

Kelp Inventory, 1978

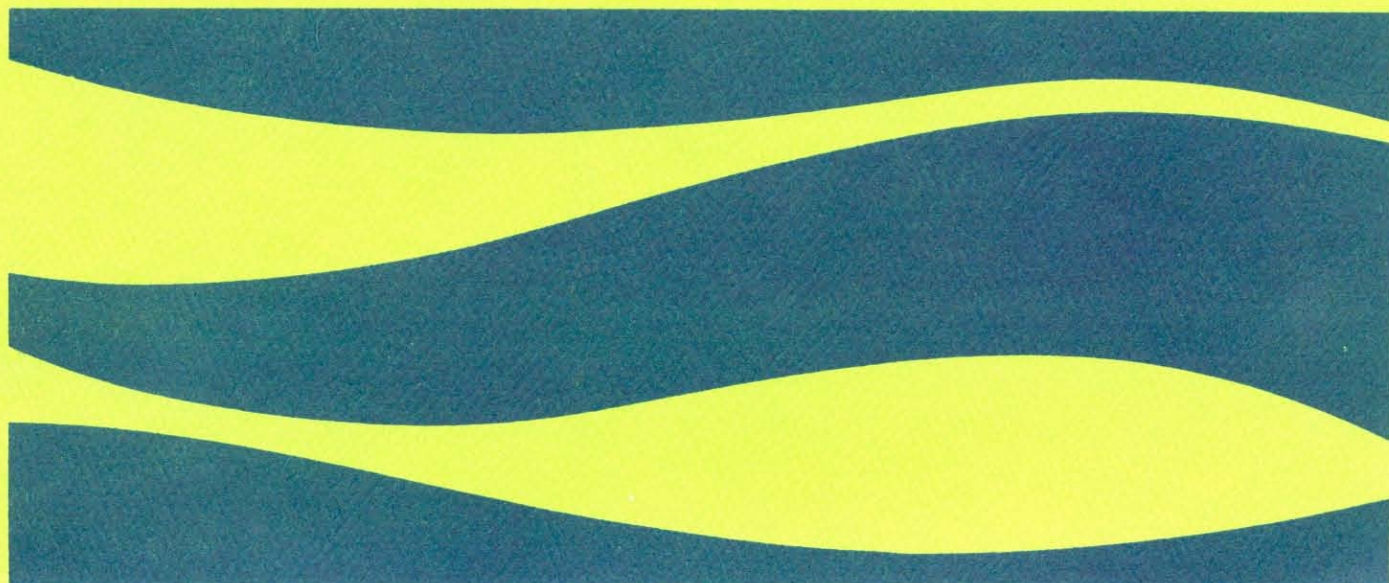
Northwest Coast of Vancouver Island

**L.M. Coon
W.G. Roland
I.R. Sutherland
R.A. Hall**



marine resources branch

Ministry of Environment
PROVINCE OF BRITISH COLUMBIA



Canadian Cataloguing in Publication Data

Main entry under title:

Kelp inventory, 1978

(Fisheries development report, ISSN 0228-5975 ;
no. 28)

ISBN 0-7719-8944-X

I. Kelp. I. Coon, L. M., 1946- . II. British
Columbia. Marine Resources Branch. III. Series.

QK571.7.B7K443

589.4'5

C82-092151-3

KELP INVENTORY, 1978

NORTHWEST COAST OF VANCOUVER ISLAND

by

L. M. Coon, W. G. Roland, I. R. Sutherland and R. A. Hall

Fisheries Development Report No. 28

Marine Resources Branch
Ministry of Environment
Province of British Columbia

March, 1982

ABSTRACT

The Kelp Inventory Method (KIM-1) developed by Foreman (1975) was used to estimate standing crop biomass of two canopy forming kelps along the northwest coast of Vancouver Island. Results indicated that 35,044 tonnes of pure Nereocystis luetkeana, 523 tonnes of pure Macrocystis integrifolia and 247 tonnes of these kelps in mixed stands were available at mean water level in this region. Total bed surface area was estimated to be 840 hectares. Five charts are presented which show the position, extent, species, and density classification of every discernable kelp bed for each of five geographic subdivision within the survey area. For management purposes, all inventoried coastlines were divided into permanent, numbered, kilometer wide blocks. The results of this survey are compared to those obtained in a private kelp survey performed in 1967.

ACKNOWLEDGEMENTS

The authors wish to thank Nellie Lee for her careful typing of the several drafts of this manuscript.

INTRODUCTION

Nereocystis luetkeana (Mertens) Postels and Ruprecht and Macrocystis integrifolia Bory form beds along extensive portions of the British Columbia coast. Beginning in 1975 the Marine Plant Management and Development Section of the Marine Resources Branch undertook a program to locate and quantify the standing crop of these economically important kelps using the inventory method (KIM-1) developed by Foreman (1975). Five areas were surveyed in August and September, 1976 (Field et al, 1977; Field and Clark, 1978; Coon et al, 1979; Coon et al, 1980; Coon et al, 1981). This report contains the results of our 1978 survey of the northwest coast of Vancouver Island. A small portion of our survey area overlapped with an earlier survey carried out by M. W. Huff and Co; the results of the two surveys are compared for the area of overlap.

Accurate and comprehensive data on the standing crop of kelp in British Columbia provide a basis for allocating these resources through licensing and for establishing area specific harvest quotas. Because kelp beds are important to other marine species, there are a growing number of other users of kelp inventory data, including those preparing environmental impact statements for major coastal developments. Inventory charts will also be of value to those conducting surveys of herring spawn, abalone and sea urchins (Coon, 1977).



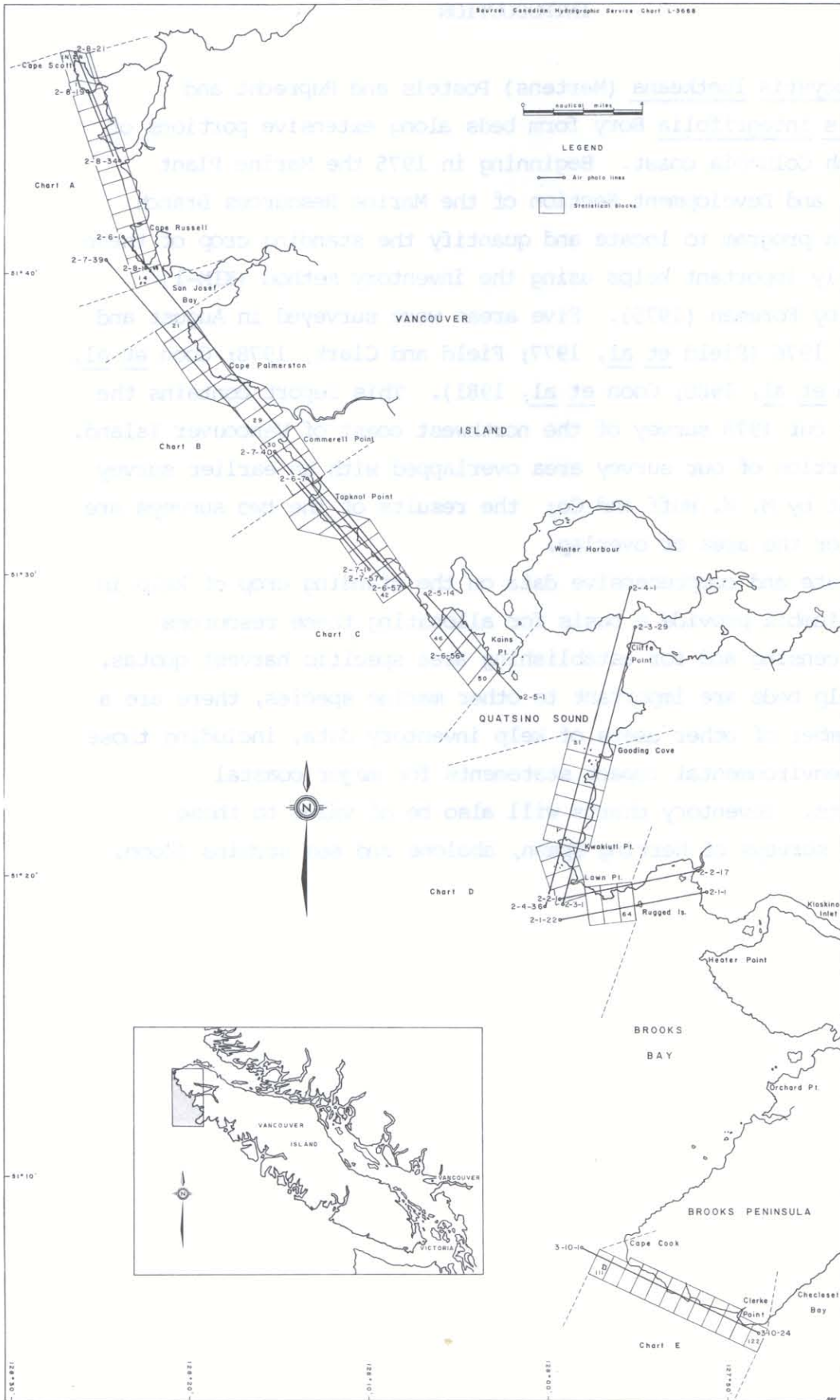


Figure 1: The northwest coast of Vancouver Island, showing the area inventoried for floating kelp resources and the mode of division of this area into inventory charts (see Appendix). Also indicated are the layout of statistical blocks, aerial photographic flight lines and locations of biomass sampling stations.

