

THE UNIVERSITY OF MANITOBA

THE ORGANIZATION OF PRODUCTION AND MARKET RELATIONS
IN A NOVA SCOTIAN INSHORE FISHING COMMUNITY

by

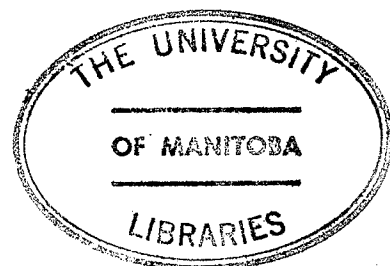
ADAM FRANCIS ANTHONY DAVIS

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES
IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE DEGREE
OF MASTER OF ARTS

DEPARTMENT OF ANTHROPOLOGY

October 1975



"THE ORGANIZATION OF PRODUCTION AND MARKET RELATIONS
IN A NOVA SCOTIAN INSHORE FISHING COMMUNITY"

by

ADAM FRANCIS ANTHONY DAVIS

A dissertation submitted to the Faculty of Graduate Studies of
the University of Manitoba in partial fulfillment of the requirements
of the degree of

MASTER OF ARTS

© 1975

Permission has been granted to the LIBRARY OF THE UNIVER-
SITY OF MANITOBA to lend or sell copies of this dissertation, to
the NATIONAL LIBRARY OF CANADA to microfilm this
dissertation and to lend or sell copies of the film, and UNIVERSITY
MICROFILMS to publish an abstract of this dissertation.

The author reserves other publication rights, and neither the
dissertation nor extensive extracts from it may be printed or other-
wise reproduced without the author's written permission.

ABSTRACT

This thesis analyzes the organization of production and market relations in an inshore fishing community on the southwestern shore of Nova Scotia. Field work upon which the study is based was carried out between May and September 1974. Traditional anthropological field techniques, particularly participant-observation, were employed in collecting the data. The theoretical approach used in the analysis is rooted in the materialist themes underlying a cultural ecological approach.

The thesis describes the articulation of environmental characteristics and historical events affecting economic relations which motivated the settlement and development of the inshore fishery in the Pagesville, Nova Scotia region. Changes in external market conditions were adjusted to by fishermen through the adoption of lobstering and the gasoline powered, Cape Island fishing boat. The role of women's labour in production was eliminated by the late 1920's with the introduction of federal standards for the processed product. In addition, the fishermen's control of production was reduced to 'from the water to the wharf!' The organization of production and market relations in contemporary Pagesville is the product of these forces and events.

The effective use of the material means of production depends on the fishermen's practical understanding of marine ecology. By acquiring an understanding of those aspects of marine ecology which most directly affect the behaviour of commercially valuable species, the fishermen attempt to minimize risk and maximize their chances of "a good day's fishing." The accumulation of this type of information is essential for success and may be considered an adaptation to the hunting character of fishing.

The social mechanisms governing the recruitment of labour, the composition of crews, the collection of information, the development of reciprocal exchange and mutual help relations, and the emphasis on co-operation are rooted in the requirements of successful commercial fishing. The social organization of production is the product of the demands placed on the fishermen for the effective use of a series of technologies and strategies within the constraints of the marine environment.

The fishermen are economically tied, through a credit system, to the local fish company which provides their only link with the external market. The federal government, through its policies and legislation, is directly assisting in the proletarianization of the inshore fishermen.

The relationship between ecological, economic, and historical factors has shaped the inshore fishermen's organization of production and market relations. The same processes, in the

form of decreasing fish and lobster stocks, governmental policies, and changing market conditions, are posing major problems in the economic well-being of inshore fishermen and the survival of the inshore fishing industry.

Preface

The field work for this study was carried out over four months during the summer of 1974 (May-September). Pagesville was selected because it visually fulfilled the criteria, i.e., population size, economic commitment to fishing and lobstering, location in an important lobstering region, and distance from major towns and cities, which I used to evaluate small communities while driving along the South Shore of Nova Scotia. I depended heavily on the traditional anthropological techniques of participation and observation in gathering data. In other words, I spent a great deal of time on the water learning the art of fishing and at dock side watching what went on. Much of the information in this thesis was obtained in the course of numerous informal conversations with fishermen. Other data-gathering methods were also employed from time to time. I conducted five open-ended interviews, two of which were tape recorded. In my opinion, field work of short duration can only rely on informal methods of data gathering because it takes a much longer time to establish the rapport and personal relations with informants that permit the researcher to reliably use 'objective' methods. The research for this study is exploratory in nature and is the first step towards a longer

and more intensive period of field work.

Following Faris (1972), I have used fictitious names for the communities and the persons involved in this study. First names were randomly selected from those commonly used in Pagesville-the Brazils. Surnames are disguised in a colour code. The purpose of this is to protect the confidence of those people who offered information and assistance.

From the point of view of research objectives, I believe that most of the goals I set have been realized. I found the four months in the field to be a rewarding and enriching experience. My wife and I are fortunate to have developed close friendships with several people in Pagesville-the Brazils as a result of the research opportunity. In many ways, I consider this to be the most important aspect of the experience.

Acknowledgements

I would like to thank my thesis committee, John S. Brierly, Roderick E. Burchard, Raymond E. Wiest, and especially Hymie Rubenstein, my committee chairperson, for support, encouragement, and constructive criticism. I am also grateful to Louise E. Sweet for the challenges and support which she offered throughout the various stages of the research.

A special debt of gratitude is owed to Margaret Hanna for the superb job on the figures and maps and Ms. Candice Hammock for her optimism, curses, prodding, and incredible typing. Also, a thanks is extended to Robert Fraser for advice, encouragement, and criticism.

For stimulation and constant support, I wish to give Rain a special thanks. When apprehension and depression were winning she drove them away. Lastly, I want to express gratitude to the people of Pagesville-the Brazils, particularly the Browns and the Greens, for opening their homes and their hearts to a couple of strangers.

Table of Contents

	Page
Preface	i
Acknowledgements	iii
List of Tables	vi
List of Maps	vii
List of Figures	viii
 Chapter	
1 Introduction	1
Thesis Outline	9
2 Environment, History, and Setting	10
The Environment	10
Settlement and History	23
Setting	48
Summary	51
3 Technology and the Ecology of Fishing	52
Technology	53
The Ecology of Inshore Fishing	68
The Ecology of Lobstering	85
Knowing and Using the Grounds	96
Territoriality	102
Markets and the Ecology of Production	106
Summary	108
4 The Social Organization of Production	109
Crew Composition	112
Division of the Catch	122
Reciprocal Relations and Information Flow	126
Summary	143

5	Market Relations	145
	The 'Truck System' Mercantile Economy	147
	A Note on the Influence of Government Action	161
	Summary	165
6	Conclusions	167
	Notes	176
	References Cited	178

List of Tables

Table		Page
1	A Summary of Monthly Sunlight Hours, Mean Temperature (F degrees), Precipitation (inches) for Brazil, 1964-74	17
2	Men Employed by Type of Fishery	33
3	Cultivated Land Compared with Total Land Occupied	34
4	Population in the Port Lameron Census Sub-District, 1870-1971	36
5	Landed Weights (lbs.) for Lobster by Season, 1971-73	92
6	Portion of the Seasons During Which the Major Percentage of Lobster Was Landed	93
7	Cognition and the Catch	106
8	Crew Composition - Fishing	113
9	Sharemen by Relation to Skipper by Method	114
10	Crew Composition - Lobstering	120
11	Catch Records, Expenses, Incomes	151
12	Export Value (\$/lb.), Main Marine Species, 1967-73	156
13	Landed Value (\$/lb.), Main Marine Species, 1967-73 (Nova Scotia)	156
14	Landed Values as a Percentage of Export Values, 1967-73	156
15	Percentage Increase in Landed Values Compared with Percentage Increase in Export Values, 1967-73	157

List of Maps

Map		Page
1	The Southwestern Coast of Nova Scotia	11
2	The Pagesville Region	13
3	The Pagesville Peninsula	15
4	The Pagesville Resource Area	98

List of Figures

Figure		Page
1	Cross Sections of the Pagesville Ground	23
2	A 'Fleet' of Longline	60
3	The Lobster Pot	64
4	The Basic Food-Chain of the Marine Environment	75
5	The Food-Chain of the Benthic Ecosystem	90

CHAPTER 1

INTRODUCTION

This thesis describes and explains the organization of production and market relations in a fishing community located on the southwestern shore of Nova Scotia. Over the last twenty years there has been an increasing amount of anthropological research concerned with fishermen and fishing cultures. The published material can be divided into two general categories: studies of labour intensive peasant fishermen (cf. Breton 1973; Faris 1972; Forman 1970; Firth 1966; Nietschmann 1973) and studies of industrial fishermen organized on a quasi-factory basis in a capital intensive industry (cf. Tunstall 1964; Wadel 1972). The fishermen dealt with in this study are self-employed, petty commodity producers who own and control the material means of production. They fish for the purpose of providing a valuable commodity for an urban-based, commercial market. Very little, if any, of their productive efforts can be thought of as subsistence oriented. In other words, the relation of these fishermen to the industrial, urban economy is identical to that of North American farmers. As primary producers, they are a vital and thoroughly integrated part of the industrial economy.

The theoretical perspective used here could best be characterized as rooted in cultural ecology with emphasis on the materialist themes underlying this orientation. As Nietschmann (1972:1) has noted:

Hunters do not range randomly through their environments in search of game. Nor do fishermen move aimlessly across stretches of water seeking undifferentiated fish. Hunting and fishing efforts are usually highly focused on specific animals, in specific locales, and at specific times of the year.

The functional relationship which exists between the fishermen's productive efforts and those characteristics of marine ecology that most directly effect the behaviour of commercially valuable species is readily apparent in the fishermen's daily and seasonal cycles of activity. In fact, aspects of their use of time and the importance of certain intra-fishermen exchange relationships can be considered as responses to the need of maximizing the chances at 'a good day's fishing' given that the fishermen do not have any means of controlling the availability of fish and lobster.

The concepts of environmental potential and subsistence risk, as developed by Porter (1965;1970), are particularly useful in this context. Initially, Porter notes that the potential of any given environment is a function of technological capability coupled with the social organization of production (Porter 1965:409; 1970:190). Expanding on this theme, he states that:

All human activities involve risk. Men have devised individual and institutional strategies to cope with these dangers...It is, I feel, in the geography of subsistence risks that a meaningful link can be forged between subsistence economies and environmental potentials. Subsistence risk is not given in nature, it is a settlement negotiated between an environment and a technology... We may assume that in the degree to which the situation is tenuous, adjustment to risk is the essential element in the articulation of subsistence with environment (Porter 1965:411-412).

Success in terms of minimizing risk rests on the ability of Western North Atlantic inshore fishermen to negotiate a settlement between their mode of production and the marine environment. This negotiation is the product of the relationship between historical processes, technological developments, market demands and human needs.

In commercial fishing, environmental potential is defined in a slightly different manner than it is in pre-industrial economies. Although the effective articulation of technological strategies and the social organization of production within the context of the marine environment must be considered important in the interpretation of environmental potentials, the market place in the industrial economy is, in the final analysis, the key element in the equation. By this I mean it is the market place that defines which species of fish will pay and thereby provide the fishermen with a livelihood. As the result of this factor, the overall potential of the marine environment, from the fisherman's

point of view, is dramatically limited. Hence, in attempting to minimize risk, the fishermen must endeavour to maximize production within the constraints set by the market place.

A comprehensive understanding, on the part of the fishermen, of those characteristics of their 'effective' marine environment which influence their access to commercial fish is essential if they hope to realize 'a good day's fishing'. In other words, the fishermen must know about the marine environment before they can use it to their productive advantage. It is this factor which explains the non-randomness of their mode of production. The organization of production of the inshore fishermen in the Western North Atlantic can only be appreciated within such a context.

This position is consistent with that expressed in most of the literature concerned with cultural ecology. For example, Netting has asserted that in utilizing the ecological approach:

We begin with the functionalist notion that "institutions are instrumentalities fulfilling certain ends (Goldschmidt 1959:120)" and focus on those institutions whose purpose is production or protection and show most clearly the links of reciprocal influence with exploitative activities...The following factors seem to be regularly and instrumentally related to ecological considerations.

- 1/ The size, density, and aggregation of the population.
- 2/ The division of labour and the composition of productive groups.
- 3/ The rights to the means of production.
(Netting 1968:16).

Starting with the notion that the purpose and organization of social production rests upon human needs to meet certain material requirements, such as procuring food, the cultural ecologist concentrates his attention on the manner in which humans act on and are influenced by their 'effective' environmental context in striving to realize material objectives. This involves a thorough examination of those social forms, institutions, and cultural strategies which most directly influence access to the material means of production and the manner of human utilization of and articulation with the environment. The reason this method of study has been used primarily in the context of non-industrial production is that it best suits situations in which humans obtain their subsistence directly from the natural environment.

The applicability of the ecological method to a study of the organization of production among Nova Scotian inshore fishermen is evident in that, although they are petty commodity producers in an industrial economy, their production pivots on an intimate interrelationship with and a thorough understanding of the marine environment. Inshore fishing is a hunting activity in which the fishermen must locate the fish before they can catch them. This demands an understanding of the marine environment so that production may be maximized. It should be made clear that this factor only operates at the fisherman's level of production. He

has almost no influence on the market and the prices he receives for his catch. The industrial-commercial market place determines the parameters of the fisherman's 'effective' environment. Indeed, when we leave the fisherman's organization of production and begin talking about market relations, we start dealing with a totally different system of relations which are based on the nature of exchange within a market economy.

In this study I deal with two separate but inter-related phenomena: the inshore fishermen's mode of production and the concomitant area of market relations. I examine the historical, economic, and ecological considerations that have fashioned the manner in which fish and lobster are caught and sold.

A mode of production emerges from the interplay of factors such as historical processes, e.g., changes in market conditions which effect production capabilities by altering the availability of labour, the social and material requirements for the effective use of any given technologies, e.g., the mechanisms by which producers gain access to the material means of production and membership in the social relations of production, and the necessity of minimizing risk and maximizing returns for productive efforts. The role of the fishermen's interrelationship with their 'effective' environment is particularly important in this process. A mode of production

has a specific direction in terms of its action on and exploitation of particular environmental relationships and desired species. The non-randomness of production stipulates that the technologies and social relations associated with production must accommodate ecological realities in the course of their development. Moreover, the success or failure of changes in any mode of production is a function of the ability of the 'new' mode of production to minimize risk within the context of the 'effective' environment, regardless of changes in external material conditions. Only through using an ecological perspective within the context of historical materialism can we best appreciate the nature of the organization of production in groups such as Nova Scotian inshore fishermen.

In examining the organization of production and market relations, considerations such as the importance of access to information resources, intra-harbour exchange relationships, crew composition, and technological strategies are dealt with in detail. Moreover, I emphasize three specific processes involved in the fashioning of the organization of production and market relations.

1. Social Change. Since cultural ecological studies have tended to emphasize synchronic interaction while giving little consideration to the processes of diachronic change (cf. Rappaport

1967; Nietschmann 1973), I intend to illustrate the manner in which the organization of production and market relations among the Nova Scotian inshore fishermen in Pagesville have undergone dramatic change over the last one hundred years as a result of their marginal position in the industrial, commercial market economy. In particular, I show the impact that external changes in market conditions have had on the fishermen's relationship with their effective environment.

2. Territoriality. The notion of 'territoriality' among inshore fishermen has been offered as one of the basic characteristics in their organization of production (cf. Acheson 1972; Forman 1970). Contrary to this, I suggest that the intensity of the fishermen's sense of 'ownership' or 'control' over specific resource areas is a function of fluctuating ecological relationships which effect the occurrence and abundance of important commercial species.

3. Proletarianization. I illustrate that, over the past one hundred years, policies initiated by the provincial and federal governments have led to the progressive proletarianization of the inshore fishermen. At the same time, these governmental initiatives have been designed in a manner to encourage the development of a capital, as opposed to labour, intensive fishing industry. I show that policies concerning

areas such as boat subsidy programmes, processing standards, and unemployment insurance benefits have functioned to force men out of the inshore fishing industry and into the offshore industry, to progressively restrict the fishermen's control over the fish product, to alienate the role of women's labour from the production process, and to benefit the growth of large, semi-monopolistic fish companies.

Thesis Outline

Chapter 2 describes the environmental setting and historical background of the Pagesville-Brazils area in southwestern Nova Scotia. An emphasis is placed on the environmental factors and historical processes which motivated settlement, encouraged the development of the inshore fishery, and fashioned the contemporary organization of production. Chapter 3 deals with the main technological strategies as well as a detailed discussion of the ecology of fishing and lobstering. This chapter focuses on the fishermen's perceptions and use of the marine environment. Chapter 4 describes the inshore fishermen's social organization of production. The principles governing crew composition, division of the value of the catch, intra-harbour reciprocal relations and information flow are dealt with in detail. Chapter 5 examines aspects of 'harbour-level' exchange, the relationship between the fishermen and the fish buyer, and the role of governmental policies. Chapter 6 summarizes the main findings of the study and makes several recommendations for future research.

CHAPTER 2

ENVIRONMENT, HISTORY, AND SETTING

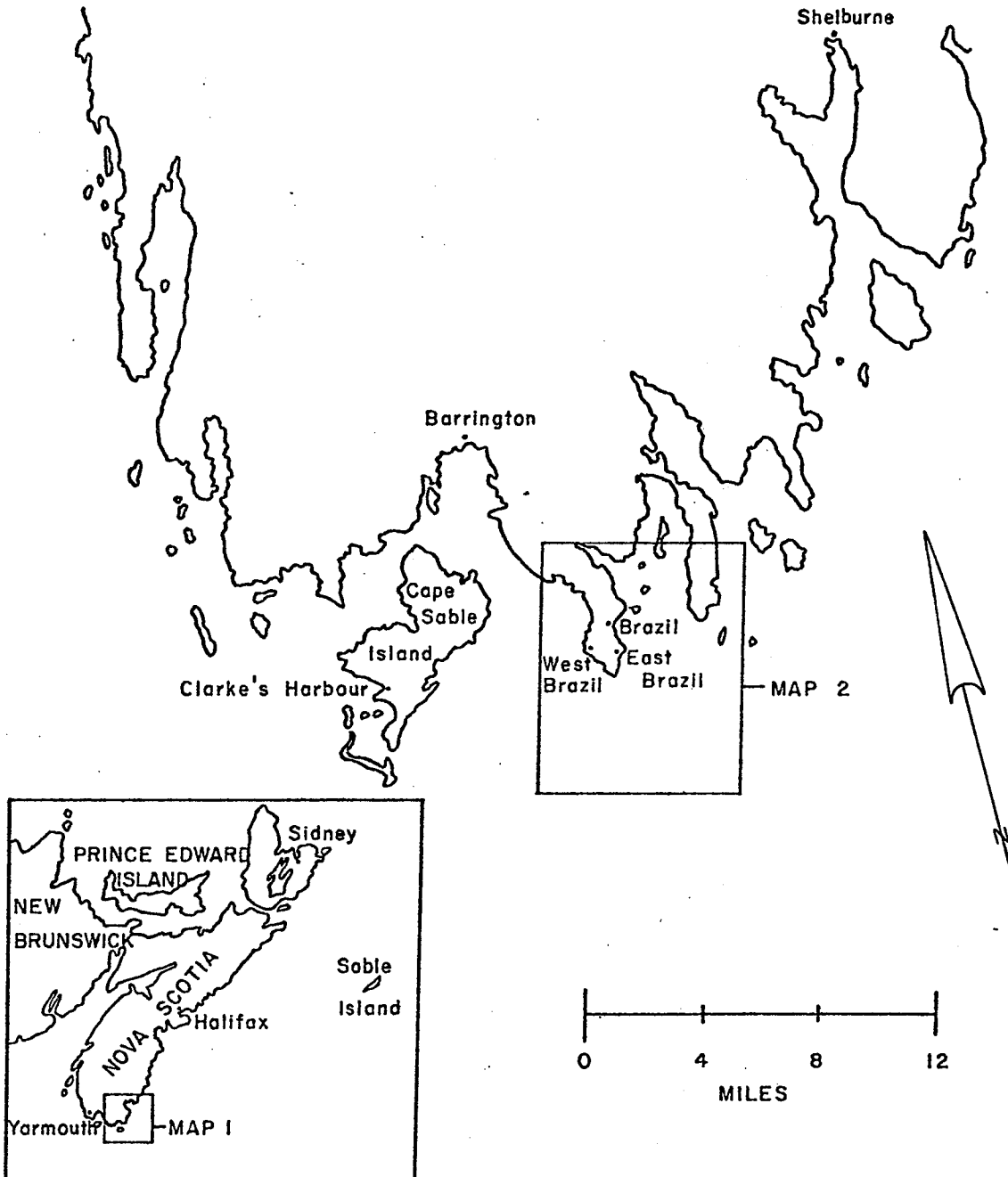
The Pagesville region is located approximately 160 miles southwest of Halifax and 60 miles northeast of Yarmouth on the South Shore of Nova Scotia (Map 1). The origin and development of the inshore fishery in this area was a function, to a large extent, of historic forces and environmental characteristics. In this chapter those aspects of the physical environment critical to the establishment of an inshore fishery are described and discussed. An emphasis is placed on the historical forces which motivated the settlement of the region and fashioned the contemporary situation.

The Environment

The coastline of southwestern Nova Scotia is characterized by a high degree of irregularity and roughness. Steep headlands, deep bays, reefs, and rocky islands, the result of massive glacial action, are the dominant features of the landscape (Clark 1968:21; Clibbon and Hamelin 1968:64). The Pagesville landscape and seacoast reflect this general pattern. The communities on the northeastern side of the peninsula are located on an estuary which extends approximately five miles inland. Although deep in parts, the great number

MAP 1

The Southwestern Coast of Nova Scotia



Adapted from: Department of Mines and Technical Surveys.
National Topographic Series. Sheet 20-0, p.

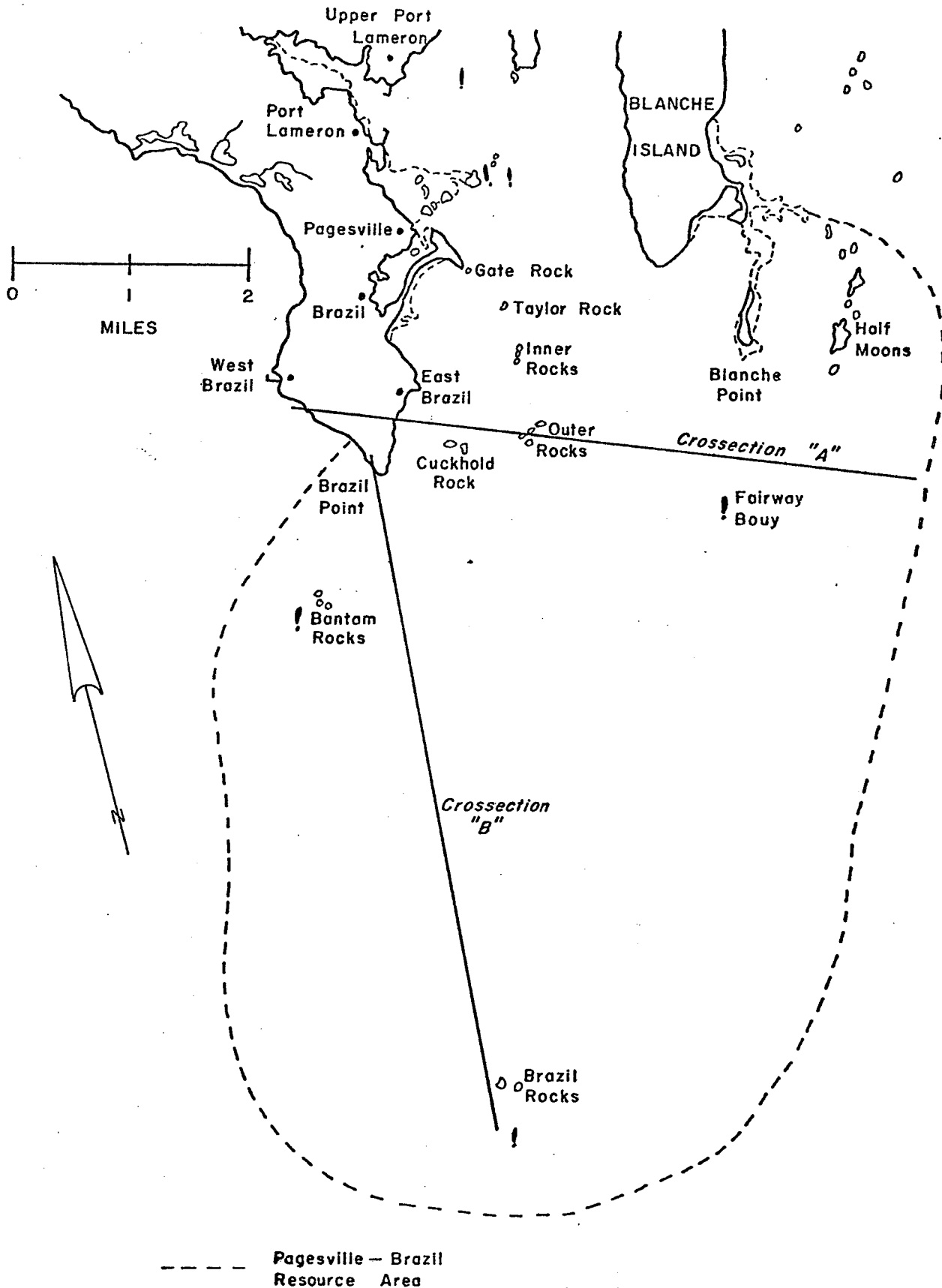
of rocky islands, reefs, and semi-submerged rocks that characterize the estuary, limit its use to shallow-draft vessels (Map 3).

The protective value of the Upper Port Lameron and Port Lameron harbour facilities is drastically limited because the southwest side of the estuary, the Pagesville peninsula, extends approximately two miles further out into the Atlantic than its northeast side, Blanche Island. Hence, boats moored in these harbours receive little protection from storms and wave action coming from a southeasterly direction. Artificial breakwaters have been constructed to compensate for this deficiency.

The Pagesville facilities, however, are nestled behind a sand-spit island complex, Crow's Neck Island. It gives total protection from storms, winds, and wave action regardless of their intensity and direction (Map 3). Although the harbour is shallow and therefore limited to small craft, it is large and offers the fishermen many ideal mooring places. The physical attributes of this harbour, considered together with those of the estuary, explain, to a large extent, why the majority of fishermen in this area have always preferred to fish out of Pagesville.

Glacial action, in the shaping of the seacoast, laid the foundation upon which the contemporary landscape rests. During the formative period, the area was scoured and

The Pagesville Region



Adapted from: Department of the Environment. Marine Sciences Branch. Canadian Hydrographic Service. #4215.