# International Commission for 

the Northwest Atlantic Fisheries

Serial No. 5253<br>(H)<br>ICNAF Sum. Doc. $78 / \mathrm{VI} / 18$<br>Provisional Index and List of Titles for ICNAF Publications and Meeting Documents, 1976<br>Compiled by<br>\section*{V. M. Hodder}

1. Introduction

Special Publication No. 11, issued in June 1975, contained an index and list of titles for ICNAF publications (Annual Proceedings, Research Bulletin, Redbook and Special Publications) for the period 1950-74. The compilation of a similar index for meeting documents issued during 1950-74 is well advanced and its completion is anticipated late in 1978 or early 1979. In the meantime, the Secretariat plans to issue annually a provisional index and list of titles of all ICNAF publications and meeting documents, with the proposal that these be collated and published at 5 -year intervals. This index covering all ICNAF publications and meeting documents issued in 1976 is presented as an example of the format proposed for the annual index.
2. ICNAF Publications in 1976

The following is a list of publications in 1976, the abbreviation preceding the name of each publication representing the code used in indexing:

| a) | AR | Annual Report Vol. 25 for 1974/75 (Issued April 1976) |
| :---: | :---: | :---: |
| b) | MP | Meeting Proceedings for 1975/76 (Issued October 1976) |
| c) | R | Redbook 1976 (Issued August 1976) |
| d) | RB | Research Bulletin No. 12 (Issued October 1976) |
| e) | SE | Selected Papers No. 1 (Issued February 1976) |
| f) | SP | Special Publication No. 9 (Issued February 1976) |
| g) | SB | Statistical Bulletin Vol. 24 for 1974 (Issued January 1976) |
| h) | SY | Sampling Yearbook Vol. 19 for 1974 (Issued February 1976) |
| i) | FV | List of Fishing Vessels for 1974 (Issued February 1976) |
| j) | CD | Conmissioners' Docwments (76/I/1 to 76/XII/84) |
| k) | RD | Research Documents (76/I/1 to 76/XII/173) |
| 1) | SD | Summary Documents (76/I/1 to 76/XII/48) |

In the preparation of the material for this index, emphasis was placed on the indexing of Scientific papers, particularly those published in the Research Bulletin, Selected Papers and Special Pulbication series, and those issued as Research Documents and also Summary Documents, where appropriate. In the case of Commissioners' Documents, except for a few originating from the ICNAF Secretariat, most lack specific authorship in that they were presented by delegates of the various countries. Such documents are referenced only in the "Author Index" under the heading "ANON.", followed by the name of the country whose delegation was responsible for presenting the document. The remaining publications (Annual Report, Meeting Proceedings, Redbook, Statistical Bulletin, Sampling Yearbook and List of Fishing Vessels) are indexed by subject under one or two appropriate headings only, as a detailed indexing by subject (e.g. names of species, areas, etc.) would have involved a great deal of repetition.
In the case of meeting documents listed by author and title in the "List of Titles" section, those indicated by asterisks (*) preceding the authorship are indexed by subject and author with reference to the actual publication noted in parentheses and not as meeting documents.

## 3. Format Used in Subject and Author Index

The compilation of this index for 1976 publication generally follows the procedure used in compiling the index for 1950-74 publications (see ICNAF Spec. Publ. No. 11). Each of the publications is identified by a 2 -character alpha code (see abbreviations below), followed by arabic numerals to designate the actual volume number, issue number or year of issue. The numerals following a colon (:) represents the first page number for the referenced paper, whereas the numerals following an oblique (/) for all meeting documents represents the designated document number. This is followed in parentheses

[^0]by a shortened version of the title or an expression which indicates to the reader the object of the paper referenced. For brevity, many ungrammatical expressions are used, some of which require the subject headings to be read into them in order for the expression to make sense. Examples of references with their descriptive expressions are as follows:

|  | (administrative report for 1974/75) |
| :---: | :---: |
| FV(74): <br> MP (76): | (list of fishing vessels for 1974) |
| R (76) : 35 | (working group report on tagging, Jan 1976) |
| RB 12 : 37 | (assessment of redfish in SA 2 and 3) |
| SB 24 : | (fisheries statistics for 1974) |
| SE 1:117 | (status of groundfish resource in Div. 4VWX) |
| SP 9 | (variation in ice season off E Canada) |
| SY 19 | (list of sampling data for 1974) |
| CD $76 / 30$ | (USA proposal re future of the Commission) |
| RD 76 / 83 | (zooplankton distribution in SA 5, 1973) |
| SD $76 / 7$ | (report of ICES Northwestern Working Group |

## 4. Abbreviations Used in the Index

The abbreviations used for the various publications and documents are indicated in Section 2 above. Abbreviations commonly used for some countries (and provinces), international agencies and standing committees are as follows:

| CWP | - Coordinating Working Party on Atlantic Fishery Statistics |
| :--- | :--- |
| FAO | - Food and Agriculture Organization of the United Nations |
| FRG | - Federal Republic of Germany |
| GDR | - German Democratic Republic |
| ICCAT | - International Commission for the Conservation of Atlantic Tunas |
| ICES | - International Council for the Exploration of the Sea |
| ICNAF | - International Commission for the Northwest Atlantic Fisheries |
| ICSEAF | - International Commission for the Southeast Atlantic Fisheries |
| NB | - New Brunswick (a province of Canada) |
| NRAFC | - Northeast Atlantic Fisheries Commission |
| Nf1d | - Newfoundland (a province of Canada) |
| NS | - Nova Scotia (a province of Canada) |
| OECD | - Organization for Economic Cooperation and Development |
| STACRES - Standing Committee on Research and Statistics (ICNAF) |  |
| STACTIC - Standing Committee on International Control |  |
| STACFAD - Standing Committee on Finance and Administration |  |
| STACREM - Standing Committee on Regulatory Measures |  |
| UK | - United Kingiom |
| USA | - United States of America |
| USSR | - Union of Soviet Socialist Republics |

In many of the references the term "re" is used to imply "in relation to", "in connection with", etc.

## 5. References

HODDER, V. M. 1975. Index and List of Titles, ICNAF Publications, 1950-1974. ICNAF Spec. Pubz. No. 11,125 p.

## SUBJECT INDEX



## Abundance; Abundance index

RB 12 : 5 (mackerel in surveys off USA coast)
91 (cod and redfish on Flemish Cap)
SE $1: 19$ (diurnal variation in redfish in Div. 3P)
(silver hake in Div. 4 VHX )
(grenadiers in NW Atlantic)
(plankton communities in Div. 5Y) (environmental fluctuations re fisheries)
recruitment re management of cod in Div. 4T)
(estimating fish density by hydroacoustics)
(mackerel in SA 5 and 6 from surveys)
(flatfishes on the Scotian Shelf)
(redfish on Scotian Shelf)
(haddock on Scotia Shelf)
(recruitment of mackerel from USA surveys)
status of haddock stock in Div. 5Z)
(status of redfish stock in SA 5,1975 )
status of cod stock in Div. 4VsW)
(capet in spawning stock on Grand Bank)
(capelin stock in Div. 2J and 3K)
(silver hake from surveys in Div. 4VWX)
status of yellowtail in Div. 3LNO)
larval herring in surveys, March 1973-76)
(larval herring in FRG survey, Nov 1975)
copepods re herring feeding in SA 5)
zooplankton in SA 5, 1973)
(ichthyoplankton in larval herring surveys)
zooplankton in SA 4 and 5, 1974)
(200)
(state of shrimp stocks in SA 1)
(young herring in FRG surveys, 1975-76)
(recruitment re herring in SA 5 and 6) (larval herring in USA surveys, 1975/76) (mackerel in SA 3 to 6)
(environment and mackerel recruitment)
(status of mackerel in SA 3 to 6)
(mackerel in USA surveys in SA 5 and 6)
Acartia sp. (copepod)
RD 76 : 82 (distribution on herring feeding grounds in SA 5)

## Administrative Reports

AR 25 : 7 (report for fiscal year 1974/75)
Age; Age composition; Age groups
RB 12 : 29 (re growth of cod in SA 5)
37 (status of redfish stocks in SA 2 and 3)
69 (method of analyzing catch-at-age data)
SE 1: 7 (assessment of cod in Div, 4VsW)
(redfish catches in Div. 3P)
59 (status of summer flounder in SA 5 and 6)
RD 76 / 17 (assessment of cod in SA 1)
18 (mackerel in Nfld area; 1975)
(herring in Canadian catches in Div. 4W)
(herring in Canadian catches in Div. 4V)
(capet in in SA 2 and 3, 1975)
(survey results for haddock in Div. 4 VWX )
(Canadian mackerel catches in SA 4)
(re maturity of cod in SA 4 and 5)
(assessment of herring in Div. 4VWX)
(assessment of cod in Div. 4 VsW )
(capelin fishery on the Grand Bank)
(mackerel catches in SA 4 to 6)
(capelin in Div. 2J and 3K, 1975)
(re growth of argentine in Div. 4VWX)
(silver hake fishery in Div. 4W)
(silver hake in Div. 4VHX)
(re assessment of haddock in Div. 4X)
(Alosa fishery in SA 6)
(studies on capelin in Div. 2 J and $3 \mathrm{~K}, 1975$ )
(salmon taken at St. Pierre, 1975)
(re growth of yellowtail in Div. 3P)
(assessment of silver hake in Div. 4VWX)
(G halibut in SA 0 to 3)
(assessment of mackerel in SA 5 and 6)
(studies on harp seals, 1976)
(research on hooded seals, 1976)
(assessment of harp seal stocks)
(assessment of mackerel stocks)
(status of mackerel in SA 3 to 6)
(variation in age data for mackerel)
(age-length keys for mackerel in SA 5 and 6)
(assessment of silver hake in Div. 4VWX)
(revised assessment of silver hake in 4VWX)
(analysis of mackerel samples from Nfl)
(mackerel in 1976 catches in SA 4)
(reassessment of mackerel stocks)
171 (variation in age composition of mackerel)

## Age determination; Age validation

SE 1 : 41 (problem re analysis of silver hake data)
RD 76 / 28 (roundnose grenadier in SA 0 to 3)
32 (results of Spain-USA cod ageing workshop)
SD $76 / 21$ (silver hake ageing workshop, Mar 1976)

## Ageing techniques (Meeting reports)

SD 76 / 21 (silver hake ageing workshop, Mar 1976)
Alewife (Alosa pseudoharengus)
RD 76 / 61 (notes on fishery in SA 6)
102 (prospectus for management off USA coast)
141 (by-catch in mackerel fishery in SA 5 and 6)
Alosa aestivalis (see Blueback)
Alosa pseudoharengus (See Alewife)
American plaice (see Plaice, American)
Ammodytes sp. (see Sand lance)
Amphipods
RD 76 / 20 (food of capelin off Labrador)
97 (distribution in SA 4 and 5, 1974)
121 (food of herring and mackerel in SA 5 and 6)
Anarhichus Sp. (see Wolffishes)

## Angler (Lophius americanus)

RD 76 /163 (summer distribution in Div. 4VWX)

## Anisakis sp. (nematode)

RD 76 / 52 (parasite in mackerel in SA 5 and 6)
Annelids
RB 12: 23 (food of flounders on the Grand Bank)
Annual Reports
AR 25 : 1 (ICNAF Annual Report for the year 1974/75)
Anomalies (hydrographic)
RD $76 / 2$ (water temperatures in SA 4 to 6)
7 (hydrographic data, Station 27, 1950-59)
71 (water temperatures in SA 1, 1975)
72 (water temperatures in SA 2 and 3, 1975)
85 (bottom temperatures in SA 5, 1968-75)
Apparatus; Equipment; Instruments
RD 76 / 10 (hydroacoustics and fish density estimation)

## Appendicularians

RD 76 / 97 (distribution in SA 4 and 5, 1974)
121 (food of herring and mackerel in SA 5 and 6)
Argentine (Argentina silus)
RD 76 / 56 (studies on age and growth in Div. 4VWX)
158 (by-catch in USSR fisheries in SA 4 to 6 )
163 (summer distribution in Div. 4VWX)

## Assessments

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RB 12 : 37 (redfish stocks in SA 2 and 3)
            49 (finfish resources in SA 5 and 6)
SE 1 : 7 (cod stock in Div. 4VsW)
            3] (redfish fishery in Div. 4VWX)
            4 1 \text { (analysis of silver hake in Div. 4VWX)}
            5 9 \text { (surmer flounder in SA 5 and 6)}
            107 (groundfish resources in SA 2 and 3)
            117 (groundfish resources in Div. 4VWX)
RD 76 / 14 (Loligo stock in SA 5 and 6)
            17 (cod stock in SA 1)
            33 (cod stock in Div. 3M)
            45 (herring stock in Div. 4WX)
            46 (cod fishery in Div. 4VsW)
            55 (red hake on Georges Bank)
            57 (silver hake in Div. 4W)
            59 (silver hake in Div. 4VWX)
            60 (haddock stock in Div. 4X)
            6 7 \text { (yellowtail stock in Div. 3LNO)}
            90 (redfish stock in Div. 4RST)
            98 (silver hake in Div. 4VWX)
            107 (mackerel stocks in ICNAF area)
            110 (mackerel stock in SA 5 and 6)
            127 (surplus production of harp seals)
            130 (stochastic model for harp seals)
            135 (mackerel stocks in ICNAF area)
            137 (mackerel stocks in SA 3 to 6)
            145 (surplus yield model for mackerel)
            157 (silver hake in Div. 4VWX)
            160 (revised for silver hake in Div. 4VWX)
            169 (revised for mackerel stocks)
SD 76 / 8 (stock records for some assessed stocks, 1975)
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## Assessments Subcommittee <br> R (76): 13 (report to STACRES, Sep 1975) 67 (report to STACRES, Jun 1976)

## Atlantic, North

RD $76 / 8$ (estimating mortality in fish populations)
75 (factors affecting herring recruitment)

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Atlantic, Nortneast
RD 76 / 63 (selection of hake in trawls off Spain)
SD 76 / 4 (press notice, NEAFC Meeting, Nov 1975)
    7 (report of ICES Northwestern Working Group)
    26 (1975 ICES resolution relevant to ICNAF)
    30 (press notice, NEAFC Meeting, Apr 1976)
    46 (press notice, NEAFC Meeting, July 1976)
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Atlantic, Northwest (see also names of specific areas)
SE $1: 73$ (distribution of grenadiers)
RD 76 / 5 (distribution of hydrographic stations, 1950-59)
6 (summary of hydrographic stations, 1950-73)
8 (age determination of grenadier)
(Spain-USA ageing workshop on cod)
(continuous plankton recorder survey, 1975)
(proposal for atlases of hydrographic data)
(material for groundfish survey manual)
(analysis of detailed sampling data)
(assessment of mackerel stocks)
(material for groundfish survey manual)
(relation of harp seals and fish stocks)
(stochastic model for harp seal stocks)
(population forecasts for harp seals)
(assessment of mackerel stocks)
(length conversions for mackerel)
(assessment of mackerel stocks)
(surplus yield model for mackerel)
(variation in age data for mackerel)
(time series analysis of mackerel catches)
(reassessment of mackerel stocks)
(stock records for some assessed stocks, 1975)
(historical catches for TAC species, 1965-74)
(finfish and squid catches in SA 5+6, 1965-74)
(United Kingdom research report, 1975)
(Japanese research report, 1975)
(Spanish research report, 1975)
(USA research report, 1975)
(Polish research report, 1975)
(GDR research report, 1975)
(Norwegian research report, 1975)
(USSR research report, 1975)
(Canadian research report, 1975)
(review of ICNAF sampling program)
(tagging activities reported for 1975)
(statistics on discards, 1974)
(FRG research report, 1975)
(Danish research report, 1975)
(adequacy of sampling TAC stocks, 1974)
(1975 supplement to 1974 list of vessels)
(Portuguese research report, 1975)
(French research report, 1975)
(catches and TACs for regulated stocks, 1973-76)
(trawl material and mesh size sampling, 1975)
Atlantic salmon (see Salmon)
Availability (see Abundance; Catches)

## B

## Baffin Island area (Statistical Area 0)

RD $76 / 70$ (circulation and salinity, 1974-75)
109 (studies on G halibut stocks)
112 (by-catches in grenadier fishery)

Bay of Fundy (Subarea 4)
RD $76 / 45$ (assessment of herring stock in Div. 4 VWX )
48 (migration of herring from tagging)
66 (herring tagging program for SA 4 to 6)
101 (techniques in herring tagging in SA 4)
163 (groundfish distribution in Div. 4VWX)
Behaviour
RD 76 /143 (swimming speed of mackerel)
Biological Surveys Subcommittee
R (76):119 (report to STACRES, June 1976)
Biomass (see Stock size and also Abundance)
Blueback (Alosa aestivalis)
RD 76 / 82 (notes of fishery in SA 6)
Brevoortia tyrannus (see Menhaden)
Brosme brosme (see Cusk)
Butterfish (Peprilus triacanthus)
RD 76 / 95 (larvae in herring surveys, 1971-75)
102 (prospectus for management off USA coast)
141 (by-catch in mackerel fishery in SA 5 and 6)

## By-catch

RB 12 : 83 (yield allocation in multi-species fisheries)
RD $76 / 3$ (in squid surveys in SA 3 and 4)
103 (simulated effect on SA 5 and 6 fisheries)
112 (in grenadier fishery in SA 1 to 3)
141 (in mackerel fisheries in SA 5 and 6)
158 (in USSR fisheries in SA 4 to 6)
173 (in Spanish squid fishery in SA 6)

## C

## Calanus sp. (copepod)

RD 76 / 20 (food of capelin in SA 2)
69 (distribution off E Nfld, June 1975)
73 (in plankton recorder surveys, 1975)
82 (distribution on herring feeding grounds)

## Canada

SD 76 / 23 (research report for 1975)
Capelin (Mallotus villosus)
RD 76 / 9 (observations on fishery in Div. 3LNO, 1975)
20 (studies on feeding in Div. 2J, 1973)
23 (Norwegian fishery in SA 2 and 3, 1975)
51 (estimated size of Grand Bank stock)
54 (estimated biomass in Div. 2J and 3 K )

62 (biological studies in Div. 2J+3K, 1975)
(food of salmon in Div. 3P, 1975)
120 (investigations in SA 2 and 3, 1973-76)
125 (food of harp seal stocks)

## Catches; Catch/effort

RB 12 : 5 (re abundance of mackerel off USA coast)
(re effort for redfish stocks in SA 2 and 3)
(effect of fishing on finfish biomass in SA $5+6$
(method of analyzing catch-at-age data)
(yield allocation in multi-species fisheries)
(assessment of cod stock in Div. 4VsW)
(diurnal variation in redfish in Div. 3P)
(assessment of redfish in Div. 4VWX)
(analysis of silver hake fishery in Div. 4VWX)
(summer flounder fishery in SA 5 and 6)
(grenadier species in NW Atlantic)
(status of groundfish resource in SA 2 and 3)
(status of groundfish resource in Div. 4VWX)
(re effort for Illex in SA 3 and 4)
(re effort for capelin in Div. 3LNO, 1975)
(re environmental factors in SA 3 and 4)
(mackerel abundance in SA 5 and 6)
(status of cod stock in SA 1)
(Canadian herring fishery in Div. 4W)
(Canadian herring fishery in Div. 4V)
(Norwegian capel in fishery in SA 3, 1975)
(re effort for flatfishes on Scotian Shelf)
(re effort for redfish on Scotian Shelf)
(assessment of cod in Div. 3M)
(status of haddock stock in Div. 5Z) (mackere1 in Canadian fishery in SA 4)
(status of squid fisheries in SA 5 and 6)
(status of redfish fishery in SA 5 and 6)
(assessment of herring in Div. 4VWX)
(developments in Div. 4VsW cod fishery)
(Spanish shrimp fishery in SA 1)
(TAC for red hake in Div. 5Z, 1977)
(status of silver hake in Div. 4W)
(silver hake fishery in Div. 4VWX)
(status of haddock fishery in Div. 4X)
(notes on alewife fishery in SA 6)
(estimating mackerel catches in SA 5 and 6)
(status of yellowtail fishery in Div. 3LNO)
(re effort for redfish in Div. 4RST)
(silver hake fishery in Div. 4VWX)
(prospectus for fishery management off USA coas
(simulating by-catch in SA 5 and 6 fisheries)
(variation in USA survey indices)
(changes in efficiency of fishing in SA 5 and 6
(fluctuation in cod yield in Div. 3NO)
(assessment of mackerel in SA 5 and 6)
(by-catches in grenadier fishery)
(surplus production model for harp seals)
(stochastic model for harp seal stocks)
(Norwegian seal fishery, 1976)
(population forecasts for harp seals)
(status of mackerel fishery in ICNAF area)
(assessment of mackerel in SA 3 to 6)
(by-catches in SA 5 and 6 mackere 1 fishery)
(USA recreational fishery for mackerel)
(time series analysis of mackerel catches)
(status of silver hake in Div. 4VWX)
(by-catches in SA 4 to 6 fisheries)
(Canadian and USSR mackerel catches, 1976)
(oceanography re fisheries in Div. 4VWX)
(re effort for shrimp fishery in SA 1)
(reassessment of mackerel in ICNAF area)
173 (observations on Spanish squid fishery, 1976)
SD 76 / 10 (historical catches for TAC species, $1965-74$ )
(finfish and squid catches in SA $5+6,1965-74$ )
(catches and TACs for regulated stocks, 1973-76
RD $76 / 82$ (distribution on herring feeding grounds)
Cephalopods (see Squids)
Chaetognaths (arrow worms)
RD 76 / 97 (distribution in SA 4 and 5, 1974)
121 (food of herring and mackere] in SA 5 and 6)
Cirripeds
RD $76 / 121$ (food of herring and mackerel in SA 5 and 6)
Circularion, water (see Currents)
Clupea harengus (see Herring)
Cod, Atlantic (Gadus morhua)
RB 12 : 29 (growth and mortality in SA 5 stock)
RB 12 : 29 (growth and mortality in SA 5 stock)
91 (study of year-class success on Flemish Cap)
91 (study of year-class success on Flemish Cap)
SE 1:7 (assessment of stock in Div. 4VsW)
SE 1:7 (assessment of stock in Div. 4VsW)
163 (mixed fishery theory re cod and redfish in SA 2
163 (mixed fishery theory re cod and redfish in SA 2
and Div. 3K)
and Div. 3K)
171 (recruitment re management in Gulf St. Lawrence)
171 (recruitment re management in Gulf St. Lawrence)
RD 76 / 3 (by-catch with squid in SA 3 and 4)
RD 76 / 3 (by-catch with squid in SA 3 and 4)
17 (status of stock at WGGreenland)
17 (status of stock at WGGreenland)
32 (results of Spain-USA ageing workshop)
32 (results of Spain-USA ageing workshop)
33 (assessment of stock in Div. 3M)
33 (assessment of stock in Div. 3M)
42 (age, length and maturity, SA 4 and 5)
42 (age, length and maturity, SA 4 and 5)
46 (recent developments in Div. 4VsW fishery)
46 (recent developments in Div. 4VsW fishery)
53 (trawl survey off Nfld, 1975)
53 (trawl survey off Nfld, 1975)
74 (migrations from tagging in Div. 3P+4RS)
74 (migrations from tagging in Div. 3P+4RS)
95 (eggs and larvae in herring surveys)
95 (eggs and larvae in herring surveys)
100 (analysis of detailed sampling data)
100 (analysis of detailed sampling data)
102 (prospectus for management off USA coast)
102 (prospectus for management off USA coast)
108 (fluctuations in yield in Div. 3NO)
108 (fluctuations in yield in Div. 3NO)
112 (by-catch in grenadier fishery)
112 (by-catch in grenadier fishery)
141 (by-catch in mackerel fishery in SA 5 and 6)
141 (by-catch in mackerel fishery in SA 5 and 6)
158 (by-catch in USSR fisheries in SA 4 to 6)
158 (by-catch in USSR fisheries in SA 4 to 6)
163 (summer distribution on Scotian Shelf)
163 (summer distribution on Scotian Shelf)
165 (re hydrographic conditions in Div. 4VWX)
165 (re hydrographic conditions in Div. 4VWX)
SD 76 / 7 (report of ICES Northwestern Working Group)
SD 76 / 7 (report of ICES Northwestern Working Group)

## Coelenterates

RB 12 : 23 (food of flounders on Grand Bank)
Cohort analysis (see Virtual population analysis)

## Competition

RD $76 / 121$ (food of herring and mackerel in SA 5 and 6) Conchoecia sp. (ostracod)

RD 76 / 20 (food of capelin in SA 2)
Continuous plankton records
RD 76 / 73 (plankton recorder surveys, 1975)
Conservation (see Management)

## Conversion factors

RD $76 / 38$ (re length of fresh and frozen herring)
93 (re length of roundnose grenadier)
94 (lumpfish roe to whole fish weight)
136 (re length measurements of mackerei)
Coordinated surveys (see Biological surveys)
Copepods (see also under individual genus names)
RD 76 / 20 (food of capelin in SA 2) 69 (distribution off E Nfld, June 1975)
73 (in plankton recorder surveys, 1975)
82 (distribution on herring feeding grounds)
97 (distribution in SA 4 and 5, 1974)
121 (food of herring and mackerel in SA 5 and 6)
Crustaceans (see also under specific headings)
RB 12 : 23 (food of flounders on Grand Bank)

## Currents

SE 1:89 (plankton conmunities in Gulf of Maine)
SE 1:89 (plankton conmunities in Gulf of Maine)
91 (effect on year-class success of fish in Div. 3M)
91 (effect on year-class success of fish in Div. 3M)
119 (physical oceanography of Georges Bank)
119 (physical oceanography of Georges Bank)
SP 9: 7 (effect on polar ice off W. Greenland)
SP 9: 7 (effect on polar ice off W. Greenland)
29 (effect on ice drift off E Canada)
29 (effect on ice drift off E Canada)
41 (effect on ice pack off E Greenland)
41 (effect on ice pack off E Greenland)
RD 76 / 70 (circulation and salinity in SA 0 to 3,
RD 76 / 70 (circulation and salinity in SA 0 to 3,
1974-75)
1974-75)
72 (re hydrographic conditions in SA 2 and 3,
72 (re hydrographic conditions in SA 2 and 3,
1975)
1975)
Cusk (Brosme brosme)
Cusk (Brosme brosme)
RD 76 /163 (summer distribution on Scotian Shelf)
Cyclopterus Rumpus (see Lumpfish)
Davis Strait
RD 76 /126 (research on hooded seals, 1976)
Decapods
RD 76 / 97 (distribution in SA 4 and 5, 1974)
121 (food of herring and mackerel in SA 5 and 6)
Denmark
SD $76 / 32$ (research report for 1975)
Diatoms
RD 76 / 69 (distribution off E Nfld, June 1975)
Discards; Discarding fish at sea
RD $76 / 166$ (in Spanish shrimp fishery in SA 1)
SD $76 / 29$ (statistics on discards, 1974)
Distribution (see also Abundance; Catches)
R8 12 : 5 (mackerel abundance off USA coast)
SE 1 : 19 (diurnal variation in redfish in Div. 3P)
41 (analysis of silver hake in Div. 4VWX)
RD 76,73 (grenadiers in the NW Atlantic)
RD $76 / 1$ (herring on Scotian Shelf)
3 (Illex in SA 3 and 4 from surveys)
5 (hydrography stations in ICNAF area)
11 (plankton re environment in SA 3 and 4)
51 (capel in spawning on Grand Bank)
54 (capelin stock in Div. $2 \mathrm{~J}+3 \mathrm{~K}$ )
69 (plankton off E Nfld, June 1975)
72 (plankton in recorder surveys, 1975)
79 (larval herring in FRG surveys, 1973-76)
80 (larval herring in FRG survey, Nov 1975)


RD $76 / 124$ (harp seals in NW Atlantic)

## Federal Republic of Germany

SD $76 / 31$ (research report for 1975)
Feeding; Food
RB 12 : 23 (flounders on the Grand Bank)
91 (cod and redfish on Flemish Cap)
RD $76 / 20$ (studies on capelin in SA 2, 1973)
62 (studies on capelin in Div. 2J+3K, 1975)
74 (and cod migrations in Div. 3P+4RS)
82 (copepod distribution re herring feeding)
89 (salmon taken at St. Pierre, 1975)
121 (competition between herring and mackerel)
125 (relation of harp seals and fish stocks)
Finfish (see also under names of species)
RB 12 : 49 (effect of fishing on finfish biomass in SA 5+6)
RD 76 / 10 (hydroacoustics and fish density estimation)
102 (prospectus for fishery management off USA coast)
103 (simulating effect of by-catch on SA 5 and 6 fisheries)
Fisheries (see Catches)
Fishery Regulations
CD $76 / 18$ (ICNAF fishing regulations for 1976, as on 24 Feb 1976)

Fishing effort; Fishing intensity
RB 12 : 37 (status of redfish fisheries in SA 2 and 3)
(76): 49 (effect on finfish biomass in SA 5 and 6)

R (76): 29 (working group report on effort regulation in SA 2 to 4, Jan 1976)
SE 1: $\quad 133$ (working group report on effort, Jun 1976)
SE 1 : 7 (assessment of cod in Div. 4Vsw)
31 (assessment of redfish in Div. 4VWX)
107 (status of groundfish resource in SA 2 and 3)
117 (status of groundfish resource in Div. 4VUX)
129 (non-equilibrium regulation of fisheries)
RD 76 / 12 (re mackerel fishery in SA 5 and 6)
14 (re assessment of Loligo in SA 5 and 6)
17 (status of cod stock in SA 1)
33 re assessment of cod in Div. 3M)
41 status of squid stocks in SA 5 and 6)
43 (status of redfish in SA 5, 1975)
44 (Schaefer model re fishery yields)
46 (status of cod fishery in Div. 4VsW)
61 (notes on fishery for Alosa in SA 6)
90 (status of redfish in Gulf of St. Lawrence)
105 (efficiency of fishing in SA 5 and 6, 1960-73)
142 (USA recreational fishery for mackerel)
166 (Spanish shrimp fishery in SA 1)

## Fishing power

RD $76 / 103$ (changes in fishing efficiency in SA 5 and 6)

## Fishing vessels

FV(76): 1 (ICNAF List of Fishing Vessels, 1974)
SD 76 / 34 ( 1975 supplement to 1974 list of vessels)
Flatfishes (see under names of various species)
Flemish Cap (Subarea 3)
RB 12 : 37 (status of redfish fishery in Div. 3M)
91 (area for study of year-class success in cod and redfish)

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RD 76 / 33 (assessment of cod in Div. 3M)
    53 (groundfish in trawl surveys, 1975)
    69 (plankton distribution, June 1975)
    70 (circulation and salinity, 1974-75)
    72 (temperature conditions, 1975)
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Flounder (see also under names of various species)
RD $76 / 102$ (prospectus for management off USA coast) 141 (by-catch in mackerel fishery in SA 5 and 6)
Flounder, summer (Paralichthys dentatus)
SE 1 : 59 (status of stock in SA 5 and 6)
Flounder, windowpane (Scophthalmus aquosus)
RD 76 / 95 (in larval herring survey samples, 1971-75)
Flounder, winter (Pseudopleuronectes americanus)
RD 76 /163 (summer distribution on Scotian Shelf)
Flounder, witch (Glyptocephalus cynoglossus)
RB 12 : 135 (length-weight relations, Nfld area)
RD $76 / 3$ (by-catch in Tllex fishery in SA 3 and 4)
24 (status of flatfish fishery in Div. 4VWX)
95 (larvae in SA 5 surveys, 1971-75)
163 (sumner distribution on Scotian Shelf)
Flounder, yellowtail (Limanda ferruginea)
RB 12 : 23 (food types in stomachs from Grand Bank)
RD 76 / 24 (status of flatfish fishery in Div. 4VWX)
53 (in trawl surveys off Nfld, 1975)
67 (status of stock in Div. 3NO)
9] (growth studies in Div. 3P)
102 (prospectus for management off USA coast)
104 (variation in abundance in SA 5)
163 (summer distribution on Scotian Shelf)
Fluctuations (see also Abundance; Diurnal effects)
RB 12 : 91 (cod and redfish on Flemish Cap)
SE 1 :141 (environmental factors re fisheries)
171 (recruitment re cod in Gulf St. Lawrence)
SP 9: 7 (polar ice variation off W Greenland, 1900-72)
29 (variation in ice seasons off $E$ Canada)
41 (time-space variation in E Greenland ice pack)
RD 76 / 75 (in recruitment to herring stocks)
83 (zooplankton abundance in SA 5 and 6)
104 (variation in USA survey catch per tow)
108 (changes in cod yield in Div. 3NO)
Food (see Feeding)

## France

SD $76 / 38$ (research report for 1975)
Front area (pertains to seal hunting off Labrador and northeast Newfoundland)

RD 76 / 124 (studies on harp seals, 1976)
125 (relation between seals and fish stocks)
126 (research on hooded seals, 1976)
127 (surplus production of harp seals)
130 (stochastic model for harp seals)
131 (Norwegian fishery for seals, 1976)
132 (population forecasts for harp seals)
133 (status of harp seal stocks)

G

## Gadus morhua (see Cod)

Gaspereau (see Alewife)

## Gastropods

RD 76 / 20 (food of capelin in SA 2, 1973)
97 (zooplankton distribution in SA 4 and 5, 1974)
121 (food of herring and mackerel in SA 5 and 6)

## Georges Bank (Subarea 5)

RB 12 : 5 (abundance of mackerel off USA coast)
29 (growth and mortality studies on cod)
49 (effect of fishing on finfish biomass)
119 (review of physical oceanography)
RD $76 / 2$ (variation in water temperatures)
12 (abundance of mackerel in SA 5 and 6)
14 (assessment of Loligo in SA 5 and 6)
29 (mackerel in USA Surveys, 1968-75)
31 (review of stock estimates for squid)
35 (current status of haddock stock)
(length conversions for fresh and frozen herring)
(status of Illex and Loligo stocks)
(age, length and maturity of cod)
(status of redfish stock, 1975)
(migration of mackerel tagged in SA 4)
(biological studies on mackerel)
(TAC estimate for red hake, 1977)
(herring larvae length measurements)
(estimating mackerel catches in SA 5 and 6)
(herring tagging program for SA 4 to 6)
(hydrographic studies, 1973-75)
(hydrographic observations, 1975)
(temperatures from larval herring survey, 1975)
(larval herring in FRG surveys, Mar 1973-75)
(FRG larval herring survey, Nov 1975)
(zooplankton distribution, 1973)
(bottom temperatures, 1968-75)
(results of French squid survey, 1975)
(ichthyoplankton from larval herring surveys)
(zooplankton distribution, 1974)
(prospectus for fishery management)
(effect of by-catch on SA 5 and 6 fisheries)
(variation in USA surveys catch per tow)
(efficiency changes in fishing, 1960-73)
(assessment of mackerel fishery)
(diurnal migrations of mackerel)
(larval herring in surveys, spring 1976)
(proposed trawling surveys for pelagics)
(FRG young herring surveys, 1975-76)
(trophic relationship of herring and mackerel)
(year-class strength and herring stock size)
(USA larval herring surveys, 1975/76)
(mackerel spawning stock in SA 5 and 6)
(mackere] by-catch in international fishery)
(mackerel age-length keys from surveys)
(by-catches in USSR fishery in SA 4 to 6)
167 (USSR fisheries in SA 5 and 6)
170 (mackere) in USA surveys in SA 5 and 6)
171 (variation in composition of mackerel catches)
German Democratic Republic (GDR)
SD 76 / 18 (research report for 1975)
Glyptocephalus cynoglossus (see Flounder, witch)
Goosefish (see Angler)

| Grand Bank (Subarea 3) |  |
| :---: | :---: |
| RB 12 : 23 | (food of yellowtail and A plaice) |
| SE 1 :107 | (status of groundfish resource in SA 2 and 3) |
| RD $76 / 3$ | (1elex distribution in SA 3 and 4, 1975) |
|  | (capelin fishery in Div. 3LN0, 1975) |
|  | (studies on capelin in SA 2 and 3, 1975) |
|  | (size of capelin stock in Div. 3N) |
|  | (trawl survey for groundfish, 1975) |
|  | (status of yellowtail in Div. 3LNO) |
|  | (plankton distribution off Nfld, June 1975) |
|  | (circulation and salinity, 1974-75) |
|  | (water temperatures in SA 2 and 3, 1975) |
|  | (fluctuation in cod yield in Div. 3N0) |
|  | (methods for groundfish surveys) |
|  | (capelin research in SA 2 and 3, 1973-76) |
| Greenland area (Subarea 1 and East Greenland) |  |
| SP 9: 7 (polar ice variation off W Greenland) <br> 41 (time-space variation in E Greenland ice pack) |  |
|  |  |
| RD $76 / 17$ (status of cod stocks in SA |  |
| 50 | (Spanish prawn fishery in SA 1) |
|  | (circulation and salinity, 1974-75) |
|  | (temperature conditions, 1975) |
|  | (hydrographic conditions in SA 1, 1975) |
| 93 | (length measuring of grenadier) |
|  | (conversion of lumpfish roe to fish weight) |
|  | (studies on G halibut in SA 0 to 3) |
|  | (by-catch in grenadier fishery) |
|  | (state of shrimp stocks in SA 1) |
|  | (shrimp fishery in Disko Bay, 1975-76) |
|  | (midwater trawling on echo-scatterers) |
|  | (studies on shrimp in SA 1) |
|  | (estimating growth and mortality of shrimp) |

Greenland hal ibut (see Halibut, Greenland)
Grenadier, common (Nezumia bairdi)
SE 1 : 73 (distribution in NW Atlantic)
Grenadier, roughhead (Mactourus berglax)
SE $1: 73$ (distribution in NW Atlantic)
Grenadier, roundnose (Macrourus rupestris)
SE 1:73 (distribution in NW Atlantic)
RD 76 / 28 (methods of age determination)
93 (methods of length measuring)
112 (by-catch in grenadier fishery)
Greysole (see Flounder, witch)
Groundfish (see also under names of species)
SE 1 :107 (status of groundfish resource in SA 2 and 3)
117 (status of groundfish resource in Div. 4VWX)
RD 76 / 53 (in trawl surveys off Nf1d, 1975)
99 (material for groundfish survey manual)
119 (material for groundfish survey manual)
163 (summer distribution in Div. 4VWX)

## Growth; Growth rate

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RB 12 : 29 (and mortality of cod in SA 5)
    37 (re assessment of redfish in SA 2 and 3)
SE 1: 7 (re assessment of cod in Div. 4VsW)
    31 (re assessment of redfish in Div. 4VWX)
    41 (analysis of silver hake in Div. 4VWX)
RD 76 / 18 (studies on mackerel in Nfld area, 1975)
    52 (studies on mackerel in SA 4 to 6)
    56 (studies on argentine in Div. 4VWX)
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57 (re assessment of silver hake in Div. 4VWX)
91 (studies on yellowtail in Div. 3P)
109 (studies on G halibut in SA 0 to 3)
123 (larval herring in SA 5)
160 (studies on silver hake on Scotian Shelf)
168 (and mortality of shrimp in SA 1)

## Gulf of Maine (Subarea 5)

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RB 12 : 5 (abundance of mackerel off USA coast)
    29 (growth and mortality of cod)
SE 1:89 (overview of plankton communities)
RD 76 / 2 (variation in water temperatures)
    29 (mackerel in USA surveys, 1968-75)
    31 (review of stock size estimates for squid)
    41 (status of squid stocks in SA 5 and 6)
    43 (status of redfish in SA 5, 1975)
    48 (movements of herring tagged in Bay of Fundy)
    49 (effect of fishing on finfish in SA 5 and 6)
    6 6 \text { (herring tagging program for SA 4 to 6)}
    6 8 \text { (hydrographic conditions, 1973-75)}
    78 (temperature data from larval surveys)
    82 (copepod distribution and herring feeding)
    8 3 \text { (zooplankton distribution, 1973)}
    85 (bottom temperatures, 1968-75)
    87 (squid survey in SA 4 to 6, 1975)
    95 (ichthyoplankton in larval surveys, 1971-75)
    9 7 \text { (zooplankton distribution, 1974)}
    102 (prospectus for fishery management)
    104 (variation in research vessel catch per tow)
    114 (larval herring distribution, winter 1976)
    118 (FRG young herring surveys, 1975-76)
    119 (review of physical oceanography)
    123 (USA larval herring surveys, 1975/76)
    142 (USA recreational fishery for mackerel)
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Gulf of St. Lawrence (Subarea 4)
SE $1: 171$ (recruitment and management of cod)
RD $76 / 4$ (environment re herring recruitment)
11 (environment re fisheries in SA 3 and 4)
40 (age composition of mackerel catches)
49 (movements of mackerel tagged in SA 4)
74 (cod migrations in Div. 3 P and 4RS)
90 (status of redfish fishery)
124 (studies on harp seal population)
125 (relation of harp seals and fish stocks)
127 (surplus production of harp seals)
130 (stochastic model for harp seal stocks)
132 (population forecast for harp seals)
133 (status of harp seal stock)

## H

## Haddock (Melanogrammus aeglefinus)

RD 76 / 26 (survey results in Div. 4VWX)
35 (status of stock in Div. 5Z)
53 (in trawl survey off Nfid, 1975)
60 (status of fishery in Div. 4X)
95 (eggs and larvae in larval herring surveys)
102 (prospectus for management off USA coast)
104 (abundance in USA research surveys)
163 (summer distribution on Scotian Shelf)
Hake (Mercluccius merluccius)
RD $76 / 63$ (selectivity in trawls off Spain)
Hake, red (Urophycis chuss)
RD 76 / 55 (TAC estimate for Georges Bank stock)

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    95 (larvae in herring surveys, 1971-75)
    102 (prospectus for management off USA coast)
    104 (variation in USA Survey indices)
    141 (by-catch in mackerel fishery in SA 5 and 6)
    l67 (USSR fishery in SA 5 and 6)
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Hake, silver (Merluccius bilinearis)
SE 1 : 41 (analysis of fishery in Div. 4VWX)
RD 76 / 3 (by-catch with squid in SA 4)
57 (assessment of stock in Div. 4W)
59 (status of stock in Div. 4VWX)
95 (larvae in herring surveys, 1971-75)
98 (assessment of stock in Div. 4VWX)
102 (prospectus for management off USA coast)
104 (variation in USA survey indices)
141 (by-catch in mackerel fishery)
157 (assessment of fishery in Div. 4VWX)
160 (revised assessment of stock in Div. 4VWX)
163 (sunmer distribution on Scotian Shelf)
165 (distribution re hydrography in Div. 4VWX)
167 (USSR fisheries in SA 5 and 6)
SD 76 / 21 (report of ageing workshop, Mar 1976)

Hake, white (Urophycis tenuis)
RD 76 / 53 (in trawl surveys off Nf1d, 1975)
163 (summer distribution in Div. 4VWX)
Hal ibut, Atlantic (Hippoglossus hippoglossus)
RD $76 / 3$ (by-catch in Illex fishery in SA 3 and 4)
163 (summer distribution in Div. 4VWX)
Halibut, Greenland (Reinhardtius hippoglossoides)
RD $76 / 53$ (in trawl surveys off Nfld, 1975)
109 (biology of stocks in SA 0 to 3)
112 (by-catch in grenadier fishery)
Harp seal (see Seal, harp)

## Harpacticoid sp.

RD $76 / 82$ (distribution on herring feeding grounds)
Herring, Atlantic (Clupea harengus)

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R (76): 35 (working group report, Jan 1976)
    153 (working group report on tagging, Jan 1976)
RD 77 / 1 (distribution and migration in Div. 4VWX)
    (environment re herring recruitment)
    (tagging with 6 different tag types)
    (Canadian fishery in Div. 4W)
    (Canadian fishery in Div. 4V)
    (length conversion for fresh and frozen fish)
    (assessment of stock in Div. 4WX)
    (migrations from tagging in Bay of Fundy)
    (length measurements of larvae)
    (tagging program for SA 4 to 6)
    (review of factors affecting recruitment)
    (larvae in surveys, Mar 1973-76)
    (FRG larval survey, Nov 1975)
    feeding re copepod distribution)
    (techniques in tagging in SA 4)
    (prospectus for management off USA coast)
    (abundance in USA research surveys)
    (larval distribution in SA 5, winter 1976)
    118 (FRG young fish surveys, 1975-76)
    121 (competition with mackerel re feeding)
    122 (year-class strength and stock size in SA 5)
    123 (USA larval surveys, winter 1975/76)
    158 (by-catch in USSR fishery in SA 5 and 6)
    167 (USSR fisheries in SA 5 and 6)
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Herring, blueback (see Blueback)
Hippoglossoides platessoides (see Plaice, American)
Hippoglossus hippoglossus (see Halibut, Atlantic)
Homarus americanus (see Lobster)

## Hydroacoustics

RD 76 / 10 (and fish density estimation)
23 (echo-survey for capel in in SA 2 and 3, 1975)
51 (stock size of capelin on Grand Bank)
54 (biomass estimate for capelin in Div. 2.J+3K)
153 (midwater trawling on echo-scatterers)
Hydrography (see also under specific headings, e.g.
Temperature, Salinity, etc.
RB 12 : 91 (re year-classes of cod and redfish in Div. 3M) 119 (review of conditions on Georges Bank)
SE 1: 41 (re abundance of silver hake in Div. 4VWX)
171 (re cod recruitment in Div. 4T
RD $76 / 2$ (temperature variation in SA 4 to 6 )
(monthly distribution of stations, 1950-59)
(monthly summary of data, 1950-73)
(data for Station 27 off St John's, 1950-59)
(and fisheries in SA 3 and 4)
(comparison of salinity determinations)
(conditions in SA 5, 1973-75)
(conditions in SA 0 to 3, 1974-75)
(water temperatures in SA 1, 1975)
(water temperatures in SA 2 and 3, 1975)
(and cod migrations in Div. 3P+4RS)
(effect on recruitment to herring stocks)
(proposal for hydrographic atlases)
(conditions in Northeast Channe1, 1975)
(data from larval herring surveys, 1975)
(data from FRG survey in SA 5, Nov 1975)
(re copepod distribution in Gulf of Maine) (temperatures in SA 5, 1968-75)
(conditions in Div. 2J, fall 1975)
(conditions off W. Greentand, 1975)
(data from young herring surveys, 1975-76)
(data from USA larval herring surveys, 1975/76)
(effect on recruitment of mackerel)
(summer distribution of groundfish, Div. 4VWX) (conditions re fisheries in Div. 4VWX)

## I

## Ice; Ice conditions

SP 9 : 7 (polar ice variation off $W$ Greenland, 1900-72)
29 (variation in ice season off E Canada)
41 (time-space variation in E Greenland ice pack)
47 (outline of sea ice services in Japan)

Japan
SD 76 / 14 (research report for 1975)

## L

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SP 9 : 29 (variation in ice season off E Canada)
RD 76 / 20 (studies on food of capel in, 1973)
    23 (research on capelin in SA 2 and 3, 1975)
    54 (bimass of capelin in Div. 2J and 3K)
    6 2 \text { (biological studies on capelin, 1975)}
    70 (circulation and salinity, 1974-75)
    72 (temperature conditions, 1975)
    8 8 \text { (hydrographic observations, fall 1975)}
    109 (studies on G halibut in SA 0 to 3)
    112 (by-catch in grenadier fishery)
    120 (capelin research, 1973-76)
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Lance (see Sand lance)
Landings (see Catches)
Larvae (fish)
RD $76 / 58$ (length measurements of herring larvae)
75 (factors affecting herring recruitment)
79 (herring in FRG surveys, Mar 1973-76)
80 (herring in FRG survey, Nov 1975)
95 (ichthyoplankton in herring surveys, 1971-75)
114 (herring in SA 5 surveys, 1976)
123 (herring in USA surveys, 1975/76)

## Laurentian Channel

RD 76 / 72 (temperature conditions, 1975)
Length; Length composition

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RB 12 : 29 (re growth of cod in SA 5)
    37 (redfish fishery in SA 2 and 3)
    135 (re weight of witch in Nfld area)
SE 1:7 (re growth of cod in Div. 4VSW)
    19 (re diurnal variation in Div. 3P redfish)
    31 (redfish fishery in Div. 4VWX)
    4 1 \text { (silver hake fishery in Div. 4VWX)}
    5 9 ~ ( s u m m e r ~ f l o u n d e r ~ c a t c h e s ~ i n ~ S A ~ 5 ~ a n d ~ 6 ) ~
RD 76 / 3 (1llex in SA 3 and 4)
    (capelin in Div. 3LNO, 1975)
    (Loligo in SA 5 and 6)
    (mackerel catches in Nfld area, 1975)
        (capelin fishery in SA 2 and 3, 1975)
        (redfish fishery in Div. 4VWX)
        (conversions for fresh and frozen herring)
        Canadian mackerel catches in SA 4)
        (re maturity of cod in SA 4 and 5)
        redfish fishery in SA 5, 1975)
        (shrimp in Spanish catches in SA 1)
        (capelin fishery on Grand Bank)
        (re weight and age of mackerel in SA 4 to 6)
        (re weight and age of argentine in Div. 4VWX)
        (silver hake catches in Div. 4N)
        (larval herring in SA 5 surveys)
        (silver hake fishery in Div. 4VWX)
        (re selection of hake off Spain)
        (larval herring in FRG surveys, 1973-76)
        (larval herring in FRG survey, Nov 1975)
        (squids in surveys in SA 4 to 6, 1975)
        (salmon taken at St. Pierre, 1975)
        (re growth of yellowtail in Div. 3P)
        (measuring of roundnose grenadier)
        (fish larvae from herring surveys, 1971-75)
        (G halibut fishery in SA O to 3)
        (shrimp fishery in SA 1)
        (larval herring in SA 5, spring 1976)
        (larval herring in FRG surveys, 1975-76)
        (larval herring in USA surveys, 1975/76)
        (conversion factors for mackerel)
        (mackerel catches in SA 3 to 6)
        (mackerel in USA recreational fishery)
        (variation in mackerel data)
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148 (mackerel from surveys in SA 5 and 6)
160 (silver hake fishery in Div. 4VWX)
161 (analysis of mackerel samples from SA 3)
162 (Canadian and USSR mackerel catches, 1976)
166 (shrimp catches in SA 1)
168 (re growth of shrimp in SA 1)

## Light (reactions to)

SE 1: 19 (diurnal variation in redfish catches)
RD $76 / 111$ (diurnal variation in mackerel catches)
113 (diurnal variation in shrimp catches)

## Limacina sp. (gastropod)

RD 76 / 20 (food of capel in in SA 2, 1973)
Limanda ferruginea (see Flounder, yellowtail)
Lobster, northern (Homarus americanus)
RD 76 / 76 (prospectus for management off USA coast)
Loligo pealei (see Squid, Long-finned)
Lophius americanus (see Angler)
Lumpfish; Lumpsucker (Cyclopterus lumpus)
RD 76 / 94 (conversion of roe to whole fish weight)
163 (summer distribution in Div. 4VWX)

## M

Mackerel (Scomber scombrus)
RB 12: 5 (abundance in surveys off USA coast)
R (76):157 (working group report, Jun 1976)
RD 76 / 12 (abundance in SA 5 and 6)
18 (research in Nfld area, 1975)
29 (recruitment estimates from USA surveys)
40 (age composition of catches in SA 4)
49 (migrations from tagging in SA 4)
52 (biological studies in SA 4 to 6)
64 (estimation of catches in SA 5 and 6)
100 (analysis of detailed sampling data)
102 (prospectus for management off USA coast)
104 (variation in research vessel catch per haul)
107 (assessment of stocks in ICNAF area)
110 (status of stock in SA 5 and 6)
111 (diurnal variation in catches)
116 (proposed surveys for pelagics in SA 5 and 6)
118 (distribution in herring surveys, 1975-76)
121 (trophic relation of mackerel and herring)
135 (assessment of stocks in SA 3 to 6)
136 (fork and total length conversion factors)
137 (review of stocks in SA 3 to 6)
139 (recruitment re environmental factors)
140 (size of spawning stock in SA 5 and 6)
141 (by-catch in SA 5 and 6 fisheries)
142 (review of USA recreational fishery)
143 (swimming speed re catpture in trawls)
145 (surplus yield model for assessment)
146 (variability in age-at-length data)
147 (time series analysis of catches)
148 (age-length keys from surveys in SA 5 and 6)
158 (by-catches in USSR fishery in SA 4 to 6)
161 (analysis of mackerel samples from SA 3)
162 (catches by Canada and USSR in 1976)
167 (USSR fishery in SA 5 and 6)
169 (reassessment of stocks in SA 3 to 6)
170 (abundance in USA surveys in SA 5 and 6)
171 (variaiton in age composition data)

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Macrourus rupestris (see Grenadier, roundnose)
Macrozoarces americanus (see Ocean Pout)
Maine (see Gulf of Maine)
Mallotus villosus (see Capelin)
Management (only the references to this item in scientific
    papers are listed below; the numerous resolutions and
    proposals relevant to the Commission's conservation
    program are given in Meeting Proceedings, Annual Reports,
    and the ICNAF Fishery Regulations for 1976 are given in
    Com. Doc. 76/18)
R (76): 29 (working group report on effort regulation in
                SA 2 to 4, Jan 1976)
RB 12 : 83 (yield allocation in multi-species fisheries)
SE 1:129 (non-equilibrium regulation of fisheries)
    141 (environment and fisheries management)
    171 (cod recruitment re management in Div. 4T)
RD 76 /102 (prospectus for management off USA coast)
    133 (status of harp seal stocks in ICNAF area)
SD 76 / 41 (catches and TACs for regulated species, 1973-76)
Manual
RD 76 / 99 (material for groundfish survey manual)
    1 1 9 \text { (material for groundfish survey manual)}
Mathematical analyses (see also under Virtual population analysis)
RB 12 : 69 (least squares approach to analyzing catch-atage data)
83 (yield allocation in multi-species fisheries)
SE 1:129 (non-equilibrium regulation of fisheries)
151 (interactive fisheries: a two-species model)
157 (biological interaction and mixed fisheries theory)
163 (mixed fisheries theory applied to cod and redfish)
RD \(76 / 44\) (Schaefer model and disequilibrium in fisheries)
103 (simulating effect of by-catch in SA 5 and 6 fisheries)
104 (variation in USA research vessel catch per tow)
105 (changes in efficiency of fishing in SA 5 and 6 , 1960-73)
130 (stochastic model for management of harp seals)
145 (surplus yield model for mackerel assessment)
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Maturation; Maturity (see also Spawning)
SE $1: 41$ (silver hake in Div. 4 VWX )
RD 76 / 9 (studies on capelin in Div. 3LNO, 1975)
18 (studies on mackerel in Nfid area, 1975)
42 (studies on cod in SA 4 and 5)
50 (observations on shrimp in SA 1)
51 (capel in spawning on Grand Bank)
52 (mackerel in SA 4 to 6)
59 (silver hake in Div. 4VWX)
62 (capelin in Div. 2 J and 3K, 1975)
74 (cod in Div. 3P, 4R and 4S)
87 (squid in SA 4 to 6 surveys)
113 (studies on shrimp in SA 1)
124 (studies on harp seals)
130 (re assessment of harp seal stocks)
168 (re mortality and growth of shrimp in SA 1)
Maximum sustainable yield (see Yield)

Meeting proceedings (see under STACRES for reports of meetings of Standing Committee on Research and Statistics)

MP(76): 5 (Seventh Special Meeting, Sep 1975)
77 (Eighth Special Meeting, Jan 1976)
159 (26th Annual Meeting, June 1976)

## Meganycliphanes sp.

RD 76 / 20 (food of capelin in SA 2)
Melanogrammus aeglefinus (see Haddock)
Menhaden (Brevoortia tyrannus)
RD 76 /141 (by-catch in mackerel fishery in SA 5 and 6)
Merluccius bilinearis (see Hake, silver)
Merluccius merluccius (see Hake)

## Mesh size sampling

SD 76 / 45 (and trawl materials, 1975)

## Meteorology

SP $9: 7$ (polar ice variation off W Greenland, 1900-72)
29 (variation in ice season off E Canada)
41 (time-space variation in E Greenland ice pack)
47 (outline of sea ice services in Japan)

## Methodology; Methods

```
RB 12 : 69 (least squares approach to analyzing catch-at-
                    age data)
            83 (yield allocation in multi-species fisheries)
SE 1:129 (non-equilibrium regulation of fisheries)
    151 (interactive fisheries: a two-species model)
    63 (application of mixed fisheries theory to cod
            and redfish in Div. 3J and 3K)
RD 76 / 8 (estimating mortality in fish populations)
    10 (hydroacoustics and density estimation)
    28 (ageing of roundnose grenadier)
    44 (Schaefer model re equilibrium in fisheries)
    8 1 \text { (variation in zooplankton sampling)}
    84 (sorting protocol for zooplankton)
    93 (length measuring of grenadiers)
    101 (techniques in herring tagging)
    116 (proposed surveys for pelagic fish)
    145 (surplus yield model for assessments)
    168 (estimating growth and mortality in shrimp)
```


## Metridia sp.

RD 76 / 20 (food of capelin in SA 2)

## Migrations; Movements

SE 1 : 19 (diurnal variation in redfish catches)
RD 76 / 1 (herring movements on Scotian Shelf)
17 (cod tagged in W. Greenland)
48 (herring tagged in Bay of Fundy)
49 (mackerel tagged in SA 4)
74 (cod in Div. 3P, 4R and 4S)
111 (diurnal migrations of mackerel in SA 5)
113 (diurnal variation in shrimp catches)
Molluscs (see also under specific names)
RB 12 : 23 (food of flounders on Grand Bank)

Monkfish (see Angler)

## Mortality

RB 12 : 29 (and growth of cod in SA 5)
37 (status of redfish stocks in SA 2 and 3)
69 (least squares approach to analyzing catch-at age data)
SE 1:7 (assessment of cod stock in Div. 4VsW)
59 (status of summer flounder in SA 5 and 6)
RD 76 / 8 (estimating natural mortality in fish stocks)
17 (status of cod stock in SA 1)
18 (studies on mackerel in Nfld area)
35 (status of haddock stock in Div. 5Z)
(assessment of herring in Div. 4WX) (status of cod fishery in Div. 4VsW) (assessment of silver hake in Div. 4W) (status of silver hake in Div. 4VWX) (status of haddock stock in Div. 4X) (status of yellowtail in Div. 3LNO) assessment of silver hake in Div. 4 VWX ) 107 (assessment of mackerel in ICNAF area)
124 (harp seals in NW Atlantic)
127 (and surplus production in harp seals)
130 (stochastic model for harp seal stocks)
132 (population forecasts for harp seals)
135 (status of mackerel stocks in SA 3 to 6)
137 (assessment of mackere) in ICNAF area)
157 (assessment of silver hake in Div. 4VWX)
160 (reassessment of silver hake in Div. 4VWX)
168 (estimation for shrimp in SA 1)
169 (reassessment of mackerel in Div. 4VWX)
Myctophids (1anternfishes)
RD 76 / 95 (larvae in larval herring surveys, 1971-75)
Myoxocephalus sp. (see Sculpins)

## Mysids

RD 76 / 97 (distribution in SA 4 and 5, 1974)
121 (food of herring and mackerel in SA 5 and 6)

## $\mathbf{N}$

## Nematodes

RD 76 / 52 (Anisakis in mackerel in SA 5 and 6)
New England area (Subarea 5 and Statistical Area 6) (see also Georges Bank and Gulf of Maine)

RB 12 : 5 (abundance of mackerel off USA coast)
9 (effect of fishing on finfish biomass)
SE 1 : 59 (status of summer flounder fishery)
RD 76 / 2 (variation in water temperatures)
12 (abundance of mackerel in surveys)
14 (assessment of Loligo stock)
29 (mackerel recruitment from surveys, 1968-75)
31 (review of squid stock sizes in SA 4 to 6)
36 (comparison of salinity determinations)
41 (status of Illex and Loligo stocks)
49 (migration of mackerel tagged in SA 4)
52 (studies on mackerel in SA 4 to 6)
61 (notes on Alosa fishery in SA 6)
64 (estimating mackerel catches)
78 (temperature data from larval herring surveys)
80 (FRG larval herring survey, Nov 1975)
87 (squid surveys in SA 4 to 6, 1975)
95 (ichthyoplankton in larval surveys, 1971-75)
102 (prospectus for fishery management)
103 (simulating effect of by-catch on fisheries)
104 (variation in USA survey indices)
105 (changes in efficiency of fishing, 1960-73)
110 (assessment of mackere1 stock)
111 (diurnal migration of mackerel)
116 (proposed surveys for pelagic fish)
121 (trophic relation of herring and mackerel)
122 (year-class strength and herring stock size)
123 (USA larval herring surveys, $1975 / 76$ )
139 (environment re mackerel recruitment).
140 (mackerel stock estimates from egg surveys)
141 (by-catches in the mackerel fisheries)
142 (UA recreational fishery for mackerel)
148 (mackeral age-length keys from Surveys)
158 (by-catch in USSR fisheries in SA 4 to 6 )
167 (USR fisheries in SA 5 and 6)
170 (mackerel abundance in USA surveys)
171 (variation in mackerel age samples)
173 (observations on Spanish squid fishery)

Newfoundland area (Subareas 3 and 4) (see also Flemish Cap, Grand Bank, Northeast Nfld Shelf, St. Pierre Bank, and Gulf of St. Lawrence)

RB 12 :135 (length-weight relationship for witch)
SP $9: 29$ (variation in ice season off $E$ Canada)
RD $76 / 7$ (hydrographic data for Station 27, 1950-59)
18 (research on mackerel, 1975)
19 (herring tagging with' 6 tag types)
74 (cod migrations in Div. 3P, 4R and 4S)
120 (capelin research in SA 2 and 3, 1973-76)
161 (analysis of mackerel samples, 1976)
162 (mackerel catches, 1976)
Newfoundland Shelf (see Northeast Nfld Shelf)
North Atlantic (see Atlantic, North)
Northeast Atlantic (see Atlantic, Northeast)
Northeast Nfld Shelf (Subarea 3)
RB 12: 37 (status of redfish stocks in SA 2 and 3)
SE 1 :107 (status of groundfish resource in SA 2 and 3)
163 (application of mixed fishery theory to cod and redfish)
RD $76 / 23$ (studies on capelin in SA 2 and 3, 1975)
53 (groundfish in Trawl surveys off Nfld, 1975)
54 (biomass estimate for capelin in Div. $2 \mathrm{~J}+3 \mathrm{~K}$ )
62 (biology of capelin in Div. 2J+3K)
70 (circulation and salinity, 1974-75)
72 (temperature conditions, 1975)
109 (studies on G halibut in SA 0 to 3)
112 (by-catch in grenadier fishery)
120 (capelin research in SA 2 and 3, 1973-76)
Northwest Atlantic (see Atlantic, Northwest)

## Norway

SD 76 / 19 (research report for 1975)
Nova Scotia area (see also Bay of Fundy, Gulf of St. Lawrence, Scotian Shelf)

RD 76 / 21 (Canadian herring fishery in Div. 4W)
22 (Canadian herring fishery in Div. 4V)
45 (assessment of herring in Div. 4WX)
49 (movements of mackerel tagged in SA 4)
66 (herring tagging program for SA 4 to 6 )
101 (techniques for herring tagging in SA 4)
162 (Canadian mackerel catches, 1976)
163 (summer distribution of groundfishes)
Nova Scotia banks (see Scotian Shelf)

| O |
| :--- |
| Ocean pout (Macrozoarces americanus) |
| RD $76 / 163$ (summer distribution in Div. 4VWX) |
| Oceanography (see under such headings as Hydrography, |
| Plankton, Salinity, Temperature, etc.) |
| Ostracods |
| RD $76 / 20$ (food of capelin in SA 2, 1973) |
| Otoliths |
| RD $76 / 28$ (age determination of roundnose grenadier) |
| 32 (results of Spain-USA cod ageing workshop) |
| SD $76 / 21$ (silver hake ageing workshop, Mar 1976) |
| Ova; Ovaries (see Eggs; Fecundity) |

Paralepididae (lancetfishes)
RD 76 / 95 (larvae in larval herring surveys, 1971-75)
Paralichthys dentatus (see Flounder, summer)

## Parasites

RD 76 / 52 (Anisakis incidence in mackerel)
Parathemisto sp. (amphipod)
RD 76 / 20 (food of capelin in SA 22 1973)

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Peprilus triacanthus (see Butterfish)
Phytoplankton
SE 1 : 89 (plankton conmunities in Gulf of Maine)
RD 76 / 11 (distribution in SA 3 and 4, 1975)
    69 (distribution off E Nfld, June 1975)
    73 (in plankton recorder surveys, 1975)
Plaice, American (Hippoglossus platessoides)
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RB 12 : 23 (and yellowtail feeding compared, Div. 3LNO)
RD 76 / 3 (by-catch in squid fishery in SA 3 and 4)
24 (status of stock in Div. 4VWX)
53 (in trawl surveys off Nf1d, 1975)
163 (summer distribution on Scotian Shelf)
Plankton (see also Phytoplankton and Zooplankton)
RB 12 : 91 (re feeding of redfish and cod in Div. 3M)
SE $1: 89$ (plankton communities in Gulf of Maine)
RD 76 / 73 (in continuous recorder surveys, 1975)
153 (midwater trawling on echo-scatterers)

## Plenary meetings

MP(76): 11 (report of First Plenary, Sep 1975)
61 (report of Final Plenary, Sep 1975)
101 (report of First Plenary, Jan 1976)
151 (report of Final Plenary, Jan 1976)
181 (report of First Plenary, Jun 1976)
277 (report of Final Plenary, Jun 1976)

## Poland

SD 76 / 17 (research report for 1975)

## Pollachius virens (see Pollock)

Pollock (Pollachius virens)

```
RD 76 / 95 (larvae in larval herring surveys, 1971-75)
    102 (prospectus for management off USA coast)
    163 (summer distribution in Div. 4VWX)
Population (see stock)
Porifera
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RD 12 : 23 (food of yellowtail and A plaice in Div. 3LNO)
Portugal
SD 76 / 17 (research report for 1975
Prawns (see Shrimp)
Predation; Predators
RB 12 : 91 (re year-class success of cod and redfish in Div. 3M)

RD 76 / 120 (predation on capel in in SA 2 and 3 )
125 (relation between harp seals and fish stocks)
Primary production
SE 1 : 89 (plankton communities in Gulf of Maine)
Proceedings (see Meeting proceedings)
Production model analysis
RB 12 : 37 (status of redfish fisheries in SA 2 and 3)
49 (effect of fishing on finfish in SA 5 and 6)

```
SE 1 : 31 (assessment of redfish in Div. 4VWX)
    59 (status of summer flounder in SA 5 and 6)
    107 (status of groundfish resource in SA 2 and 3)
    117 (status of groundfish resource in Div. 4VWX)
    129 (non-equilibrium regulation of fisheries)
    141 (fisheries management re environment)
    151 (interactive fisheries: a two-species model)
    157 (interaction and the theory of mixed fisheries)
    163 (application of mixed fishery theory to cod and
        redfish, SA 2 and Div. 3K)
RD 76 / 33 (assessment of cod in Div. 3M)
    44 (disequilibrium in fisheries)
    90 (status of redfish stock in Div. 4RST)
    145 (surplus yield model for mackerel assessment)
    130 (assessment of harp seal stocks)
Pseudocalanus sp. (copepod)
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RD 76 / 82 (distribution on herring feeding grounds)
Pseudopleuronectes americanus (see Flounder, winter)

## Pteropods

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RD 76 / 97 (distribution in SA 4 and 5, 1974)
    121 (food of herring and mackerel in SA 5 and 6)
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## R

## Raja sp. (see Skates)

Recaptures (see Tagging)

## Recruitment

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RB 12 : 37 (status of redfish stocks in SA 2 and 3)
SE 1:7 (status of cod stock in 4VsW)
    31 (assessment of redfish in Div. 4VWX)
    41 (analysis of silver hake fishery in Div. 4VWX)
    59 (summer flounder in SA 5 and 6)
    141 (and environmental fluctuations)
    171 (and management of cod in Gulf St. Lawrence)
RD 76 / 4 (of herring re environmental factors)
    17 (assessment of cod stock in SA 1)
    29 (mackerel from USA surveys, 1968-75)
    35 (status of haddock stock in Div. 5Z)
    46 (status of cod fishery in Div. 4VsW)
    57 (assessment of silver hake in Div. 4W)
    5 9 ~ ( s t a t u s ~ o f ~ s i l v e r ~ h a k e ~ f i s h e r y ~ i n ~ D i v . ~ 4 V W X ) ~
    6 0 \text { (status of haddock in Div. 4X)}
    6 7 \text { (status of yellowtail in Div. 3LNO)}
    75 (effect on herring stocks in ICNAF area)
        98 (assessment of silver hake in Div. 4VWX)
    107 (assessment of mackerel stocks)
    108 (fluctuations in cod in Div. 3NO)
    122 (effect on herring stock size in SA 5 and 6)
    127 (re surplus production of harp seals)
    130 (and management of harp seal stocks)
    132 (population forecasts for harp seals)
    137 (assessment of mackerel in SA 5 and 6)
    139 (mackerel re environmental factors)
    160 (silver hake fishery in Div. 4VWX)
    169 (reassessment of mackerel stocks)
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Red hake (see Hake, red)
Redfish, Atlantic (Sebastes marinus; S. mentella)

RB 12: 37 (status of fisheries in SA 2 and 3)
91 (Flemish Cap as study area on year-class success)
SE 1: $\begin{aligned} 19 & \text { (diurnal variation in catches in Div. 3P) } \\ & 31 \text { (assessment of stock in Div. 4VWX) }\end{aligned}$

163 (application of mixed fishery theory to cod and redfish)
RD 76 / 3 (by-catch in Illex fishery in SA 3 and 4)
25 (status of fishery on Scotian Shelf)
43 (status of fishery in SA 5, 1975)
53 (abundance in trawl survey off Nfld, 1975)
73 (larvae in recorder surveys, 1975)
90 (status of fishery in Div. 4RST)
102 (prospectus for management off USA coast)
112 (by-catch in grenadier fishery)
153 (midwater trawling on echo-scatterers in SA 1)
158 (by-catch in USSR fisheries in SA 5 and 6)
163 (surmer distribution on Scotian Shelf)
Regulation (see Management)
Reinhardtius hippoglossoides (see Halibut, Greenland)
Reports of Meetings (see under Annual Report, Meeting
Proceedings, and names of Committees and Subcommittees)
Research and Statistics (see STACRES for Meeting Reports)

## Research reports

SD 76 / 12 (United Kingdom research report, 1975)
14 (Japanese research report, 1975)
5 (Spanish research report, 1975)
(United States research report, 1975)
(Polish research report, 1975)
(German Dem. Rep. research report, 1975)
(Norwegian research report, 1975)
(USSR research report, 1975)
(Canadian research report, 1975)
(Fed. Rep. Germany research report, 1975)
(Danish research report, 1975)
(Portuguese research report, 1975)
(French research report, 1975)
Rockling, four-bearded (Enchelyopus cimbrius)
RD 76 / 95 (larvae in larval herring surveys, 1971-75)

## S

Salinity
SE $1: 119$ (physical oceanography of Georges Bank)
RD $76 / 7$ (data from Station 27 off St. Johns, 1950-59)
36 (comparison of different determinations)
68 (hydrographic conditions in SA 5, 1973-75)
70 (and circulation in SA 0 to 3, 1974-75)
75 (factors affecting recruitment of herring)
77 (observations in Northeast Channe1, 1975)
80 (data from FRG larval surveys, 1975)
88 (observations in Div. 2J, fall 1975)
92 (observations off Greenland, 1975)
118 (data from FRG spring surveys, 1975-76)
Salmon, Atlantic (Salmo solar)
RD 76 / 89 (study on specimens taken at St. Pierre, 1975)
Salpidae
RD 76 / 97 (distribution in SA 4 a:nd 5 , 1973)
Sampling
R (76):129 (report of Statistics and Sampling Subc., Jun 19;
SY 19: 1 (list of sampling data for 1974)
RD 76 / 81 (variation in subsampling zooplankton)
84 (sorting protocol for zooplankton samples)
100 (analysis of sampling data for cod, mackerel and silver hake)

SD 76 / 27 (review of ICNAF sampling program)
33 (adequacy of sampling TAC stocks, 1974)
Sand lance (Anmodytes sp.)
RD 76 / 89 (food of salmon taken at St. Pierre, 1975)
95 (larvae in herring surveys, 1971-75)
163 (summer distribution on Scotian Shelf)

## Scales

RD 76 / 28 (ageing of roundnose grenadier)
Scallop, sea (Placopectin magellanicus)
RD 76 /102 (prospectus for management off USA coast)
Scomber scombrus (see Mackerel)

## Scientific Advisers

R (76): 169 (reports for Panels 1 to 5, Jun 1976)
193 (reports for Panel A on seals, Nov-Dec 1976)

## Scotian Shelf (Subarea 4)

SE 1: 7 (assessment of cod in Div. 4VSW)
31 (status of redfish fishery)
41 (analysis of silver hake fishery)
117 (status of groundfish resource)
RD 76 / 1 (herring distribution and migration)
(variation in temperature conditions)
(Illex distribution in SA 3 and 4)
11 (environment, plankton and fishery)
24 (status of flatfish stocks, 1975)
25 (status of redfish stock, 1975)
26 (survey results for haddock)
29 (mackerel in USA surveys, 1968-75)
40 (Canadian mackerel catches by age)
42 (age, length and mortality of cod)
45 (assessment of herring in Div. 4WX)
46 (assessment of cod in Div. 4VsW)
52 (biological studies on mackerel)
56 (age and growth of argentine)
57 (assessment of silver hake stock)
59 (status of silver hake fishery)
60 (status of haddock fishery in Div. 4X)
77 (hydrographic data for Northeast Channe1)
87 (French survey for squid, 1975)
97 (zooplankton distribution, 1974)
98 (assessment of silver hake stock)
157 (reassessment of silver hake)
158 (by-catches in USSR fisheries)
160 (revised assessment of silver hake)
162 (mackerel catches by Canada and USSR, 1976)
163 (summer distribution of groundfish)
165 (oceanographic conditions re fisheries)
Sculpins (Myoxocephalus sp.)
RD 76 /163 (summer distribution on Scotian Shelf)
Scup (Stenotomus chrysops)
RD 76 /141 (by-catch with mackerel in SA 5 and 6)
Seal, Harp (Pagophilus groenlandicus)
RD $76 / 124$ (research on Front and Gulf stocks, 1976)
125 (relation between seals and fish stocks)
127 (mortality and surplus production)
130 (stochastic model for management)
131 (Norwegian seal fishery, 1976)
132 (population forecasts)
133 (status of harp seal stocks)
Seal, hooded (Cystophora cristata)
RD $76 / 126$ (research in Davis Strait, 1976)
131 (Norwegian fishery, 1976)
Seals
R (76):193 (scientific advisers reports to Panel A, NovDec 1975)

## Selection

RD 76 / 63 (European hake in trawls off Spain)

## Sequential population analysis

RD $76 / 130$ (stochastic model for harp seals)
Shark, dogfish (see Dogfish)
Shrimps (Pandalus sp.)
RD 76 / 50 (Spanish fishery in SA 1)
113 (USSR studies in SA 1)
125 (food of harp seals)
151 (fishery in Disko Bay, 1975-76)
166 (Spanish fishery and studies in SA 1)
168 (growth and mortality studies in SA 1)
Silver hake (see Hake, silver)
Skates (Raja sp.)
RD 76 / 3 (by-catch in squid fishery in SA 3 and 4)
53 (abundance in trawl surveys off Nfld, 1975)
163 (summer distribution on Scotian Shelf)
Southern New England (see New England)
Spain
RD $76 / 15$ (research report for 1975)
Spawning (see also Maturation)
RD 76 / 51 (capelin stock on Grand Bank)
RD 76 / 51 (capelin stock on Grand Bank)
52 (studies on mackerel in SA 4 to 6)
52 (studies on mackerel in SA 4 to 6)
109 (G halibut in SA O to 3)
109 (G halibut in SA O to 3)
140 (mackerel egg abundance in SA 5 and 6)
140 (mackerel egg abundance in SA 5 and 6)
RB 12 : 91 (cod and redfish on Flemish Cap)
RB 12 : 91 (cod and redfish on Flemish Cap)
Spiny dofgish (see Dogfish)
Spiny dofgish (see Dogfish)
Squalus acanthias (see Dogfish)
Squalus acanthias (see Dogfish)
Squid, long-finned (Loligo pealei)
Squid, long-finned (Loligo pealei)
RD 76 / 14 (assessment of SA 5 and 6 stock)
RD 76 / 14 (assessment of SA 5 and 6 stock)
31 (review of stock size estimates for SA 5 and 6)
31 (review of stock size estimates for SA 5 and 6)
41 (status of stock in SA 5 and 6)
41 (status of stock in SA 5 and 6)
87 (distribution in SA 5 and 6, 1975)
87 (distribution in SA 5 and 6, 1975)
102 (prospectus for management off USA coast)
102 (prospectus for management off USA coast)
141 (by-catch in mackerel fishery in SA 5 and 6)
141 (by-catch in mackerel fishery in SA 5 and 6)
173 (observations on Spanish fishery in SA 6)
173 (observations on Spanish fishery in SA 6)
Squid, short-finned (Illex illecebrosus)
Squid, short-finned (Illex illecebrosus)
RD $76 / 3$ (distribtuion in SA 3 and 4)
31 (review of stock size estimates for SA 5 and 6)
41 (status of stock in SA 5 and 6)
87 (distribution in SA 4 to 6, 1975)
102 (prospectus for management off USA coast)
141 (by-catch in mackerel fishery in SA 5 and 6)
165 (distribution re temperature in $S A 4$ )
173 (observations on Spanish fishery in SA 6)

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St. Pierre Bank (Subarea 3)
SE 1: 19 (diurnal variation in redfish)
    107 (status of groundfish resource in SA 2 and 3)
RD 76 / 3 (Illex distribution in SA 3 and 4)
    23 (studies on capelin, 1975)
    53 (groundfish in surveys off Nf1d, 1975)
    72 (water temperatures in SA 2 and 3, 1975)
    89 (biology of salmon taken at St. Pierre, 1975)
    91 (growth studies on yellowtail)
    119 (material for groundfish surveys manual)
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STACFAD (Standing Committee on Finance and Administration)
MP(76):213 (report to Plenary, Jun 1976)
STACRES (Standing Committee on Research and Statistics)
R (76): 5 (report of Special Meeting, Sep 1975)
21 (report of Special Meeting, Jan 1976)
51 (report of Annual Meeting, Jun 1976)
STACTIC (Standing Committee on International Control)
MP (76): 41 (report of Special Meeting, Sep 1975)
79 (report of Special Meeting, Jan 1976)
161 (report of Annual Meeting, Jun 1976)
Statistical Area 0 (see Baffin Island; Davis Strait)
Statistical Area 6 (see New England)
Statistics
SB 25: 1 (fisheries statistics of NW Atlantic, 1975)
SD $76 / 9$ (historical catches for TAC stocks, 1965-74)
10 (finfish and squid catches in SA 5+6, 1965-74)
29 (statistics on discards, 1974)
34 (1975 supplement to 1974 list of vessels)

## Statistics and Sampling Subcommittee

R (76):129 (report to STACRES, Jun 1976)
Steering and Publications Subcommittee
R (76):163 (report to STACRES, Jun 1976)
Stenotomus chrysops (see Scup)
Stock; Stock size; Stock differentiation
RB $12: 37$ (status of redfish stocks in SA 2 and 3 )
SE 1:7 (assessment of cod stock in Div. 4VsW)
31 (assessment of redfish in Div. 4VWX)
41 (analysis of silver hake fishery in Div. 4VWX)
59 (status of summer flounder in SA 5 and 6)
RD $76 / 12$ (mackerel abundance in SA 5 and 6)
14 (assessment of Loligo in SA 5 and 6)
17 (status of cod stock in SA 1)
24 (status of flatfish stocks in Div. 4VWX)
25 (status of redfish fishery in Div. 4VWX)
26 (haddock abundance in surveys)
31 (estimates for squid in SA 5 and 6)
33 (assessment of cod in Div. 3M)
35 (assessment of haddock in Div. 4X)
41 (status of Loligo and Ileex in SA 5 and 6)
45 (assessment of herring in Div. 4WX)
46 (status of cod fishery in Div. 4VsW)
50 (estimate for shrimp in SA 1)
51 (estimate for capelin on Grand Bank)
54 (estimate for capelin in Div. 2J+3K)
55 (estimate for red hake in Div. 5Z)
57 (assessment of sitver hake in Div. 4VWX)

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59 (status of silver hake in Div. 4 VWX )
60 (status of haddock stock in Div. 4X)
67 (status of yellowtail in Div. 3LNO)
98 (assessment of silver hake in Div. 4VWX)
102 (prospectus for management off USA coast)
107 (assessment of mackerel stocks in ICNAF area)
110 (assessment of mackere] in SA 3 to 6)
122 (year-class strength and stock size in herring)
124 (estimates for harp seal stocks)
126 (estimates for hooded seals)
127 (surpius production of harp seals)
130 (stochastic model for harp seals)
132 (population forecasts for harp seals)
(status of harp seal stocks)
135 (assessment of mackerel in ICNAF area)
137 (status of mackerel stocks in SA 3 to 6)
157 (assessment of silver hake in Div. 4VWX)
160 (reassessment of silver hake in Div. 4VWX)
166 (estimates for shrimp in SA 1)
169 (reassessment of mackerel in ICNAF area)
SD 76 / 8 (stock records for some assessed stocks, 1975)
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## Stratified trawling

SE 1 : 19 (re diurnal variation of redfish in Div. 3P)
RD 76 / 53 (survey for groundfish off Nfld, 1975)
99 (material for groundfish survey manual)
104 (variation in USA survey indices)
119 (material for groundfish survey manual)
Subcommittee reports (see Assessments; Biological Surveys; Environmental; Statistics and Sampling; Steering and Publications)
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| 76/64 | 4015 | ICNAF. Report of the Group of Experts on the Future of ICNAF, Ottawa, 5-7 October 1976. |
| 76/65 | 4023 | UNITED STATES OF AMERICA. Note by Commissioners concerning a regulatory regime for Subarea 5 and Statistical Area 6. |
| 76/66 | 4026 | SPAIN. Proposal for the allocation of surplus cod stocks - a note by the Government of Spain. |


| 76/67 | 4027 | CANADA. Views on the regulation of the silver hake fishery in ICNAF Divisions 4 VWX . |
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| 76/83 | 4094 | UNITED STATES OF AMERICA. Proposal for repeal of fishing gear regulations for Subarea 5 and Statistical Area 6. |
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| 76/14 | 3792 | IKEDA, I., and T. SATO. Stock assessment of Loligo squid in Subarea 5 and Statistical Area 6 in the 1972/73 and 1973/74 fishing seasons. |
| 76/15 | 3795 | HOYDAL, L. An assessment of the deep sea shrimp (Pandalus borealis) in West Greenland waters (Subarea 1), based on Faroes catch/effort data and information on fishing areas from the Faroes fishery. (Publ. in ICNAF Sel. Papers No. 4: in press.) |
| 76/16 | 3796 | * CARLSSON, D., and E. L. B. SMIDT. Pandalus borealis stocks at Greenland: biology, exploitation and possible protective measures. (Publ. in ICNAF Sel. Papers No. 4: in press.) |
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| 76/164 | 4060 | * HUNT, J. J. Age, growth and distribution of silver hake (Merluccius bilinearis) on the Scotian Shelf from modal analysis of length frequencies. (Publ. in ICNAF SeZ. Papers No. 3: 33-44.) |
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| 76/167 | 4063 | NOSKOV, A. S., V. A. RIKHTER, and V. I. ISAKOV. A brief description of the Soviet herring, mackerel, silver hake and red hake fisheries in ICNAF Subarea 5 and Statistical Area 6. |
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| 76/171 | 4067 | WARING, G. A look at the age distribution of mackerel (27-30. cm) in mackerel age samples of Poland, January-June 1976, from ICNAF SA 5-6. |
| 76/172 | 4068 | * ULLTANG, $\varnothing$. A note on a method to determine the total allowable catch of shrimps (Pandalus borealis) at West Greenland. (Publ. in ICilAF Sel. Papers No. 4: in press.) |
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| 76/2 | 3776 | * ICNAF. Proceedings of Seventh Special Commission Meeting, Montreal, Canada, 22-28 September 1975. (Pub1. in ICNAF Meet. Proc. 1975/76: 5-76.) |
| 76/3 | 3730 | * ICNAF. Report of Special Meeting of Panel A (Seals), Bergen, Norway, 12 December 1975. (Publ. in ICNAF Meet. Proc. 1975/76: 131-134.) |
| 76/4 | 3759 | NEAFC. Northeast Atlantic Fisheries Commission Mid-term Meeting, November 1975: press notice. |
| 76/5 | 3764 | * ICNAF. Report of Standing Committee on Research and Statistics (STACRES), Eighth Special Commission Meeting, January 1976. (Publ. in ICNAF Redbook 1976: 21-50.) |
| 76/6 | 3884 | * ICNAF. Proceedings of Eighth Special Comission Meeting, FAO, Rome, Italy, 21-26 January 1976. (Pub1. in ICNAF Meet. Proc. 1975/76: 77-158.) |
| 76/7 | 3829 | ICES. Report of Northwestern Working Group, Charlottenlund, Denmark, 8-12 March 1976. |
| 76/8 | 3765 | ICNAF Secretariat. Stock records for some species considered at 1975 assessment meetings. |
| 76/9 | 3766 | * ICNAF Secretariat. Revised catch and effort statistics for Japan 1967-69. (See ICNAF Stat. BulZ. Vo1. 26: 232-233.) |
| 76/10 | 3773 | ICNAF Secretarlat. Historical catches of TAC species by stock area and country for the period 1965-74. |
| 76/11 | 3774 | ICNAF Secretariat. Nominal catches of finfish species and squids in Subarea 5 and Statistical Area 6, 1965-74. |
| 76/12 | 3790 | JONES, B. W. United Kingdom research report, 1975. |
| 76/13 | 3783 | * ICNAF. Report of Ageing Workshop on cod, held at Vigo, Spain, 20-25 October 1975. (Publ. in ICNAF SeZ. Papers No. 2: 155-204.) |
| 76/14 | 3793 | SATO, T. Japanese research report, 1975. |
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| 76/19 | 3816 | ULLTANG, $\emptyset$, and T. $\emptyset$ RITSLAND. Norwegian research report, 1975. + Addendum. |
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[^1]:    Labrador area (Subarea 2)
    RB 12 : 37 (status of redfish fisheries in SA 2 and 3)
    SE 1 :107 (status of groundfish resources in SA 2 and 3)
    163 (mixed fishery theory re cod and redfish in SA 2 and Div. 3K)

[^2]:    * Indexing refers to the publication indicated in parentheses.

[^3]:    * Indexing refers to the publication indicated in parentheses.

