Northwest Atlantic



Fisheries Organization

Serial No. N2168

NAFO SCS Doc. 93/2

Provisional Index of Journal of Northwest Atlantic Fishery Science and NAFO Scientific Council Studies, 1987-93

by

NAFO Secretariat

CONTENTS

	Page
Introduction	. 1
Map of NAFO Area	. 2
List of Titles	. 3
Subject Index	. 13
Author Index	. 25

Introduction

In its consideration of the indexing of the Scientific Council's meeting documents and published papers at the June 1984 Meeting (NAFO, 1984), the Standing Committee on Publications (STACPUB) agreed to proceed with the publication of a 5-year index which would include all meeting documents to the end of 1984 (NAFO, 1985). At that time, it was decided not to proceed with publication of a 5-year index of published papers in the Journal of Northwest Atlantic Fishery Science and NAFO Scientific Council Studies, because the volume of material was too low. However, it was agreed that a provisional index of these papers would be useful as a Summary Document, with consideration to be given to a formal publication of an index when the volume of material were greater. The first such document was NAFO SCS Doc. 87/07 which contained all issues of the Journal of Northwest Atlantic Fishery Science (Vol. 1-7(1) inclusive) and NAFO Scientific Council Studies (No. 1-10 inclusive) to the end of 1986.

This provisional index contains the lists of contents of the Journal of Northwest Atlantic Fishery Science Vol. 7 (2) to Vol. 14 inclusive, which were issued between December 1988 and February 1993, and the contents of NAFO Scientific Council Studies No. 11-17 inclusive, which were issued between March 1987 and February 1993.

Subject and Author Indexes

Compilation of the subject and author indexes have generally followed the guidelines that were used in preparing the Index and List of Titles for Research and Summary Documents. This volume is divided into three sections: 1) List of Titles, 2) Subject Index and 3) Author Index. The List of Titles presented by volume lists the authors, the full title and the first page number of the paper in that volume. In the next two sections, subjects and authors are listed alphabetically, respectively. Each paper is identified by a letter (I for journal and S for Studies), followed by the volume number, a colon, and the first page number of the paper. This is followed in parenthesis by a shortened version of the title or a short expression which indicates the object of the reference paper. In the preparation of the Subject Index, key words were selected from the titles and abstracts. The subjects basically focus on species, geographic area and specific biological, environmental aspects and methodology. Species names are listed by common names and geographic areas are broad, although some specific areas are given where possible. In the Author Index, all authors and co-authors are listed. Some users of this index may find the map useful in locating some place names and also the NAFO Divisions and Subareas which are frequently mentioned in the text.

	4. 4	
	А	·
1		
1		
: 		
i i		
1		
ŧ		
1		
1		
-		
THE PERSON NAMED IN		
1		

LIST OF TITLES

Journal of Northwest Atlantic Fishery Science

Volume 7 (Dec. 1988)1

TEMPLEMAN, Wilfred. Length-weight Relationships, Morphometric Characteristics and Thorniness of Thorny Skate (Raja radiata) from the Northwest Atlantic	89
MAZHIRINA, G. P., and A. A. FILIN. Gonad Development and Spawning of Notoscopelus krøyeri in the Northwest Atlantic, with Observations on Other Biological Characteristics	99
POTTER, David C., and R. Gregory LOUGH. Vertical Distribution and Sampling Variability of Larval and Juvenile Sand Lance (Ammodytes sp.) on Nantucket Shoals and Georges Bank	107
MOHN, R. K., G. ROBERT, and D. L. RODDICK. Research Sampling and Survey Design for Sea Scallops (<i>Placopecten magella</i> nicus) on Georges Bank	117
HURLEY, G. V., M. J. TREMBLAY, and C. COUTURIER. Age Estimation of Sea Scallop Larvae (Palacopecten magellanicus) from Daily Growth Lines on Shells	123
NAIDU, K. S. Efficiency of Meat Recovery from Iceland Scallops (Chlamys islandica) and Sea Scallops (Placopecten magellanicus) in the Canadian Offshore Fishery	131
GAVARIS, S., and S. J. SMITH. Effect of Allocation and Stratification Strategies on Precision of Survey Abundance Estimates for Atlantic Cod (Gadus morhua) on the Eastern Scotian Shelf	137
OVERHOLTZ, William J. Factors Relating to the Reproductive Biology of Georges Bank Haddock (Melanogrammus aeglefinus) in 1977-83	145
TEMPLEMAN, Wilfred. Differences in Sexual Maturity and Related Characteristics Between Populations of Thorny Skate (Raja radiata) in the Northwest Atlantic	155
Volume 8 (Dec. 1988)	
SMITH, P. C., and H. SANDSTRÖM. Physical Processes at the Shelf Edge in the Northwest Atlantic	5
PINHORN, A. T. Catchability in Some of the Major Groundfish Fisheries off the East Coast of Canada	15
GODØ, O. R., and T. HAUG. Tagging and Recapture of Atlantic Halibut (Hippoglossus hippoglossus L.) on the Continental Shelves off Eastern Canada, and off Western and Eastern Greenland	25
CREASER, E. P., and D. A. LIBBY. Seasonal Movements of Juvenile and Adult Herring (Clupea harengus L.) Tagged Along the Maine and New Hampshire Coasts in 1976-82	33

This is contents of No. 2 only, No. 1 of Volume 7 was issued in 1986.

LIST OF TITLES

TREMBLAY, M. J., and M. M. SINCLAIR. The Vertical and Horizontal Distribution of Sea Scallop (Placopecten magellanicus) Larvae in the Bay of Fundy in 1984 and 1985	43
ANDERSON, J. T. A Review of Size Dependent Survival During Pre-recruit Stages of Fishes in Relation to Recruitment	55
AUSTER, P. J. A review of the Present State of Understanding of Marine Fish Communities	67
Volume 9(1) (Sep. 1989)	
WINTERS, G. H. Life History Parameters of Sand Lances (Ammodytes spp.) from the Coastal Waters of Eastern Newfoundland	5
MAYO, R. K., J. M. McGLADE, and S. H. CLARK. Patterns of Exploitation and Biological Status of Pollock (<i>Pollachius virens</i> L.) in the Scotian Shelf, Georges Bank, and Gulf of Maine Area	13
CLAY, D., W. T. STOBO, B. BECK, and P. C. F. HURLEY. Growth of Juvenile Pollock (Pollachius virens L.) Along the Atlantic Coast of Canada with Inferences of Inshore-Offshore Movements .	37
TEMPLEMAN, W. Variation of Vertebral Numbers with Fish Length in Atlantic Cod (Gadus morhua) of the Eastern Newfoundland Area, 1947-71	45
PÁLSSON, O. K., E. JONSSON, S. A. SCHOPKA, G. STEFANSSON, and B. Æ. STEINARSSON. Icelandic Groundfish Survey Data Used to Improve Precision in Stock Assessments	53
MAHON, R., and R. W. SMITH. Comparison of Species Composition in a Bottom Trawl Calibration Experiment	73
BUCH, E., and M. STEIN. Environmental Conditions off West Greenland, 1980-85	81
Volume 9(2) (Dec. 1989)	
MOUNTAIN, D. G., M. PASTUSZAK, and D. A. BUSCH. Slope Water Intrusion to the Great South Channel During Autumn, 1977-85	97
LOENG, H. The Influence of Temperature on Some Fish Population Parameters in the Barents Sea	103
OVERHOLTZ, W. J. Density-dependent Growth in the Northwest Atlantic Stock of Atlantic Mackerel (Scomber scombrus)	115
PARSONS, D. G., V. L. MERCER, and P. J. VEITCH. Comparison of the Growth of Northern Shrimp (Pandalus borealis) from Four Regions of the Northwest Atlantic	123
GODØ, O. R., and A. ENGÅS. Swept Area Variation with Depth and its Influence on Abundance Indices of Groundfish from Trawl Surveys	133

LIST OF TITLES	5	
ATKINSON, D. B. Seasonal Distribution of Sharp-beaked Redfish (Sebastes spp.) in Northeastern Grand Bank	141	
Volume 10 (Dec. 1990)	•	
HALLIDAY, R. G., and A. T. PINHORN. The Delimitation of Fishing Areas in the Northwest Atlantic	1	
Volume 11 (Feb. 1991)		
ATKINSON, D. B. Relationships Between Pre-anal Fin Length and Total Length of Roughhead Grenadier (Macrourus berglax Lacépède) in the Northwest Atlantic	7	
NELSON, G. A., and M. R. ROSS. Biology and Population Changes of Northern Sand Lance (Ammo dytes dubius) from the Gulf of Maine to the Middle Atlantic Bight	11	
ROBICHAUD, D. A., and A. CAMPBELL. Annual and Seasonal Size-frequency Changes of Trapcaught Lobsters (Homarus americanus) in the Bay of Fundy	29	
FOWLER, G. M., and W. T. STOBO. Comparative Recoveries of Spaghetti Tags and Petersen Disc Tags on Atlantic Cod (Gadus morhua) and American Plaice (Hippoglossoides platessoides)	39	
KENCHINGTON, T. J. Vertical Distribution and Movements of Larval Redfishes (Sebastes spp.) in the Southern Gulf of St. Lawrence	43	
KOELLER, P. A. Approaches to Improving Groundfish Survey Abundance Estimates by Controlling the Variability of Survey Gear Geometry and Performance	51	
AUSTER, P. J., R. J. MALATESTA, S. C. LaROSA, R. A. COOPER, and L. L. STEWART. Microhabitat Utilization by the Megafaunal Assemblage at a Low Relief Outer Continental Shelf Site Middle Atlantic Bight, U.S.A.	59	•
Volume 12 (Jan. 1992)		
RIGET, F., J. BOJE, and V. SIMONSEN. Analysis of Meristic Characters and Genetic Differentiation in Greenland Halibut (Reinhardtius hippoglossoides) in the Northwest Atlantic	. 7	
BURNETT, J., M. R. ROSS, and S. H. CLARK. Several Biological Aspects of the Witch Flounder (Glyptocephalus cynoglossus (L.)) in the Gulf of Maine-Georges Bank Region	15	
STOBO, W. T., G.M. FOWLER, and A. F. SINCLAIR. Short-term Tagging Mortality of Laboratory Held Juvenile Atlantic Herring (Chapea h. harengus)	27	
GRISWOLD, C. A., and M. J. SILVERMAN. Fecundity of the Atlantic Mackerel (Scomber scombrus) in the Northwest Atlantic in 1987	-35	

American Sand Lance (Ammodytes americanus Dekay) off the North Shore of the Gulf of St. Lawrence
LANGE, A. M., and G. T. WARING. Fishery Interactions Between Long-finned Squid (Loligo pealei) and Butterfish (Peprilus triacanthus) off the Northeast USA
ARKHIPKIN, A. I. Reproductive System Structure, Development and Function in Cephalopods with a New General Scale for Maturity Stages
Volume 13 (Dec. 1992)
KEATS, D. W., and D. H. STEELE. Diurnal Feeding of Juvenile Cod (Gadus morhua) which Migrate into Shallow Water at Night in Eastern Newfoundland
SINCLAIR, A. Fish Distribution and Partial Recruitment: The Case of Eastern Scotian Shelf Cod .
SERCHUK, F. M., and S. E. WIGLEY. Assessment and Management of the Georges Bank Cod Fishery: An Historical Review and Evaluation
NELSON, G. A., and M. R. ROSS. Distribution, Growth and Food Habits of the Atlantic Wolffish (Anarhichas lupus) from the Gulf of Maine-Georges Bank Region
HUNT, J. J. Morphological Characteristics of Otoliths of Selected Fish in the Northwest Atlantic
DEGOURSEY, R. E., and P. J. AUSTER. A Mating Aggregation of the Spider Crab (Libina emarginata)
McGARVEY, R., F. M. SERCHUK, and I. A. McLAREN. Statistics of Reproduction and Early Life History Survival of the Georges Bank Sea Scallop (Placopecten magellanicus) Population
Volume 14 (Dec. 1992)
FOGARTY, M. (Convener). Report of Special Session
GOMES, M. C., R. L. HAEDRICH, and J. C. RICE. Biogeography of Groundfish Assemblages on the Grand Bank
GABRIEL, W. L. Persistence of Demersal Fish Assemblages Between Cape Hatteras and Nova Scotia, Northwest Atlantic
BRODIE, W. B. Analysis of American Plaice, Cod and Yellowtail Flounder Catches in Research Vessel Surveys on the Tail of the Grand Bank, 1971-89
MAYO, R. K., M. J. FOGARTY, and F. M. SERCHUK. Aggregate Fish Biomass and Yield on Georges Bank 1960-1987

LIST OF TITLES	7
MURAWSKI, S. A., and J. S. IDOINE. Multispecies Size Composition: A Conservative Property of Exploited Fishery Systems?	79
WALDRON, D. E. Diet of Silver Hake (Merluccius bilinearis) on the Scotian Shelf	87
SIGAEV, I. K. On Possible Causes of Year-class Variability of Scotian Shelf Silver Hake (Merluccius bilinearis)	103
SEREBRYAKOV, V. P., A. K. CHUMAKOV, and I. I. TEVS. Spawning Stock, Population Fecundity and Year-class Strength of Greenland Halibut (Reinhardtius hippoglossoides) in the Northwest Atlantic, 1969-88	107
PEZZACK, D. S. A Review of Lobster (Homarus americanus) Landing Trends in the Northwest Atlantic, 1947-86	115
PAZ, J., and M. G. LARRAÑETA. Cod Year-class Variations and Abundance of Other Commercial Fish in NAFO Divisions 3NO	129
MESSIEH, S. N. Fluctuations in Atlantic Herring (Clupea harengus) Populations in the Northwestern Atlantic with Particular Emphasis on the Gulf of St. Lawrence Stocks	135
BAIDALINOV, A. P. Influence of Long-term Changes of Sea-surface Temperature on the State of Some Fish Stocks in the Northwest Atlantic	137
TROYANOVSKY, F. M. Observations on Non-maturing Redfish (Sebastes mentella Travin) in the Northwest Atlantic	145
NAFO Scientific Council Studies	
Number 11 (Mar. 1987)	
SEREBRYAKOV, V. P., A. V. ASTAFJEVA, V. K. ALDONOV, and A. K. CHUMAKOV. USSR Ichthyoplankton investigations on Flemish Cap, 1978-83	7
DRINKWATER, K. F., and R. W. TRITES. Overview of Environmental Conditions in the Northwest Atlantic in 1985	23
HANSEN, HOLGER H. Changes in Size-at-age of Atlantic Cod (Gadus morhua) off West Greenland, 1979-84	37
SAVVATIMSKY, P. I. Changes in Species Composition of Trawl Catches by Depth on the Continental Slope from Baffin Island to Northeastern Newfoundland, 1970-85	43
MESSIEH, S. N. Some Characteristics of Atlantic Herring (Clupea harengus) Spawning in the Southern Gulf of St. Lawrence	53
ERMOLCHEV, V. A. On Estimating the Average Target Strength of Pelagic Fishes in situ by Acoustic Methods	63

T i

8

LIST OF TITLES

Fundy, 1951-80 Mean Temperature and Salinity Conditions Near the Entrance to the Bay of	71
HALLIDAY, R. G., and A. F. SINCLAIR. Fishing Grounds of Groundfish Longliners from the Cape Sable Island Area, Southwestern Nova Scotia, in 1982-84	75
Special Session on Recruitment Studies: Editorial Note	81
GROSSLEIN, M. D., and G. R. LILLY. Summary Report of the Special Session on Recruitment Studies	83
GROSSLEIN, M. D. Synopsis of Knowledge of the Recruitment Process for Atlantic Herring (Clupea harengus), with Special Reference to Georges Bank	91
LILLY, G. R. Synopsis of Research Related to Recruitment of Atlantic Cod (Gadus morhua) and Atlantic Redfishes (Sebastes sp.) on Flemish Cap	109
Number 12 (Mar. 1988)	
RIGET, Frank, and Jesper BOJE. Distribution and Abundance of Young Greenland halibut (Reinhardtius hippoglossoides) in West Greenland Waters	7
RIGET, FRANK, and J. MESSTORFF. Distribution, Abundance and Migration of Atlantic Wolffish (Anarhichas lupus) and Spotted Wolffish (Anarhichas minor) in West Greenland Waters	13
HOVGÅRD, HOLGER. Effects of Selectivity on Results from Gillnet Surveys for Young Atlantic Cod (Gadus morhua L.) in West German Waters	21
HALLIDAY, R. G. Use of Seasonal Spawning Area Closures in the Management of Haddock Fisheries in the Northwest Atlantic	27
ALBIKOVSKAYA, L. K. Some Aspects of the Biology and Distribution of Glacier Lanternfish (Benthosema glaciale) over the Slopes of Flemish Cap and Eastern Grand Bank	37
DRINKWATER, K. F., and R. W. TRITES. Overview of Environmental Conditions in the Northwest Atlantic in 1986	43
PETRIE, B., S. AKENHEAD, J. LAZIER, and J. LODER. The Cold Intermediate Layer on the Labrador and Northeast Newfoundland Shelves, 1978-86	57
STEIN, M. Variability of Water Masses, Currents and Ice in Denmark Strait	71
Number 13 (Nov. 1989)	•
PETERS, G. R., L. A. STROWBRIDGE, and L. W. PENNEY. Experiment to Determine Split Fish Equivalent Factor for Salted Codfish in Bulk	7

LIST OF TITLES	9
DRINKWATER, K. F., and R. W. TRITES. Overview of Environmental Conditions in the Northwest Atlantic in 1987	27
RIGET, F., and J. BOJE. Fishery and Some Biological Aspects of Greenland Halibut (Reinhardtius hippoglossoides) in West Greenland Waters	41
SAVVATIMSKY, P. I. Distribution and Biology of Common Grenadier (Nezumia bairdi) from Trawl Surveys in the Northwest Atlantic, 1969-83	53
SAVVATIMSKY, P. I. Investigations of Roughhead Grenadier (Macrourus berglax L.) in the Northwest Atlantic, 1967-83	59
Number 14 (May 1990)	
TRITES, R. W., and K. F. DRINKWATER. Overview of Environmental Conditions in the Northwest Atlantic in 1988	7.
TRUE, E. D., and S. A. WIITALA. Annual Temperature Curves in Twelve Regions of the Gulf of Maine	21
STEIN, M., and G. WEGNER. Recent Thermohaline Observations on the Deep Waters off West Greenland	29
STEIN, M., and J. MESSTORFF. Relationship of Fluctuations in Cod Recruitments off West Greenland to Long-term Variations of the Physical Environment	39
HOVGÅRD, H., and S. CHRISTENSEN. Population Structure and Migration Patterns of Atlantic Cod (Gadus morhua) in West Greenland Waters Based on Tagging Experiments from 1946 to 1964	45
CHUMAKOV, A. K., and P. I. SAVVATIMSKY. Distribution of Greenland Halibut (Reinhardtius hippoglossoides) and Roundnose Grenadier (Coryphaenoides rupestris) in the Northwest Atlantic	10
in Relation to Hydrographic Conditions in 1968-86	51
N. 1 1001)	
Number 15 (May 1991)	
DRINKWATER, K. F., and R. W. TRITES. Overview of Environmental Conditions in the Northwest Atlantic in 1989	7
STEIN, M. Global Warming Induced Changes and Their Implications to Fisheries in the North Atlantic	19
STEIN, M., and E. BUCH. Are Subsurface Ocean Temperatures Predictable at Fylla Bank, West Greenland?	25
STEIN, M. Recent Variations of Salt and Heat Flow in West Greenland Waters	. 31
NIZOVSTEV, G. P. Growth Patterns of Greenland Halibut (Reinhardtius hippoglossoides) in the Northeast Atlantic	35

ZAMARRO, J. Batch Fecundity and Spawning Frequency of Yellowtail Flounder (Limanda ferruginea) on the Grand Banks	43
SHERSTYUKOV, A. I., and G. I. NAZAROVA. Vertical Migrations and Feeding of 0-Group Silver Hake (Merluccius bilinearis) on the Scotian Shelf, November 1985	53
Number 16 (Nov. 1991)	
SHEPHERD, J. (Convener). Report of the Special Session	7
SHELTON, P. A., L. FAHRIG, and R. B. MILLAR. Uncertainty Associated With Cod - Capelin Interactions: How Much is Too Much?	13
MYERS, R. A. Recruitment Variability and Range of Three Fish Species	21
FAHRIG, L., and B. ATKINSON. Uncertainty in a Mixed Stock Fishery: A Redfish Simulation Study	25
TALLMAN, R. Reduction of Uncertainty Caused by Discarding in the Fisheries of the Gulf of St. Lawrence	39
SEREBRYAKOV, V. P. Predicting Year-class Strength Under Uncertainties Related to Survival in the Early Life History of Some North Atlantic Commercial Fish	49
PRAGER, M. H., and C. D. JONES. Effects of Growth Variability on Estimation of the Biological Reference Point F _{0.1} , with Examples from Chesapeake Bay, USA	57
SINCLAIR, A., D. GASCON, R. O'BOYLE, D. RIVARD, and S. GAVARIS. Consistency of Some Northwest Atlantic Groundfish Stock Assessments	59
HORSTED, S. A. Biological Advice for and Management of Some of the Major Fisheries Resources in Greenland Waters	79
FRÉCHET, A. A Declining Cod Stock in the Gulf of St. Lawrence: How Can We Learn From the Past?	95
BRODIE, W. B., and W. R. BOWERING. A Review of the Assessment of the American Plaice (Hippoglossoides platessoides) Stock in Divisions 3LNO in Relation to the Recent Decline in Stock Abundance	103
BAIRD, J. W., C. A. BISHOP, and E. F. MURPHY. Sudden Changes in the Perception of Stock Size and Reference Catch Levels for Cod in Northeastern Newfoundland Shelves	111
RESTREPO, V. R., J. W. BAIRD, C. A. BISHOP, and J. M. HOENIG. Quantifying Uncertainty in ADAPT (VPA) Outputs Using Simulation - An Example Based on the Assessment of Cod in Divisions 2J+3KL	121
KIZNER, Z. I. Uncertainty in Biomass Assessment and Survey Planning	123
COOK, R. M., P. A. KUNZLIK, and R. J. FRYER. On the Quality of North Sea Cod Stock	129

LIST OF TITLES	11
MOHN, R. Stability and Sustainability of Harvesting Strategies in a Modeled Fishery	133
BRODIE, W. G., S. J. WALSH, and W. R. BOWERING. Managing Transboundary Flatfish Stocks: Sources and Consequences of Uncertainty	137
FRANCIS, R. I. C. C. Risk Analysis in Fishery Management	143
KIZNER. Z. I. Bootstrap Estimation of the Confidence Intervals of Stock and TAC Assessments with the Use of Dynamic Surplus Production Models	149
PELLETIER, D., and A. LAUREC. Toward More Efficient TAC Policies With Error-prone Data	153
LASSEN, H. Biological Uncertainties in Fish Stock Management: A Discussion	165
ROSENBERG, A. A., and S. BRAULT. Stock Rebuilding Strategies Over Different Time Scales	171
Number 17 (Feb. 1993)	
MOHN, R. K., and R. COOK. WORKBOOK - Introduction to Sequential Population Analysis. Special Session on Fish Stock Assessment Calibration Methods, 9-11 September 1992	3

[A] Abundance; abundance index (precision of survey estimates of cod) J 7: 137 (growth of Atlantic mackerel stock) 9: 115 (depth influence on abundance of groundfish) 133 (biology & population of sand lance) 11: 11 (improving groundfish survey estimates) 51 13: 83 (reproduction & early life of sea scallops) (cod & flounder catches on Grand B., 1971-89) 14: 47 87 (diet of silver hake on Scotian Shelf) 103 (variability of silver hake on Scotian Shelf) (Greenland halibut in the NW Atl., 1969-88) 107 129 (commercial fish in Div. 3NO) S 11: (ichthyoplankton on Flemish Cap) 43 (species composition of trawl catches) 53 (characteristics of herring spawning) 83 (report of Session on recruitment) 91 (knowledge of recruitment for herring) 109 (research on recruitment of cod & redfish) (G. halibut in West Greenland waters) 12: (wolffishes in West Greenland waters) 13 (G halibut & roundnose grenadier, 1968-86) 14: 51 16: 13 (cod - capelin interactions) (recruitment variability of three fishes) 21 25 (redfish simulation study) 49 (predicting year-class strength) 59 (consistency of groundfish assessments) 95 (cod stock abundance in G. of St Lawrence) (assessment of A. plaice in Div. 3LNO) 103

Acoustics

111

123

129

S 11: 63 (target strength of pelagics by acoustics)16: 123 (uncertainty in assessment & surveys)

(stock rebuilding over time)

(stock size and catch of cod off Nfld.)

(uncertainty in assessment & surveys)
(North Sea cod stock forecasts)

(estimation of assessments by use of models)

Adaptive framework (ADAPT) model

S 16: 59 (consistency of groundfish assessments)
111 (stock size and catch of cod off Nfld.)
121 (uncertainty in ADAPT using simulation)

17: 3 (intro to sequential population analysis)

Age; Age composition

7: 123 (age estimation of scallop larvae)
9: 5 (sand lances of eastern Newfoundland)

37 (growth of pollock on Atlantic coast)

J 9: 53 (groundfish data in stock assessments)

115 (growth of Atlantic mackerel stock)

123 (growth of northern shrimp from NW Atl.)

13: 53 (information on Atlantic wolffish)

S 12: 37 (biology & distribution of lanternfishes)

15: 35 (growth of G halibut in the NE Atlantic)

S 16: 57 (effects of growth on estimation of $F_{0,1}$)

79 (advice & management of fish at Greenland)

17: 3 (intro to sequential population analysis)

Age, determination

J 11: 11 (biology & population of sand lance)

S11: 37 (size-at-age of cod off W. Greenland)

American lobster (Homarus americanus)

J 11: 29 (size frequency of lobsters)14: 115 (lobster landing trends, 1947-88)

American plaice (Hippoglossoides platessoides)

J 13: 63 (morphological characteristics of otoliths)

14: 47 (cod & flounder catches on Grand B.,1971-89)

129 (commercial fish in Div. 3NO)

S11: 7 (ichthyoplankton on Flemish Cap)

16: 103 (assessment of A. plaice in Div. 3LNO)

137 (managing transboundary flatfish stocks)

Assessment

] 7: 117 (survey design for scallops, Georges B.)

8: 15 (catchability of major groundfish)

9: 13 (biological status of pollock)

53 (groundfish data in stock assessments)

13: 25 (assessment & management of Georges B cod)

S11: 109 (research on recruitment of cod & redfish)

16: 59 (consistency of groundfish assessments)

95 (cod stock abundance in G. of St Lawrence)

103 (assessment of A. plaice in Div. 3LNO)

111 (stock size and catch of cod off Nfld.)

121 (uncertainty in ADAPT using simulation)

123 (uncertainty in assessment & surveys)

129 (North Sea cod stock forecasts)

137 (managing transboundary flatfish stocks)

143 (risk analysis in fishery management)

149 (estimation of assessments by use of models)

153 (more efficient TAC policies)

165 (uncertainties in fish stock management)

171 (stock rebuilding over time)

17: 3 (intro to sequential population analysis)

Atlantic cod (Gadus morhua)

- 3 7: 137 (precision of survey estimates of cod)
 - 9: 45 (vertebral numbers in cod of Nfld.)
 - 103 (temperature on population parameters)
 - 10: 1 (fishing areas in the NW Atlantic)
 - 11: 39 (recoveries of cod & plaice tags)
 - 13: 7 (feeding of juvenile cod in east Nfld)
 - 15 (distribution and recruitment of cod)
 - 25 (assessment & management of Georges B cod)
 - 63 (morphological characteristics of otoliths)
 - 14: 47 (cod & flounder catches on Grand B.,1971-89)
 - 129 (commercial fish in Div. 3NO)
 - 137 (influence of temperature on some stocks)
- S11: 7 (ichthyoplankton on Flemish Cap)
 - 37 (size-at-age of cod off W. Greenland)
 - 75 (fishing grounds of longliners off SW NS)
 - 83 (report of Session on recruitment)
 - 109 (research on recruitment of cod & redfish)
 - 12: 21 (gillnet surveys for cod in German waters)
 - 13: 7 (conversion factors for cod)
 - 14: 39 (cod recruitment vs physical environment)
 - 45 (tagging of cod off W Greenland, 1946-64)
 - 16: 13 (cod capelin interactions)
 - 21 (recruitment variability of three fishes)
 - 39 (fish discarding in the G. of St Lawrence)
 - 49 (predicting year-class strength)
 - 59 (consistency of groundfish assessments)
 - 95 (cod stock abundance in G. of St Lawrence)
 - 111 (stock size and catch of cod off Nfld.)
 - 121 (uncertainty in ADAPT using simulation)
 - 129 (North Sea cod stock forecasts)
 - 133 (harvesting strategies in a modeled fishery)
 - 153 (more efficient TAC policies)
 - 171 (stock rebuilding over time)
 - 17: 3 (intro to sequential population analysis)

Atlantic halibut (Hippoglossus hippoglossus)

- J 8: 25 (tagging and recapture of A. halibut)
- S11: 75 (fishing grounds of longliners off SW NS)

Atlantic herring (Clupea harengus)

- J 8: 33 (movement of herring off US coast)
 - 12: 27 (tagging mortality of lab held herring)
 - 13: 63 (morphological characteristics of otoliths)
 - 14: 135 (fluctuations in herring stocks)
- S 11: 53 (characteristics of herring spawning)
 - 83 (report of Session on recruitment)
 - 91 (knowledge of recruitment for herring)
 - 16: 21 (recruitment variability of three fishes)
 - 49 (predicting year-class strength)

Atlantic mackerel (Scomber scombrus)

- J 9: 115 (growth of Atlantic mackerel stock)
- 12: 35 (fecundity of Atlantic mackerel)
- 13: 63 (morphological characteristics of otoliths)

Atlantic redfish (Sebastes marinus)

J 13: 63 (morphological characteristics of otoliths)

Atlantic redfishes (Sebastes spp.)

- J 9: 141 (distribution of redfish on Grand Bank)
 - 11: 43 (vertical distribution of larval redfish)
 - 14: 145 (observations on non-maturing redfish)
- S11: 7 (ichthyoplankton on Flemish Cap)
 - 43 (species composition of trawl catches)
 - 83 (report of Session on recruitment)
 - 109 (research on recruitment of cod & redfish)
 - 16: 25 (redfish simulation study)

Atlantic wolffish (Anarhichas lupus)

- J 13: 53 (information on Atlantic wolffish)
- S12: 13 (wolffishes in West Greenland waters)

[B]

Baffin Island

- J 7: 155 (thorny skate population characteristics)
- S 11: 43 (species composition of trawl catches)
- 14: 51 (G halibut & roundnose grenadier, 1968-86)

Barents Sea

- J 9: 103 (temperature on population parameters)
 - 133 (depth influence on abundance of groundfish)
- S 15: 35 (growth of G halibut in the NE Atlantic)
 - 16: 49 (predicting year-class strength)

Bay of Fundy

- J 8: 43 (distribution of scallop in Bay of Fundy)
- 11: 29 (size frequency of lobsters)
- S11: 71 (temperature & salinity near Bay of Fundy)

Biological characteristics

- J 7: 89 (thorny skate from the NW Atlantic)
 - 99 (biological aspects of lanternfish)
 - 155 (thorny skate population characteristics)
 - 9: 13 (biological status of pollock)
 - 103 (temperature on population parameters)
 - 123 (growth of northern shrimp from NW Atl.)
 - 10: 1 (fishing areas in the NW Atlantic)
 - 11: 11 (biology & population of sand lance)
 - 29 (size frequency of lobsters)
 - 12: 15 (biological aspects of witch flounder)
 - 63 (reproductive system in cephalopods)
 - 14: 13 (groundfish assemblages on the Grand Bank)
 - 129 (commercial fish in Div. 3NO)
 - 145 (observations on non-maturing redfish)
- S11: 109 (research on recruitment of cod & redfish)
 - 12: 37 (biology & distribution of lanternfishes)
 - 13: 41 (biology of G. halibut at West Greenland)
 - 53 (common grenadier in trawl surveys, 1967-83)
 - 59 (roughhead grenadier investigation, 1967-83)
 - 14: 39 (cod recruitment vs physical environment)
 - 16: 39 (fish discarding in the G. of St Lawrence)
 - 57 (effects of growth on estimation of F_{0.1})
 - 79 (advice & management of fish at Greenland)
 - 165 (uncertainties in fish stock management)
 - 171 (stock rebuilding over time)

Biomass

- 1 14: 59 (fish biomass & yield on Grand B., 1960-87)
 - 129 (commercial fish in Div. 3NO)
 - 137 (influence of temperature on some stocks)
- S 16: 13 (cod capelin interactions)
 - 123 (uncertainty in assessment & surveys)
 - 171 (stock rebuilding over time)

Butterfish (Peprilus triacanthus)

J 12: 49 (interaction between squid & butterfish)

By-catches

I 12: 49 (interaction between squid & butterfish)

[C]

Capelin (Mallotus villosus)

- J 9: 103 (temperature on population parameters)
- S16: 13 (cod capelin interactions)

- S 16: 49 (predicting year-class strength)
 - 79 (advice & management of fish at Greenland)

Cephalopods

12: 63 (reproductive system in cephalopods)

Cohort analysis

S 17: 3 (intro to sequential population analysis)

Common grenadier (Nerumia bairdi)

S13: 53 (common grenadier in trawl surveys, 1967-83)

Continental Shelf/Slope

- J 8: 5 (physical processes at the Shelf edge)
 - 25 (tagging and recapture of A. halibut)
 - 67 (review of marine fish communities)
 - 9: 97 (water intrusion to Great South Channel)
- S11: 43 (species composition of trawl catches)
 - 13: 53 (common grenadier in trawl surveys, 1967-83)
 - 59 (roughhead grenadier investigation, 1967-83)
 - 14: 29 (thermohaline observations off W Greenl.)
 - 51 (G halibut & roundnose grenadier, 1968-86)

Conversion factors

\$13: 7 (conversion factors for cod)

Currents (water circulation)

- J 8: 5 (physical processes at the Shelf edge)
 - 9: 81 (environmental conditions off W. Greenland)
 - 97 (water intrusion to Great South Channel)
- S11: 7 (ichthyoplankton on Flemish Cap)
 - 12: 43 (review of environmental conditions, 1986)
 - 71 (water masses, currents & ice, Denmark St.)
 - 13: 27 (review of environmental conditions, 1987)
 - 41 (biology of G. halibut at West Greenland) : 7 (review of environmental conditions, 1988)
 - 14: 7 (review of environmental conditions, 1988)
 15: 7 (review of environmental conditions, 1989)
 - 19 (warming effect on fisheries in N Atl.)
 - 25 (predictability of temp. at W Greenl.)
 - 31 (salinity & temperature at W Greenland)

[D]

Davis Strait

J 9: 81 (environmental conditions off W. Greenland)

(growth of northern shrimp from NW Atl.) (G. halibut in West Greenland waters) S 12: (biology of G. halibut at West Greenland) 13: 41 Denmark Strait 7 (meristic characters in G. halibut) 1 12:

Discards

S 16: 39 (fish discarding in the G. of St Lawrence) (advice & management of fish at Greenland)

(cod stock abundance in G. of St Lawrence)

(water masses, currents & ice, Denmark St.)

Distribution

(juvenile sand lance off east USA) 7: 107 (survey design for scallops, Georges B.) 117

(reproductive biology of haddock) 145

(distribution of scallop in Bay of Fundy) 8: 43

(distribution of redfish on Grand Bank) 9: 141

(fishing areas in the NW Atlantic) 10: 1

(vertical distribution of larval redfish) 11: 43 (megafaunal assemblages off eastern USA)

12: 15 (biological aspects of witch flounder)

(distribution and recruitment of cod) 15 13:

53 (information on Atlantic wolffish)

(groundfish assemblages on the Grand Bank) 14: 13

(demersal fish assemblages off east US) 29

(size-at-age of cod off W. Greenland) S11: 37

43 (species composition of trawl catches) (characteristics of herring spawning)

53

(target strength of pelagics by acoustics) 63 (report of Session on recruitment)

(knowledge of recruitment for herring)

12: 7 (G. halibut in West Greenland waters)

(wolffishes in West Greenland waters) 13 (gillnet surveys for cod in German waters) 21

(biology & distribution of lanternfishes)

13: 41 (biology of G. halibut at West Greenland)

(common grenadier in trawl surveys, 1967-83) 53

(toughhead grenadier investigation, 1967-83)

(G halibut & roundnose grenadier, 1968-86) 51· 14:

(recruitment variability of three fishes) 16: 21

(advice & management of fish at Greenland)

(uncertainty in assessment & surveys) 123

(managing transboundary flatfish stocks)

(stock rebuilding over time)

[E]

Early life history

I 13: 83 (reproduction & early life of sea scallops)

S 16: 49 (predicting year-class strength)

East Greenland

25 (tagging and recapture of A. halibut)

(salinity & temperature at W Greenland) S 15: 31

(advice & management of fish at Greenland) 16: 79

East Coast of Canada

(thorny skate from the NW Atlantic) J 7: 89

(meat recovery from scallops offshore) 131

(catchability of major groundfish) 8: 15

25 (tagging and recapture of A. halibut)

9: 5 (sand lances of eastern Newfoundland)

37 (growth of pollock on Atlantic coast)

(vertebral numbers in cod of Nfld.) 45

12: (meristic characters in G. halibut)

(fecundity of Atlantic mackerel) 35

(demersal fish assemblages off east US) 14: 29

(lobster landing trends, 1947-88) 115

(commercial fish in Div. 3NO) 129

137 (influence of temperature on some stocks)

(observations on non-maturing redfish) 145

(fishing grounds of longliners off SW NS) S11: 75

(area closures in management of haddock) 12: 27

(water temperature off Nfld & Labrador) 57

16: 25 (redfish simulation study)

> (consistency of groundfish assessments) 59

(assessment of A. plaice in Div. 3LNO) 103

(stock size and catch of cod off Nfld.) 111

East Coast of USA

(juvenile sand lance off east USA) 7: 107

(movement of herring off US coast) 8: 33

9: 13 (biological status of pollock)

(water intrusion to Great South Channel) 97

115 (growth of Atlantic mackerel stock)

11: 11 (biology & population of sand lance)

> (megafaunal assemblages off eastern USA) 59

35 (fecundity of Atlantic mackerel) 12:

(interaction between squid & butterfish)

(mating aggregation of spider crab) 13: 77

J 14: 29 115	(demersal fish assemblages off east US) (lobster landing trends, 1947-88)	S 15: 43	(fecundity of yellowtail flo. on Grand B.)
S 12: 27	(man alasses is assessment of haddonly)	Feeding	• ,
S 12: 27 16: 57	(area closures in management of haddock) (effects of growth on estimation of $F_{0,1}$)	J 7: 99	(biological aspects of lanternfish)
59	(consistency of groundfish assessments)	8: 55	(survival of pre-recruit fishes)
0,	, (, u. g,	9: 103	(temperature on population parameters)
Eastern No	ewfoundland	13: 7	(feeding of juvenile cod in east Nfld)
	·	53	(information on Atlantic wolffish)
J 9: 5 45	(sand lances of eastern Newfoundland) (vertebral numbers in cod of Nfld.)	14: 87	(diet of silver hake on Scotian Shelf)
13: 7	(feeding of juvenile cod in east Nfld)	S 11: 109	(research on recruitment of cod & redfish)
		12: 37	(biology & distribution of lanternfishes)
r	•	13: 53	(common grenadier in trawl surveys, 1967-83)
Eggs	,	15: 53	(silver hake on the Scotian Shelf, 1985)
J 11: 29 12: 63	(size frequency of lobsters) (reproductive system in cephalopods)	Fish comm	<u>unities</u>
13: 83	(reproduction & early life of sea scallops)	J 8: 67	(review of marine fish communities)
14: 107	(Greenland halibut in the NW Atl., 1969-88)	9: 73	(species composition in bottom trawl)
011 #		11: 59	(megafaunal assemblages off eastern USA)
S 11: 7	(ichthyoplankton on Flemish Cap) (report of Session on recruitment)	14: 13 29	(groundfish assemblages on the Grand Bank)
16: 49	(predicting year-class strength)	87	(demersal fish assemblages off east US) (diet of silver hake on Scotian Shelf)
,,	(breatestiff for ourse servinging)	0,	(dict of biller flame off bestian offen)
Environme	ent	S 11: 43	(species composition of trawl catches)
		16: 13	(cod - capelin interactions)
J 8: · 5 9: 81 97	(physical processes at the Shelf edge) (environmental conditions off W. Greenland) (water intrusion to Great South Channel)	Fishing are	2 <u>as</u>
14: 115	(lobster landing trends, 1947-88)	J 10: 1	(fishing areas in the NW Atlantic)
			•
S 11: 23 37	(review of environmental conditions, 1985) (size-at-age of cod off W. Greenland)	Flemish C	
43	(species composition of trawl catches)	J 7: 99	(biological aspects of lanternfish)
71 91	(temperature & salinity near Bay of Fundy) (knowledge of recruitment for herring)	S11: 7	(inhaharan an Floraich Com)
12: 43	(review of environmental conditions, 1986)	S 11: 7	(ichthyoplankton on Flemish Cap) (report of Session on recruitment)
57	(water temperature off Nfld & Labrador)	109	(research on recruitment of cod & redfish)
71	(water masses, currents & ice, Denmark St.)	12: 37	(biology & distribution of lanternfishes)
13: 27	(review of environmental conditions, 1987)	-	,
14: 7	(review of environmental conditions, 1988)	Fylla Bank	·
39	(cod recruitment vs physical environment)		
51	(G halibut & roundnose grenadier, 1968-86)	S 15: 25	(predictability of temp. at W Greenl.)
15: 7 19	(review of environmental conditions, 1989) (warming effect on fisheries in N Atl.)		
.,	(warming effect off indicates at 14,11ett)	•	
	·		[G]
	, ren	C	
	[F]	Gear	
Fecundity	•	J 9: 53	(groundfish data in stock assessments)
		73	(species composition in bottom trawl)
J 12: 15	(biological aspects of witch flounder)	133	(depth influence on abundance of groundfish)
	(fecundity of Atlantic mackerel)	11: 29	(size frequency of lobsters)
14: 107	(Greenland halibut in the NW Atl., 1969-88)	51	(improving groundfish survey estimates)

10.	,			
S 11: 43	(species composition of trawl catches)	Greenland	waters	
63	(target strength of pelagics by acoustics)	_		
75	(fishing grounds of longliners off SW NS)	J 14: 137	(influence of temperature on some stocks)	
12: 13	(wolffishes in West Greenland waters)	*		
21	(gillnet surveys for cod in German waters)	S 16: 79	(advice & management of fish at Greenland)	
13: 53	(common grenadier in trawl surveys,1967-83)			
•		<u>Groundfish</u>		
Georges Bank				
		J 8: 15	(catchability of major groundfish)	
J 7: 107	(juvenile sand lance off east USA)	9: 53	(groundfish data in stock assessments)	
117	(survey design for scallops, Georges B.)	11: 51	(improving groundfish survey estimates)	
145	(reproductive biology of haddock)	14: 13	(groundfish assemblages on the Grand Bank)	
9: 13	(biological status of pollock)	S 16: 59	(consistency of groundfish assessments)	
97 12: 15	(water intrusion to Great South Channel) (biological aspects of witch flounder)	133	(consistency of groundfish assessments) (harvesting strategies in a modeled fishery)	
12: 15 13: 25	(assessment & management of Georges B cod)	133	(marvesting strategies in a modered rishery)	
13: 23	(information on Atlantic wolffish)	Growth		
83	(reproduction & early life of sea scallops)	Growan	,	
14: 59	(fish biomass & yield on Grand B., 1960-87)] 8: 15	(catchability of major groundfish)	
17. 37	(Instruction of Field of Chair Bit 1700 of)	9: 37	(growth of pollock on Atlantic coast)	
S 11: 83	(report of Session on recruitment)	115	(growth of Atlantic mackerel stock)	
91	(knowledge of recruitment for herring)	123	(growth of northern shrimp from NW Atl.)	
16: 21	(recruitment variability of three fishes)	11: 11	(biology & population of sand lance)	
171	(stock rebuilding over time)	12: 15	(biological aspects of witch flounder)	
	•	41	(growth & sexual maturity of sand lance)	
Glacier lanternfish (Benthosema glaciale)		13: 53	(information on Atlantic wolffish)	
C12 27	(tilling for discribing on toward fisher)	S 15: 35	(growth of G halibut in the NE Atlantic)	
512: 37	(biology & distribution of lanternfishes)			
16: 57 (effects of growth on estimation of F _{0.1}) Grand Bank				
Otalia Da	116.	Gulf of Ma	aine	
J 7: 99	(biological aspects of lanternfish)			
9: 141	(distribution of redfish on Grand Bank)	. J 9: 13	(biological status of pollock)	
14: 13	(groundfish assemblages on the Grand Bank)	11: 11	(biology & population of sand lance)	
47	(cod & flounder catches on Grand B.,1971-89)	43	(vertical distribution of larval redfish)	
		12: 15	(biological aspects of witch flounder)	
S 11: 109	(research on recruitment of cod & redfish)	13: 53	(information on Atlantic wolffish)	
12: 37	· •	14: 115	(lobster landing trends, 1947-88)	
43	•			
	(fecundity of yellowtail flo. on Grand B.)	4.	(fishing grounds of longliners off SW NS)	
16: 137	(managing transboundary flatfish stocks)	91	(knowledge of recruitment for herring)	
	and the transfer of the transf	12: 43	(review of environmental conditions, 1986)	
Greenlan	d halibut (Reinhardiius hippoglossoides)	14: 21	(temperature in the Gulf of Maine)	
7.13 7	(16: 21	(recruitment variability of three fishes)	
J 12: 7	•	Gulf of St.	Laurence	
14: 107	(Greenland halibut in the NW Atl., 1969-88)	Cun or or.	Lawience	
S 11: 43	(species composition of trawl catches)	J 7: 155	(thorny skate population characteristics)	
12: 7	(G. halibut in West Greenland waters)	11: 39	(recoveries of cod & plaice tags)	
13: 41		43	(vertical distribution of larval redfish)	
14: 51	· · · · · · · · · · · · · · · · · · ·	12: 41	(growth & sexual maturity of sand lance)	
15: 35	••	14: 115	(lobster landing trends, 1947-88)	
16: 49	(predicting year-class strength)	135	(fluctuations in herring stocks)	
1/				

S 14: 51 (G halibut & roundnose grenadier, 1968-86) (characteristics of herring spawning) 43 (review of environmental conditions, 1986) Lanternfish (Notoscopelus kroyeri) 27 (review of environmental conditions, 1987) 13: (fish discarding in the G. of St Lawrence) 16: 39 J 7: 99 (biological aspects of lanternfish) (cod stock abundance in G. of St Lawrence) Larvae [H] J 7: 107 (juvenile sand lance off east USA) (age estimation of scallop larvae) 123 Haddock (Melanogrammus aeglefinus) 8: 43 (distribution of scallop in Bay of Fundy) 9: 97 (water intrusion to Great South Channel) 7: 145 (reproductive biology of haddock) 11: 43 (vertical distribution of larval redfish) 9: 103 (temperature on population parameters) 12: 63 (reproductive system in cephalopods). (fishing areas in the NW Atlantic) 10: 1 S 11: (morphological characteristics of otoliths) 7 (ichthyoplankton on Flemish Cap) 13: 63 83 (report of Session on recruitment) (fishing grounds of longliners off SW NS) 91 (knowledge of recruitment for herring) (research on recruitment of cod & redfish) (area closures in management of haddock) (recruitment variability of three fishes) 12: 37 (biology & distribution of lanternfishes) 16: 21 (consistency of groundfish assessments) 13: 41 (biology of G. halibut at West Greenland) 59 171 (stock rebuilding over time) Laurec/Shepherd S 16: 153 (more efficient TAC policies) [1] 3 (intro to sequential population analysis) Life history Iceland (sand lances of eastern Newfoundland) J 7: 155 (thorny skate population characteristics) (groundfish data in stock assessments) 9: 53 Long-finned squid (Loligo pealei) (G. halibut in West Greenland waters) S 12: (review of environmental conditions, 1988) J 12: 49 (interaction between squid & butterfish) 14: 15: 35 (growth of G halibut in the NE Atlantic) (advice & management of fish at Greenland) [M] Management [J]J 7; 117 (survey design for scallops, Georges B.) (meat recovery from scallops offshore) 131 Juveniles (precision of survey estimates of cod) 7 (feeding of juvenile cod in east Nfld) 15 (catchability of major groundfish) 1 13: (biological status of pollock) 9: 13 10: 1 (fishing areas in the NW Atlantic) 12: 49 (interaction between squid & butterfish) 13: 25 (assessment & management of Georges B cod) (groundfish assemblages on the Grand Bank) [L] S 12: 27 (area closures in management of haddock) 16: 25 (redfish simulation study) Labrador 39 (fish discarding in the G. of St Lawrence) 57 J 7: 155 (effects of growth on estimation of F_{0.1}) (thorny skate population characteristics)

(consistency of groundfish assessments)

(observations on non-maturing redfish)

S 16: (advice & management of fish at Greenland) (cod stock abundance in G. of St Lawrence) 13 (assessment of A. plaice in Div. 3LNO) 45 103 53 111 (stock size and catch of cod off Nfld.) 123 129 (North Sea cod stock forecasts) (harvesting strategies in a modeled fishery) 11: 133 137 (managing transboundary flatfish stocks) 29 12: 143 (risk analysis in fishery management) 7 (estimation of assessments by use of models) 41 149 153 (more efficient TAC policies) 13: 53 165 (uncertainties in fish stock management) 63 171 (stock rebuilding over time) (intro to sequential population analysis) 17: S 11: 37 15: 35 Maturity 16: 13 J 7: 89 (thorny skate from the NW Atlantic) 49 (biological aspects of lanternfish) 99 (reproductive biology of haddock) 145 (thorny skate population characteristics) 155 (biological status of pollock) 9: 13 (biology & population of sand lance) 11: 11 29 (size frequency of lobsters) 12: 15 (biological aspects of witch flounder) North Sea (growth & sexual maturity of sand lance) 41 (reproductive system in cephalopods) 63 14: 145 (observations on non-maturing redfish) Northeast Atlantic (research on recruitment of cod & redfish) S11: 109 12: 37 (biology & distribution of lanternfishes) S 12: 13: (biology of G. halibut at West Greenland) 15: 35 16: 129 15: 43 (fecundity of yellowtail flo. on Grand B.) **Migration** J 7: 155 (thorny skate population characteristics) (tagging and recapture of A. halibut) 8: 25 (movement of herring off US coast) 33 S 12: 9: 37 (growth of pollock on Atlantic coast) (vertebral numbers in cod of Nfld.) 45 (distribution of redfish on Grand Bank) 16: 79 Norwegian Sea S11: 37 (size-at-age of cod off W. Greenland) (knowledge of recruitment for herring) 12: 13 (wolffishes in West Greenland waters) 13: 41 (biology of G. halibut at West Greenland)

Morphometrics

14: 45

15: 53

16: 79

- (thorny skate from the NW Atlantic)] 7: 89
 - (age estimation of scallop larvae)
 - (meat recovery from scallops offshore)
 - (thorny skate population characteristics)

(tagging of cod off W Greenland, 1946-64)

(advice & management of fish at Greenland)

(silver hake on the Scotian Shelf, 1985)

- J 9: (sand lances of eastern Newfoundland)
 - (biological status of pollock)
 - (vertebral numbers in cod of Nfld.)
 - (groundfish data in stock assessments)
 - (growth of northern shrimp from NW Atl.)
 - (length of roughhead grenadier)
 - (size frequency of lobsters)
 - (meristic characters in G. halibut)
 - (growth & sexual maturity of sand lance)
 - (information on Atlantic wolffish)
 - (morphological characteristics of otoliths)
 - (mating aggregation of spider crab)
- (size-at-age of cod off W. Greenland)
 - (growth of G halibut in the NE Atlantic)
 - (cod capelin interactions)
 - (predicting year-class strength)
 - (effects of growth on estimation of $F_{0.1}$)

[N]

S 16: 129 (North Sea cod stock forecasts)

- (gillnet surveys for cod in German waters)
- (growth of G halibut in the NE Atlantic)
- (North Sea cod stock forecasts)
 - (more efficient TAC policies)

Northern shrimp (Pandalus borealis)

- (growth of northern shrimp from NW Atl.)
- (G. halibut in West Greenland waters)
 - (water masses, currents & ice, Denmark St.)
- (advice & management of fish at Greenland)
- (target strength of pelagics by acoustics)
- (predicting year-class strength)

[O]

Oceanography

- (physical processes at the Shelf edge)
 - 81 (environmental conditions off W. Greenland)
 - (water intrusion to Great South Channel)

J 9: 103	(temperature on population parameters)	[R]	
S 11: 23 12: 43	(review of environmental conditions, 1985) (review of environmental conditions, 1986)	Recruitment	
57 13: 27	(water temperature off Nfld & Labrador) (review of environmental conditions, 1987)	J 8: 55 (survival of pre-recruit fishes) 13: 15 (distribution and recruitment of cod)	
13: 27	(review of environmental conditions, 1988)	14: 103 (variability of silver hake on Scotian Shelf)	
39	(cod recruitment vs physical environment)		
51	(G halibut & roundnose grenadier, 1968-86)	S 11: 83 (report of Session on recruitment)	
15: 7	(review of environmental conditions, 1989)	91 (knowledge of recruitment for herring)	
19	(warming effect on fisheries in N Atl.)	109 (research on recruitment of cod & redfish)	
25	(predictability of temp. at W Greenl.)	14: 39 (cod recruitment vs physical environment)16: 21 (recruitment variability of three fishes)	
. 31	(salinity & temperature at W Greenland)	25 (redfish simulation study)	
Overviews		25 (10411)21 0111111111111111111111111111111111	
		Reproduction	
J 8: 67	(review of marine fish communities)		
13: 25	(assessment & management of Georges B cod)	J 7: 99 (biological aspects of lanternfish)	
14: 115	(lobster landing trends, 1947-88)	123 (age estimation of scallop larvae)	
C 11. 22	(review of environmental conditions, 1985)	145 (reproductive biology of haddock) 11: 11 (biology & population of sand lance)	
S 11: 23 12: 43	(review of environmental conditions, 1986)	13: 77 (mating aggregation of spider crab)	
71	(water masses, currents & ice, Denmark St.)	83 (reproduction & early life of sea scallops)	
13: 27	(review of environmental conditions, 1987)		
41	(biology of G. halibut at West Greenland)	S 11: 53 (characteristics of herring spawning)	
14: 7	(review of environmental conditions, 1988)	83 (report of Session on recruitment)	
15: 7	(review of environmental conditions, 1989)	12: 27 (area closures in management of haddock)	
		15: 43 (fecundity of yellowtail flo. on Grand B.)16: 49 (predicting year-class strength)	
		10: 49 (predicting year-class strength)	
[P]		Roughhead grenadier (Macrourus berglax)	
Pelagic fishes		S 13: 59 (roughhead grenadier investigation,1967-83)	
S 11: 63	(target strength of pelagics by acoustics)	Roundnose grenadier (Coryphaenoides rupestris)	
<u>Plankton</u>		J 11: 7 (length of roughhead grenadier)	
	(growth of pollock on Atlantic coast)	S 11: 43 (species composition of trawl catches) 14: 51 (G halibut & roundnose grenadier, 1968-86)	
S11: 7	(ichthyoplankton on Flemish Cap) (biology & distribution of lanternfishes)		
12: 37 15: 53	(silver hake on the Scotian Shelf, 1985)		
, ,,, ,,,	(ottyet imae off the ocottan offen, 1703)	[S]	
Pollock (Pollachius virens)		•	
		<u>Salinity</u>	
J 9: 13	(biological status of pollock)	TO 01 / standard by the WV C	
J 9: 37	(growth of pollock on Atlantic coast) (morphological characteristics of otoliths)	J 9: 81 (environmental conditions off W. Greenland) 97 (water intrusion to Great South Channel)	
13: 63	(morphological characteristics of otolidis)	77 (water industrial to Oreat South Charmer)	
Population		S11: 23 (review of environmental conditions, 1985)	
	- .	71 (temperature & salinity near Bay of Fundy)	
J 9: 103	(temperature on population parameters)	12: 43 (review of environmental conditions, 1986)	
11: 11	(biology & population of sand lance)	13: 27 (review of environmental conditions, 1987)	
C14 45	(14: 7 (review of environmental conditions, 1988) 29 (thermohaline observations off W Greenl.)	
S 14: 45	(tagging of cod off W Greenland, 1946-64)	29 (thermohaline observations off W Greenl.)	

22.	SUBJ			
S 14: 39 15: 7 31	(cod recruitment vs physical environment) (review of environmental conditions, 1989) (salinity & temperature at W Greenland)			
Sand lance	s (Ammodytes spp.)			
J 7: 107 9: 5 11: 11 12: 41	(juvenile sand lance off east USA) (sand lances of eastern Newfoundland) (biology & population of sand lance) (growth & sexual maturity of sand lance)			
S-16: 79	(advice & management of fish at Greenland)			
Scotian Shelf				
J 7: 137 9: 13 73 11: 51 13: 15 14: 87 103 115	(precision of survey estimates of cod) (biological status of pollock) (species composition in bottom trawl) (improving groundfish survey estimates) (distribution and recruitment of cod) (diet of silver hake on Scotian Shelf) (variability of silver hake on Scotian Shelf) (lobster landing trends, 1947-88)			
S 15: 53 16: 133	(silver hake on the Scotian Shelf, 1985) (harvesting strategies in a modeled fishery)			
Sea scallop (Placopecten magellanicus)				
7: 117 123 131 8: 43 13: 83	(survey design for scallops, Georges B.) (age estimation of scallop larvae) (meat recovery from scallops offshore) (distribution of scallop in Bay of Fundy) (reproduction & early life of sea scallops)			
Selectivity				
S 12: 21	(gillnet surveys for cod in German waters)			
Sequential population analysis				
S 16: 103 17: 3	(assessment of A. plaice in Div. 3LNO) (intro to sequential population analysis)			
Sexual maturity				
J 7: 155	(thorny skate population characteristics)			
Silver hake (Merluccius bilinearis)				
J 13: 63	(morphological characteristics of otoliths)			

(diet of silver hake on Scotian Shelf)

S 15: 53 (silver hake on the Scotian Shelf, 1985)

(variability of silver hake on Scotian Shelf)

14: 87

Spawning J 7: 99 (biological aspects of lanternfish) 145 (reproductive biology of haddock) 9: 5 (sand lances of eastern Newfoundland) 103 (temperature on population parameters) S 11: (ichthyoplankton on Flemish Cap) (characteristics of herring spawning) (report of Session on recruitment) (knowledge of recruitment for herring) 91 109 (research on recruitment of cod & redfish) 12: (G. halibut in West Greenland waters) 37 (biology & distribution of lanternfishes) 13: 41 (biology of G. halibut at West Greenland) 15: 43 (fecundity of yellowtail flo. on Grand B.) 16: 49 (predicting year-class strength) 137 (managing transboundary flatfish stocks) 171 (stock rebuilding over time) Spider crab (Libinia emarginata) J 13: 77 (mating aggregation of spider crab) Spotted wolffish (Anarhichas minor) S 12: 13 (wolffishes in West Greenland waters) Surveys method J 7: 107 (juvenile sand lance off east USA) (survey design for scallops, Georges B.) 137 (precision of survey estimates of cod) (catchability of major groundfish) (groundfish data in stock assessments) (species composition in bottom trawl) (depth influence on abundance of groundfish) 133 11: 11 (biology & population of sand lance) (vertical distribution of larval redfish) 43 51 (improving groundfish survey estimates) 13: 15 (distribution and recruitment of cod) (information on Atlantic wolffish) (reproduction & early life of sea scallops)

(size-at-age of cod off W. Greenland) (target strength of pelagics by acoustics)

(fishing grounds of longliners off SW NS)

(gillnet surveys for cod in German waters)

(fish discarding in the G. of St Lawrence)

(assessment of A. plaice in Div. 3LNO)

(uncertainty in assessment & surveys)

(common grenadier in trawl surveys, 1967-83)

(G. halibut in West Greenland waters)

(wolffishes in West Greenland waters)

S11: 37

12:

13: 53

16: 39

75

7

21

103

[T]

Tagging

- (tagging and recapture of A. halibut) 1 8: 25
 - (movement of herring off US coast) 33
 - 9: (biological status of pollock) 13
 - 37 (growth of pollock on Atlantic coast)
 - 11: 39 (recoveries of cod & plaice tags)
 - 13 (wolffishes in West Greenland waters) 12:
 - 27 (tagging mortality of lab held herring)
 - (biology of G. halibut at West Greenland) 41
 - 14: (tagging of cod off W Greenland, 1946-64)

Temperature

- (reproductive biology of haddock) J 7: 145
 - (distribution of scallop in Bay of Fundy)
 - 55 (survival of pre-recruit fishes)
 - (environmental conditions off W. Greenland) 9: 81
 - (temperature on population parameters) 103
 - (growth of northern shrimp from NW Atl.) 123
 - 141 (distribution of redfish on Grand Bank)
 - (megafaunal assemblages off eastern USA) 11: 59
 - (variability of silver hake on Scotian Shelf) 14: 103
 - 107 (Greenland halibut in the NW Atl., 1969-88)
 - 137 (influence of temperature on some stocks)
- (review of environmental conditions, 1985) S11: 23
 - - (species composition of trawl catches) 43
 - (characteristics of herring spawning)
 - (temperature & salinity near Bay of Fundy) 71
 - 12: 37 (biology & distribution of lanternfishes)
 - (review of environmental conditions, 1986) 43
 - (water temperature off Nfld & Labrador) 57
- 13: 27 (review of environmental conditions, 1987)
 - 53 (common grenadier in trawl surveys, 1967-83)
 - (roughhead grenadier investigation, 1967-83) 59 (review of environmental conditions, 1988)
- 14: 7
 - (temperature in the Gulf of Maine) 21
 - (thermohaline observations off W Greenl.)
 - (cod recruitment vs physical environment)
 - (G halibut & roundnose grenadier, 1968-86)
- (review of environmental conditions, 1989) 15:
 - (warming effect on fisheries in N Atl.) 19
 - (predictability of temp. at W Greenl.)
 - (salinity & temperature at W Greenland) 31
 - (silver hake on the Scotian Shelf, 1985)

Thorny skate (Raja radiata)

J 7: 89 (thorny skate from the NW Atlantic)

(thorny skate population characteristics)

[V]

Virtual Population Analysis

S 17: 3 (intro to sequential population analysis)

[W]

West Greenland

-] 7: 155 (thorny skate population characteristics)
 - 8: 25 (tagging and recapture of A. halibut)
 - 9: 81 (environmental conditions off W. Greenland)
 - 12: 7 (meristic characters in G. halibut)
- S11: 37 (size-at-age of cod off W. Greenland)
- 7 12: (G. halibut in West Greenland waters)
 - 13 (wolffishes in West Greenland waters)
- 13: 41 (biology of G. halibut at West Greenland)
- 14: 29 (thermohaline observations off W Greenl.)
 - 39 (cod recruitment vs physical environment)
 - 45 (tagging of cod off W Greenland, 1946-64)
- 15: 25 (predictability of temp. at W Greenl.)
 - 31 (salinity & temperature at W Greenland)
- 16: 79 (advice & management of fish at Greenland)

Witch flounder (Glyptocephalus cynoglossus)

J 12: 15 (biological aspects of witch flounder)

[Y]

Yellowtail flounder (Limanda ferruginea)

- J 14: 47 (cod & flounder catches on Grand B.,1971-89)
- (fecundity of yellowtail flo. on Grand B.)
- 16: 137 (managing transboundary flatfish stocks)

.

[A]

AKENHEAD, S. A. (Canada)

S12: 57 (water temperature off Nfld & Labrador)

ALBIKOVSKAYA, L. K. (Russia)

S12: 37 (biology & distribution of lanternfishes)

ALDONOV, V. K. (Russia)

S11: 7 (ichthyoplankton on Flemish Cap)

ANDERSON, J. T. (Canada)

] 8: 55 (survival of pre-recruit fishes)

ARKHIPKIN, A. I. (Russia)

J 12: 63 (reproductive system in cephalopods)

ASTAFJEVA, A. V. (Russia)

S11: 7 (ichthyoplankton on Flemish Cap)

ATKINSON, D. B. (Canada)

J 9: 141 (distribution of redfish on Grand Bank)

11: 7 (length of roughhead grenadier)

S 16: 25 (redfish simulation study)

AUSTER, P. J. (USA)

J 8: 67 (review of marine fish communities)

11: 59 (megafaunal assemblages off eastern USA)

13: 77 (mating aggregation of spider crab)

[B]

BAIDALINOV, A. P. (Russia)

J 14: 137 (influence of temperature on some stocks)

BAIRD, J. W. (Canada)

S 16: 111 (stock size and catch of cod off Nfld.)

121 (uncertainty in ADAPT using simulation)

BECK, B. (Canada)

J 9: 37 (growth of pollock on Atlantic coast)

BISHOP, C. A. (Canada)

S 16: 111 (stock size and catch of cod off Nfld.)

121 (uncertainty in ADAPT using simulation)

BOJE, J. (Denmark)

3 12: 7 (meristic characters in G. halibut)

S12: 7 (G. halibut in West Greenland waters)

13: 41 (biology of G. halibut at West Greenland)

BOWERING, W. R. (Canada)

S 16: 103 (assessment of A. plaice in Div. 3LNO)

137 (managing transboundary flatfish stocks)

BRAULT, S. (USA)

S 16: 171 (stock rebuilding over time)

BRETHES, J. C. (Canada)

J 12: 41 (growth & sexual maturity of sand lance)

BRODIE, W. B. (Canada)

J 14: 47 (cod & flounder catches on Grand B.,1971-89)

S 16: 103 (assessment of A. plaice in Div. 3LNO)

137 (managing transboundary flatfish stocks)

BUCH, E. (Denmark)

J 9: 81 (environmental conditions off W. Greenland)

S 15: 25 (predictability of temp. at W Greenl.)

BURNETT, J. (USA)

J 12: 15 (biological aspects of witch flounder)

BUSCH, D. A. (USA)

J 9: 97 (water intrusion to Great South Channel)

[C]

CAMPBELL, A. (Canada)

J 11: 29 (size frequency of lobsters)

CHRISTENSEN, S. (Denmark)

S14: 45 (tagging of cod off W Greenland, 1946-64)

CHUMAKOV, A. K. (Russia)

J 14: 107 (Greenland halibut in the NW Atl., 1969-88)

S11: 7 (ichthyoplankton on Flemish Cap)

14: 51 (G halibut & roundnose grenadier, 1968-86)

CLARK, S. H. (USA)

J 9: 13 (biological status of pollock)

12: 15 (biological aspects of witch flounder)

CLAY, D. (Canada)

J 9: 37 (growth of pollock on Atlantic coast)

COOK, R. M. (United Kingdom)

S 16: 129 (North Sea cod stock forecasts)

17: 3 (intro to sequential population analysis)

COOPER, R. A. (USA)

J 11: 59 (megafaunal assemblages off eastern USA)

COUTURIER, C. (Canada)

J 7: 123 (age estimation of scallop larvae)

CREASER, E. P. (Canada)

J 8: 33 (movement of herring off US coast)

[D]

DEGOURSEY, R. E. (USA)

J 13: 77 (mating aggregation of spider crab)

DESROSIERS, G. (Canada)

J 12: 41 (growth & sexual maturity of sand lance)

DRINKWATER, K. F. (Canada).

S11: 23 (review of environmental conditions, 1985)

71 (temperature & salinity near Bay of Fundy)

12: 43 (review of environmental conditions, 1986)

S 13: 27 (review of environmental conditions, 1987)

14: 7 (review of environmental conditions, 1988)

15: 7 (review of environmental conditions, 1989)

[E]

ENGAS, A. (Norway)

J 9: 133 (depth influence on abundance of groundfish)

ERMOLCHEV, V. A. (Russia)

S 11: 63 (target strength of pelagics by acoustics)

[F]

FAHRIG, L. (Canada)

S16: 13 (cod - capelin interactions)

25 (redfish simulation study)

FILIN, A. A. (Russia)

J 7: 99 (biological aspects of lanternfish)

FOGARTY, M. J. (USA)

J 14: 59 (fish biomass & yield on Grand B., 1960-87)

FOWLER, G. M. (Canada)

J 11: 39 (recoveries of cod & plaice tags)

12: 27 (tagging mortality of lab held herring)

FRANCIS, R. I. C. C. (New Zealand)

S 16: 143 (risk analysis in fishery management)

FRECHET, A. A. (Canada)

S 16: 95 (cod stock abundance in G. of St Lawrence)

FRYER, R. J. (United Kingdom)

S 16: 129 (North Sea cod stock forecasts)

[G]

GABRIEL, W. (USA)

J 14: 29 (demersal fish assemblages off east US)

GASCON, D. (Canada)

S 16: 59 (consistency of groundfish assessments)

GAVARIS, S. (Canada)

J 7: 137 (precision of survey estimates of cod)

S 16: 59 (consistency of groundfish assessments)

GODØ, O. R. (Norway)

J 8: 25 (tagging and recapture of A. halibut)

9: 133 (depth influence on abundance of groundfish)

GOMES, M. C. (Canada)

J 14: 13 (groundfish assemblages on the Grand Bank)

GRISWOLD, C. A. (USA)

] 12: 35 (fecundity of Atlantic mackerel)

GROSSLEIN, M. D. (USA)

S11: 83 (report of Session on recruitment)

91 (knowledge of recruitment for herring)

[H]

HAEDRICH, R. L. (Canada)

1 14: 13 (groundfish assemblages on the Grand Bank)

HALLIDAY, R. G. (Canada)

I 10: 1 (fishing areas in the NW Atlantic)

\$11: 75 (fishing grounds of longliners off SW NS)

12: 27 (area closures in management of haddock)

HANSEN, H. H. (Denmark)

S11: 37 (size-at-age of cod off W. Greenland)

HAUG, T. (Norway)

J 8: 25 (tagging and recapture of A. halibut)

HOENIG, J. M. (Canada)

S 16: 121 (uncertainty in ADAPT using simulation)

HORSTED, Sv. Aa. (Denmark)

S 16: 79 (advice & management of fish at Greenland)

HOVGÅRD, H. (Denmark)

S 12: 21 (gillnet surveys for cod in German waters)

14: 45 (tagging of cod off W Greenland, 1946-64)

HUNT, J. J. (Canada)

J 13: 63 (morphological characteristics of otoliths)

HURLEY, G. V. (Canada)

J 7: 123 (age estimation of scallop larvae)

HURLEY, P. C. F. (Canada)

J 9: 37 (growth of pollock on Atlantic coast)

[I]

IDOINE, J. S. (USA)

J 14: 79 (multispecies size composition)

[]]

JONES, C.D. (USA)

S 16: 57 (effects of growth on estimation of F_{0.1})

JONSSON, E. (Iceland)

J 9: 53 (groundfish data in stock assessments)

[K]

KEATS, D. W. (South Africa)

J 13: 7 (feeding of juvenile cod in east Nfld)

KENCHINGTON, T. J. (Canada)

J 11: 43 (vertical distribution of larval redfish)

KIZNER, Z. I. (Russia)

S 16: 123 (uncertainty in assessment & surveys)

S 16: 149 (estimation of assessments by use of models)

KOELLER, P. A. (Canada)

J 11: 51 (improving groundfish survey estimates)

KUNZLIK, P. A. (United Kingdom)

S 16: 129 (North Sea cod stock forecasts)

[L]

LA ROSA, S. C. (USA)

111: 59 (megafaunal assemblages off eastern USA)

LANGE, A. M. (USA)

J 12: 49 (interaction between squid & butterfish)

LARRAÑETA, M. G. (Spain)

J 14: 129 (commercial fish in Div. 3NO)

LASSEN, H. (Denmark)

S 16: 165 (uncertainties in fish stock management)

LAUREC, A. (France)

S 16: 153 (more efficient TAC policies)

LAZIER, J. (Canada)

S12: 57 (water temperature off Nfld & Labrador)

LIBBY, D. A. (USA)

J 8: 33 (movement of herring off US coast)

LILLY, G. R. (Canada)

S11: 83 (report of Session on recruitment)
109 (research on recruitment of cod & redfish)

LODER, J. (Canada)

S12: 57 (water temperature off Nfld & Labrador)

LOENG,H. (Norway)

J 9: 103 (temperature on population parameters)

LOUGH, R. G. (USA)

J 7: 107 (juvenile sand lance off east USA)

[M]

MAHON, R. (Canada)

J 9: 73 (species composition in bottom trawl)

MALATESTA, R. J. (USA)

J 11: 59 (megafaunal assemblages off eastern USA)

MAYO, R. K. (USA)

J 9: 13 (biological status of pollock)

14: 59 (fish biomass & yield on Grand B., 1960-87)

MAZHIRINA, G. P. (Russia)

J 7: 99 (biological aspects of lanternfish)

McGARVEY, R. (Canada)

J 13: 83 (reproduction & early life of sea scallops)

McGLADE, J. M. (Canada)

J 9: 13 (biological status of pollock)

McLAREN, I. A. (Canada)

J 13: 83 (reproduction & early life of sea scallops)

MERCER, V. L. (Canada)

J 9: 123 (growth of northern shrimp from NW Atl.)

MESSIEH, S. N. (Canada)

] 14: 135 (fluctuations in herring stocks)

S 11: 53 (characteristics of herring spawning)

MESSTORFF, J. (Republic of Germany)

S 12: 13 (wolffishes in West Greenland waters)

14: 39 (cod recruitment vs physical environment)

MILLAR, R. B. (Canada)

S 16: 13 (cod - capelin interactions)

MOHN, R. K. (Canada)

J 7: 117 (survey design for scallops, Georges B.)

S 16: 133 (harvesting strategies in a modeled fishery)

17: 3 (intro to sequential population analysis)

MOUNTAIN, D. G. (USA)

J 9: 97 (water intrusion to Great South Channel)

MURAWSKI, S. A. (USA)

J 14: 79 (multispecies size composition)

MURPHY, E. F. (Canada)

S16: 111 (stock size and catch of cod off Nfld.)

MYERS, R. A. (Canada)

S 16: 21 (recruitment variability of three fishes)

[N]

NAIDU, K. S. (Canada)

] 7: 131 (meat recovery from scallops offshore)

NAZAROVA, G. I. (Russia)

S 15: 53 (silver hake on the Scotian Shelf, 1985)

NELSON, G. A. (USA)

J 11: 11 (biology & population of sand lance)

13: 53 (information on Atlantic wolffish)

NIZOTSEV, G. P. (Russia)

S 15: 35 (growth of G halibut in the NE Atlantic)

[O]

O'BOYLE, R. (Canada)

S 16: 59 (consistency of groundfish assessments)

OVERHOLTZ, W. J. (USA)

J 7: 145 (reproductive biology of haddock)

9: 115 (growth of Atlantic mackerel stock)

[P]

PALSSON, O. K. (Iceland)

J 9: 53 (groundfish data in stock assessments)

PARSONS, D. G. (Canada)

J 9: 123 (growth of northern shrimp from NW Atl.)

PASTUSZAK, M. (Poland)

J 9: 97 (water intrusion to Great South Channel)

PAZ, J. (Spain)

J 14: 129 (commercial fish in Div. 3NO)

PELLETIER, D. (France)

S 16: 153 (more efficient TAC policies)

PENNEY, L. W. (Canada)

S 13: 7 (conversion factors for cod)

PETERS, G. R. (Canada)

S13: 7 (conversion factors for cod)

PETRIE, B. (Canada)

S12: 57 (water temperature off Nfld & Labrador)

PEZZACK, D. S. (Canada)

J 14: 115 (lobster landing trends, 1947-88)

PINHORN, A. T. (Canada)

J 8: 15 (catchability of major groundfish)

10: 1 (fishing areas in the NW Atlantic)

POTTER, D. C. (USA)

7: 107 (juvenile sand lance off east USA)

PRAGER, M. H. (USA)

S 16: 57 (effects of growth on estimation of $F_{0.1}$)

[R]

RESTREPO, V. R. (USA)

S 16: 121 (uncertainty in ADAPT using simulation)

RICE, J. C. (Canada)

J 14: 13 (groundfish assemblages on the Grand Bank)

RIGET, F. (Denmark)

J 12: 7 (meristic characters in G. halibut)

S12: 7 (G. halibut in West Greenland waters)

13 (wolffishes in West Greenland waters)

13: 41 (biology of G. halibut at West Greenland)

RIVARD, D. (Canada)

S 16: 59 (consistency of groundfish assessments)

ROBERT, G. (Canada)

J 7: 117 (survey design for scallops, Georges B.)

ROBICHAUD, D. A. (Canada)

J 11: 29 (size frequency of lobsters)

RODDICK, D. L. (Canada)

7: 117 (survey design for scallops, Georges B.)

ROSENBERG, A. A. (USA)

S 16: 171 (stock rebuilding over time)

ROSS, M. R. (USA)

J 11: 11 (biology & population of sand lance)

12: 15 (biological aspects of witch flounder)

13: 53 (information on Atlantic wolffish)

[S]

SAINT-PIERRE, R. (Canada)

J 12: 41 (growth & sexual maturity of sand lance)

SANDSTRÖM,, H. (Canada)

J 8: 5 (physical processes at the Shelf edge)

SAVVATIMSKY, P. I. (Russia)

S11: 43 (species composition of trawl catches)

13: 53 (common grenadier in trawl surveys, 1967-83)

59 (roughhead grenadier investigation, 1967-83)

14: 51 (G halibut & roundnose grenadier, 1968-86)

SCHOPKA, S. A. (Iceland)

J 9: 53 (groundfish data in stock assessments)

SERCHUK, F. M. (USA)

J 13: 25 · '(assessment & management of Georges B cod)

83 (reproduction & early life of sea scallops)

14: 59 (fish biomass & yield on Grand B., 1960-87)

SEREBRYAKOV, V. P. (Russia)

J 14: 107 (Greenland halibut in the NW Atl., 1969-88)

S11: 7 (ichthyoplankton on Flemish Cap)

S 16: 49 (predicting year-class strength)

SHELTON, P. A. (Canada)

S16: 13 (cod - capelin interactions)

SHEPHERD, J. (United Kingdom)

S 16: 7 (report of the Special Session)

SHERSTYUKOV, A. I. (Russia)

S 15: 53 (silver hake on the Scotian Shelf, 1985)

SIGAEV, I. K. (Russia)

J 14: 103 (variability of silver hake on Scotian Shelf)

SILVERMAN, M. J. (USA)

J 12: 35 (fecundity of Atlantic mackerel)

SIMONSEN, V. (Denmark)

J 12: 7 (meristic characters in G. halibut)

SINCLAIR, A. F. (Canada)

J 12: 27 (tagging mortality of lab held herring)

13: 15 (distribution and recruitment of cod)

S11: 75 (fishing grounds of longliners off SW NS)

16: 59 (consistency of groundfish assessments)

SINCLAIR, M. M. (Canada)

] 8: 43 (distribution of scallop in Bay of Fundy)

SMITH, P. C. (Canada)

J 8: 5 (physical processes at the Shelf edge)

SMITH, R. W. (USA)

J 9: 73 (species composition in bottom trawl)

SMITH, S. J. (Canada)

J 7: 137 (precision of survey estimates of cod)

STEELE, D. H. (Canada)

J 13: 7 (feeding of juvenile cod in east Nfld)

STEFFANSSON, G. (Iceland)

3 9: 53 (groundfish data in stock assessments)

STEIN, M. (Republic of Germany)

J 9: 81 (environmental conditions off W. Greenland)

S 12: 71 (water masses, currents & ice, Denmark St.)

14: 29 (thermohaline observations off W Greenl.)

39 (cod recruitment vs physical environment)

15: 19 (warming effect on fisheries in N Atl.)

25 (predictability of temp. at W Greenl.)

31 (salinity & temperature at W Greenland)

STEINARSSON, B. Æ (Iceland)

J 9: 53 (groundfish data in stock assessments)

STEWART, L. L. (USA)

J 11: 59 (megafaunal assemblages off eastern USA)

STOBO, W. T. (Canada)

J 9: 37 (growth of pollock on Atlantic coast)

11: 39 (recoveries of cod & plaice tags)

12: 27 (tagging mortality of lab held herring)

STROWBRIDGE, L.A. (Canada)

S 13: 7 (conversion factors for cod)

[T]

TALLMAN, R. (Canada)

S 16: 39 (fish discarding in the G. of St Lawrence)

TEMPLEMAN, W. (Canada)

J 7: 89 (thorny skate from the NW Atlantic)

J 7: 155 (thorny skate population characteristics)

9: 45 (vertebral numbers in cod of Nfld.)

TEVS, I. I. (Russia)

J 14: 107 (Greenland halibut in the NW Atl., 1969-88)

TREMBLAY, M. J. (Canada)

J 7: 123 (age estimation of scallop larvae)

8: 43 (distribution of scallop in Bay of Fundy)

TRITES, R. W. (Canada)

S11: 23 (review of environmental conditions, 1985)

12: 43 (review of environmental conditions, 1986)

13: 27 (review of environmental conditions, 1987)

14: 7 (review of environmental conditions, 1988)

: 7 (review of environmental conditions, 1989)

TROYANOVSKY, F. M. (Russia)

J 14: 145 (observations on non-maturing redfish)

TRUE, E. D. (USA)

S14: 21 (temperature in the Gulf of Maine)

[V]

VEITCH, P. J. (Canada)

J 9: 123 (growth of northern shrimp from NW Atl.)

[W]

WALDRON, D. E. (Canada)

J 14: 87 (diet of silver hake on Scotian Shelf)

WALSH, S. J. (Canada)

S 16: 137 (managing transboundary flatfish stocks)

WARING, G. T. (USA)

J 12: 49 (interaction between squid & butterfish)

WEGNER, G. (Republic of Germany)

S 14: 29 (thermohaline observations off W Greenl.)

WIGLEY, S. E. (USA)

[Z]

J 13: 25 (assessment & management of Georges B cod)

ZAMARRO, J. (Spain)

WIITALA, S. A. (USA)

S15: 43 (fecundity of yellowtail flo. on Grand B.)

S14: 21 (temperature in the Gulf of Maine)

WINTERS, G. H. (Canada)

J 9: 5 (sand lances of eastern Newfoundland)