla, under the orders of Captain William Edward Parry. London, John Murray. 1826.

Pilot of Arctic Canada, 1970. Volume 1, Second Edition. Department of Energy, Mines and Resources, Marine Services Branch, Ottawa.

Polar Record 1934. Bartlett-Norcross Expedition, 1933. Polar Record, V. 1, N. 7: 70-71.

Polar Record 1935. Mr. Manning's work on Southampton Island, 1933-35. Polar Record, V. 2, N. 10: 104-105.

Polar Record 1937. British Canadian Arctic Expedition, 1936-39. Polar Record, V. 2, N. 13: 54-55.

Polar Record 1937b. British Canadian Arctic Expedition, 1936-39. Polar Record, V. 2, N. 14: 123-127.

Polar Record 1938. British Canadian Arctic Expedition, 1936-39. Polar Record, V. 2, N. 15: 43-44.

Polar Record 1939. British Canadian Arctic Expedition, 1936-39. Polar Record, V. 3, N. 17: 54-55.

Polar Record 1942. British Canadian Arctic Expedition, 1936-40. Polar Record, V. 3, N. 23: 490-495.

Putnam, G.P. 1928. The Putnam Baffin island Expedition, Geographical Review, V. 18, N. 1: 1-27.

R.C.M.P. 1920-1940. Royal Canadian Mounted Police. "Patrol Report, Chesterfield Inlet Detachment, 1920-1940". Ottawa.

R.C.M.P. 1944. Royal Canadian Mounted Police. "Patrol Report, Pond Inlet Detachment", Ottawa.

Rae, J. 1850. Narrative of an expedition to the shores of the Arctic Sea in 1846 and 1847. Canadiana House, 1970.

Rae, J. 1855. Arctic exploration, with information respecting Sir John Franklin's missing party. Royal Geographical Society. Journal, V. 25: 246-256.

Ross, W.G. 1975. Whaling and Eskimos: Hudson Bay 1860-1950. National Museums of Canada, Ottawa.

Stackpole, E.A. ed. 1965. The long Arctic search; the narrative of Lieutenant Frederick Schwatka, U.S.A., 1878-1880, seeking the records of the lost Franklin expedition. Marine Historical Association, Inc., Mystic.

Stewart, S.J. 1935. Coats Island, Beaver, V. 266, N. 3: 38-40.

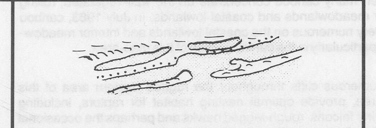
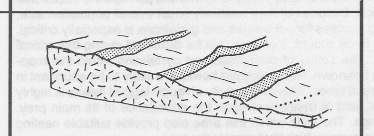
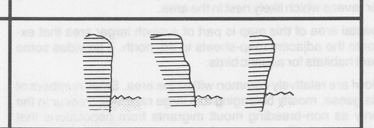
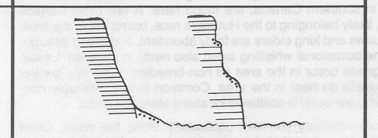
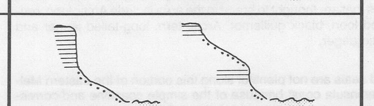
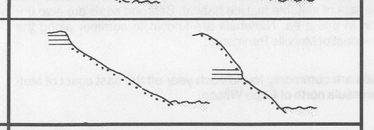
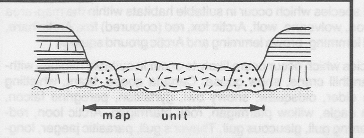
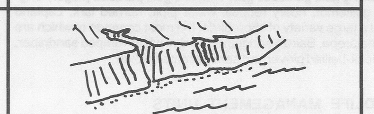
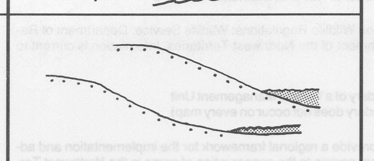
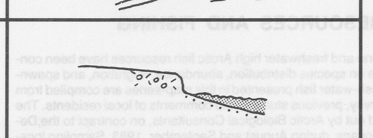
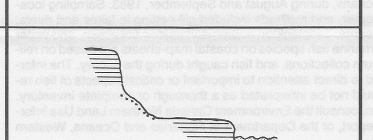
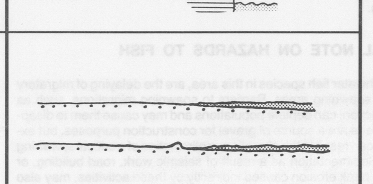
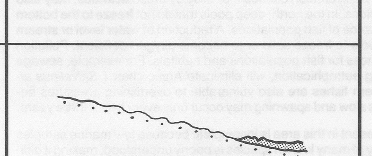
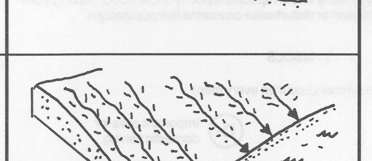
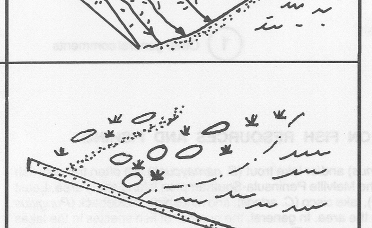
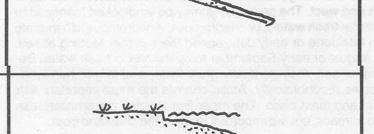
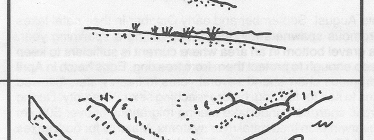
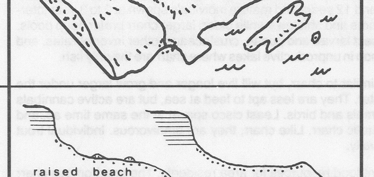
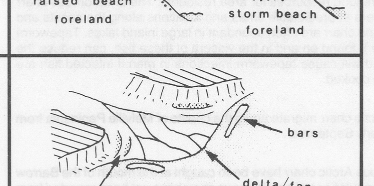
Tremblay, A. 1921. Cruise of the Minnie Maud. Arctic Seas and Hudson Bay 1910-11 and 1912-13. Arctic Exchange and Publishing Ltd., Quebec.

Usher, P. 1971. Fur trade posts of the Northwest Territories 1870-1970. NSRG, Department of Indian Affairs and Northern Development, Ottawa.

Williams, G. 1962. The British search for the Northwest Passage in the eighteenth century. Printed for the Royal Commonwealth Society by Longmans, London.


## COASTAL CLASSIFICATION

### NLUIS AREA 12 Melville Peninsula - Southampton Island

| CODE | CLASS AND DESCRIPTION | DIAGRAMS (NOT TO SCALE) |
|---|---|---|
| Bc | CONTEMPORARY BEACH COMPLEX - High energy depositional environments, which are usually extensive. Spits, bars, lagoons, former beach ridges and storm beaches all common, as are gravel forelands and raised beaches inland. Coarse sands and gravels are typical materials. |  |
| Br | RAISED BEACH SEQUENCE - Series of beach ridges occurring on slopes steeper than $5^{o}$ to $10^{o}$ extending up to 2 km inland. Surface materials are gravel. Narrow comtemporary beaches of low energy are ubiquitous. Wider beaches are classed as Bc, and strandlines on generally level plains are classed as Pg. |  |
| Ca | CLIFFS WITH NO TALUS. Precipitous rock slopes, that range from $65^{o}$ to vertical or overhanging. The cliff face may include prominent rock ledges. This class has no beach and occurence is very limited. |  |
| Cb | CLIFFS WITH LESS THAN 1/3 COVERED BY BLOCKY, RUBBLY COLLUVIUM. As class Ca but with up to one third of the height covered by colluvial deposits of various thickness and extent. Colluvium is normally barren to sparsely vegetated. Narrow (1-3m) coarse gravel to boulder beaches are common. |  |
| Cc | CLIFFS WITH 1/3 to 2/3 COVERED BY BLOCKY, RUBBLY COLLUVIUM. As class Cb, but with more extensive colluvium. |  |
| Cd | CLIFFS WITH MORE THAN TWO-THIRDS TALUS. As class Cc, but mostly talus covered. As talus attains complete cover, this class grades into Hc. |  |
| Gl | GLACIERS - glacier ice which reaches the sea and results in calving. Unit includes associated lateral moraines and bluffs of till with small gravel beaches. Classes Cb, Cc and Cd are normally found juxtaposed. Where the ice has retreated to leave a gravel plain, class Pg or Ps takes precedence. |  |
| Hb | BLUFFS - ERODING HILLS. Steep slopes over 10m high of unconsolidated materials, generally free of talus, resulting from past or present erosion at the base. Gullies and a narrow beach at low tide are common. |  |
| Hc | COLLUVIAL HILLSLOPES. Smooth sloping colluvium, typically undergoing sheet wash or solifluction extending to narrow gravel beaches. This class occurs mostly in sheltered waters; exposure to significant wave action would quickly erode these materials and create beach or foreland conditions. This class grades into Cd with increasing slope. |  |
| Hr | ROCKY HILLS. Mainly bedrock controlled slopes, over $5-10^{o}$ which extend from over 10m elevation. Pockets of colluvium small pocket beaches, and sections of precipitous rock slopes are common. Stretches of narrow, coarse textured beaches may extend along the shoreline. Islands and reefs are common offshore. | |
| Hs | SLUMPS, Steep over 10 m. high slopes of unconsolidated, or weakly consolidated materials, which display rotational or planar slumping. Bowl scars, mud flows, gullies and narrow tidal beaches are common. | |
| Pb | ERODED PLAINS - CUTBANKS. Coastal plains of unconsolidated, cohesive materials such as clay - till or lacustine sediments which are eroded at the shoreline to produce low bluff backshores and typically narrow beaches. Similar coasts in bedrock are classified Pc. |  |
| Pc | ROCKY PLAINS WITH LOW CLIFFS. These normally occur as low rock forelands in front of rocky hills or high cliffs with talus. These rock forelands range in width from 10's of metres to 1-2 km and are typically less than 10 m high. Near vertical cliffs at the seaward end are common. Beaches of any king are rare. |  |
| Pf | FLUVIAL PLAINS - SANDFLATS - Extensive deposits (up to 100 $km^{2}$) of unconsolidated alluvial sand and/or silt resulting from rapid terrestrial erosion inland, and coinciding with wave and current free nearshore conditions; microrelief features such as channels and beach ridges are quickly obliterated by wind action. Shorelines may be marked by push ridges, but it is also common to find no beach forms whatever, just a smooth progression from land to sea |  |
| Pg | IRREGULAR PLAIN (formerly till plain, Pt). Similar to Pi in broad relief - plains of less than 10 m elevation near the coast and slopes typically less than $5^{o}$ to $10^{o}$, coupled with limited beach development and shallows nearshore. Medium to coarse sediments and irregular terrain prevail, such as related to morainal plains or strandlines. Strandlines on progressively inclined surfaces are classified as Br. |  |
| Pi | INCLINED PLAIN: Plains of less than 10 m elevation near the coast and slopes typically less than $5-10^{o}$, coupled with limited beach development and shallows nearshore. Fine to medium textured materials and smooth terrain prevail, such as related to emergent marine deposits or pediments. Local drainage is typically parallel and perpendicular to the coast. |  |
| Pl | LEVEL PLAIN. Extensive deposits of marine and/or fluvial deposits of fine textured materials coinciding with wave and current free nearshore conditions. Backshore is typically an almost zero relief plain with numerous shallow ponds, and possibly widely spaced low strandlines. Shorelines may be indicated by beach ridges, but it is also common to find no beach forms whatever, just a smooth progression from land to sea. Typically, the plain extends offshore with wide near-shore or tidal flats. |  |
| Po | ORGANIC PLAINS. A very low, often featureless plain or fringe of organic materials, usually associated with very sheltered waters. Shores are low banks of organic accumulations or progressive intermixing of open water and emergent vegetation. Usually recorded as the minor component in a shoreline rating. |  |
| Pr | ROCKY PLAINS. Rocky slopes of low elevation usually less than 10 m and slopes generally less than $5-10^{o}$. Patchy colluvial or moraine veneer and pocket beaches and fans and intermittent to scattered narrow gravel beaches occur. Islands, reefs and shoals are common offshore. |  |
| Ps | PLAINS WITH STEEP BACKSHORE (other than rock controlled). Forelands or plains consisting of unconsolidated sediments, usually as raised fans or raised marine platforms covered by beach deposits past or present. The plain changes abruptly to a steep backshore usually $20-35^{o}$ with a narrow contemporary beach. |  |
| Rf | RIVER MOUTH AND FLUVIAL COMPLEXES - includes features associated with river mouths: fans, deltas, estuaries, tidal flats marshes, baymouth bars, spits, etc. Smaller fans grade into Ps where isostatic rebound exceeds the stream's debris supply, causing the fan to be raised and the stream to incise. |  |
| U | UNDIFFERENTIATED CLIFFS, HILLS or PLAINS. In cases where imagery is poor and no field checks were made, it may be impossible to determine the sub-class. | |
| P | NEARSHORE FLAT. Indicates the presence of a low-slope tidal or nearshore flat extending 200 to several hundreds of metres off-shore. The flat may be composed of fine textured materials, particularly if associated with a level plain (Pl), or it may be a rock bench or platform with a patchy veneer of fines. On tidal flats, ie. where tidal range is typically greater than 1.5m, ice-rafted boulders may occur, singly, in nets or as boulder barricades. | |