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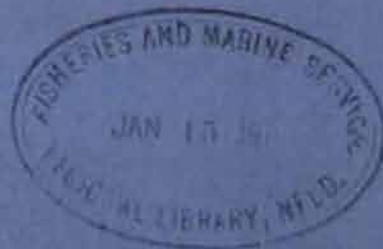
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FISHERIES RESEARCH BOARD OF CANADA

Manuscript Report Series

(Biological)

No. 900



Index and List of Titles of Manuscript Reports

**(Biological No. 1-900; Experimental No. 1-61; Oceanographic
and Limnological No. 1-229)**

to Their Conclusion as Three Separate Series in 1966

**prepared by
Neal M. Carter**

**Issued by Fisheries Research Board of Canada
Office of the Editor, 116 Lisgar St., Ottawa, Canada**

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C O N T E N T S

Introduction	iii-viii
Acknowledgment	viii
Subject—Author Index	1-168
List of Titles of Manuscript Reports:	
Biological Series No. 1-900	169-235
Experimental Series No. 1-61	237-240
Oceanographic and Limnological Series No. 1-229	241-255

INTRODUCTION

Manuscript Reports of the Fisheries Research Board of Canada* are prepared for the purpose of recording field data, or preliminary notes and discussions concerning investigations in progress, or theses embodying Board work.

With a few exceptions, Manuscript Reports are intended principally for use within the Fisheries Research Board's own organization. There is no single complete file of all of these Reports, but files of varying completeness are kept at the Board's Headquarters in Ottawa and at each of its various establishments. Reports of recent data are available at Headquarters and at most or all of the establishments.

In order to facilitate these original records to be catalogued, three separately numbered series of Reports were initiated, though not simultaneously:

Manuscript Reports (Biological Series) of the Biological Board of Canada*
 Manuscript Reports (Experimental Series) of the Biological Board of Canada*
 Manuscript Reports (Oceanographic and Limnological Series) of the Fisheries Research Board of Canada.

These three series continued separately until by 1966 it was becoming evident from the rapidly growing complexity of research disciplines and the Board's investigations that the original fairly distinct differentiation between Board investigations dealing with biology, oceanography, limnology, the physics and chemistry of fisheries products, and other subjects pertinent to fisheries, no longer held. The allocation of Reports to one or other of the three series sometimes led to ambiguity.

A** The three series were therefore concluded and subsequent Manuscript Reports appear in a single series of Fisheries Research Board of Canada Manuscript Reports commenced towards the end of 1966 with No. 901 to avoid confusion with the numbering of the previous series. Titles of Manuscript Reports in the new single series as issues appear are given in the Board's published biennial Reviews, commencing with the 1967/1968 Review.

.....

The following three headings give additional information about the three discontinued series.

THE BIOLOGICAL SERIES

This series was so called because when it was instituted about 1925 as a numbered series most of the investigations reported in it were conducted by or through Board establishments known as Biological Stations and dealt with marine

* Officially called the Biological Board of Canada until by Act of Parliament in 1937 the name was changed to the Fisheries Research Board of Canada. Covers of Reports to 1937 bear the old name of the Board.

** Certain paragraphs or headings in this Introduction are designated by a letter to facilitate reference to them in subsequent places in this compilation.

or freshwater biology. The reason why many Reports in this series are dated prior to 1925 is given in item E below.

Included in this series are thirteen Reports dealing with what may be considered the technology of fisheries products. Of these, five (No. 23, 30, 32, 34 and 72) are dated prior to 1925, the year in which the Board's first Experimental Station was established and the Experimental Series of Manuscript Reports was commenced. The remaining eight (No. 15, 18, 19, 20, 28, 33, 38 and 47) are undated but were probably prepared just shortly before the Experimental Series began.

Also included in this series are numerous Reports dealing with oceanographic or limnological topics, prepared prior to the commencement of the Oceanographic and Limnological Series in 1957. It is interesting to note that the earliest dated (1910) Report in the Biological Series (No. 48) deals with hydrographic oceanography; item E below explains why this is not No. 1 in the series.

Reports No. 674 and 692 in this series were not issued.

This series was concluded with an investigational Report No. 899* in 1966; subsequent Board Manuscript Reports of this type appear in the new single series described in item A above.

THE EXPERIMENTAL SERIES

This series was so called because for some time after it was initiated in 1925 the Board establishments contributing to it were known as Experimental Stations undertaking principally technological investigations on fishery products. As stated under the preceding heading, thirteen earlier Reports of this nature had already been placed in the Biological Series before the Experimental Series began.

The relatively few Reports appearing in this series before it was concluded with No. 61 does not justly reflect the amount of the above types of investigations conducted to that time, the results of which usually appeared in Board or other publications without passing through the Manuscript Report stage.

Subsequent Board Manuscript Reports of this type appear in the new single series described in item A above.

THE OCEANOGRAPHIC AND LIMNOLOGICAL SERIES

B. This series was commenced early in 1957. As stated under the preceding description of the Biological Series, a large number of Board Manuscript Reports dealing with oceanography and limnology appeared in the Biological Series prior to the institution of the Oceanographic and Limnological Series. Hence certain topics treated in sub-series of oceanographic Reports that commenced in the Biological Series are continued in the Oceanographic and Limnological Series.

With the exception of the limnological issues (No. 148, 180, 181, 192, 210 and 212) and a few others, these Reports show on their covers that they were prepared either by the Board's Atlantic Oceanographic Group or the Board's Pacific

* No. 900 was reserved to allow this present Index and List of Titles, completed in 1969, to be included in the last issue of the discontinued three series.

Oceanographic Group, and that they were programmed by the Canadian Joint Committee on Oceanography, the title of which dropped the word "Joint" about the end of 1959.

Reports No. 75, 191 and 194 in this series were not issued.

This series was concluded with No. 229 in 1966; subsequent Board Manuscript Reports of this type appear in the new single series described in item A above.

C. Other types of Board manuscript reports on oceanography by the Atlantic and Pacific Oceanographic Groups appear in other series such as the Canadian Oceanographic Data Centre Data Record Series. This is distinct from the Board Manuscript Report Series and its issues are not indexed or listed herein; titles will be found listed under the heading "Data Records" in the "Publications and Reports" section of the Board's biennial Reviews. A similar oceanographic series of Board reports is the Pacific Oceanographic Group's Circulars. This series, to the end of 1964, is listed on pages 533-539 of Board Bulletin No. 164 and indexed in that Bulletin. Subsequent issues are listed and indexed in the "Index to Publications" section in the concluding issue of annual volumes of the Journal of the Fisheries Research Board of Canada.

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THIS SUBJECT—AUTHOR INDEX AND LIST OF TITLES OF THE THREE SEPARATE CONCLUDED SERIES OF BOARD MANUSCRIPT REPORTS

The present compilation expands and supersedes a 1956 mimeographed subject—author index and list of titles of the 600 issues of the Biological Series and the 67 issues of the Experimental Series that had appeared in those two series up to that date (the Oceanographic and Limnological Series had not then been commenced).

For preparing this present compilation practically complete sets of the three series were borrowed. Some errors and omissions noticed in the wording of the titles in the earlier compilation have been rectified herein. The issues covered by the earlier index have been to a large extent re-indexed to provide fuller information under the present author headings, to allow easier combination of old and new references, and in some cases to allow better choice of subject headings in view of changes in the nature and emphasis of Board investigations since 1956.

The information under the following headings concerning the present Index and List of Titles may help to facilitate its use.

THE INDEX

With some exceptions, this Index generally follows the style used in Board Bulletin No. 164 which did not include the indexing and listing of the Board Manuscript Reports series.

Author Headings

In author headings the initials or given names of the author are shown only to the maximum extent used by the author for these Reports.

Many of the Biological Series Reports dealing with oceanography and almost all of the Oceanographic and Limnological Series were prepared by the Board's Atlantic Oceanographic Group or Pacific Oceanographic Group either under personal authorship or under the name of the Group only. The Index headings for the names of these two Groups are to be considered as author headings for indicating only the Reports issued under the impersonal authorship of the Groups; for Reports issued under the personal authorship of staff of these two Groups, refer to their personal names in the Index, also to the following Manuscript Reports giving lists of Reports issued by the two Groups:

- Atlantic Oceanographic Group -
 - To 1954, see Biological Series No. 585;
 - 1950-1959, see Oceanographic and Limnological Series No. 65.
- Pacific Oceanographic Group -
 - To 1954, see Biological Series No. 585.

Subject Headings

Organisms having generally recognized common names are in most cases indexed under these; their scientific names are also indexed, cross-referenced to the common names. Where scientific or common names used in Reports have been recognized by the present author as obsolete, only the more recent names have been indexed; reference to Bulletin No. 164 assists in locating the more recent names from obsolete ones.

Organisms not having generally recognized individual common names, such as many invertebrates, are in some cases indexed under their scientific names if in several Reports special significance is attached to the organism; otherwise they are indexed under a heading as embracing as "Invertebrates, aquatic (general)" or under a less embracing heading such as the phylum, class, order, family, genus, or common-name group (e.g. "Starfishes") to which they belong.

Some Reports contain lists of fishes and other aquatic organisms observed during biological surveys but with little particular information about the individual organisms. In most cases such lists have been indexed under the headings "Fishes, lists of", "Invertebrates, lists of" or "Plankton, lists of" even though for other references there may be individual headings for some of the listed forms.

Keys to organisms are indexed by their type under the heading "Keys".

For a few commercially important species the products of which have been the subject of several Reports, there are two subject headings for the common name of the species; one for its biology and one for the technology of its products. For other species the products of which have been the subject of only few Reports, the references to both biology and technology are under the one heading for the species.

References

- "B" references are those to Reports in the Biological Series;
- "E" references are those to Reports in the Experimental Series;
- "OL" references are to Reports in the Oceanographic and Limnological Series;

and under the headings all references after one of the above marginal letters will be found in that series.

To lessen the possibility of using the wrong list when looking in the List of Titles for the full title of a reference designated in the Index by one of the above three abbreviations, each page of the List of Titles is headed by the abbreviation for the series listed on that page.

The Roman numerals employed in many Biological Series Reports for separating the Report into several sections each with its own author have been altered to Arabic numerals in parentheses in the Index for the purpose of conserving space. Semicolons are used for indicating different Report numbers, also section numbers originally in Roman numerals. Colons introduce page numbers when reference to a specific page in a Report or section is given; commas separate the different page numbers if more than one page is referred to. Hyphens indicate inclusive Report, section or page numbers. Hence, as a rather elaborate example,

B 674; 650; 692(8;18;23:5,8;38:7-9) (topic)

means the topic is referred to in Biological Series Reports No. 674 and 650, also in sections VIII and XVIII, on pages 5 and 8 of section XXIII, and on pages 7, 8 and 9 of section XXXVIII, of Report No. 692.

Abbreviations

Alta. (Alberta)	N.W.T. (Northwest Territories)
B.C. (British Columbia)	Ont. (Ontario)
Man. (Manitoba)	P.E.I. (Prince Edward Island)
N.B. (New Brunswick)	Que. (Quebec)
Nfld. (Newfoundland)	Sask. (Saskatchewan)
N.S. (Nova Scotia)	Yuk. (Yukon Territory)

N (north or northern), S (south), E (east), W (west), NE (northeast), etc.

Atl. (Atlantic); Pac. (Pacific) Is. (island); R. (river), L. (lake)

A.O.G. (Atlantic Oceanographic Group) P.O.G. (Pacific Oceanographic Group)

ICNAF (International Commission for the Northwest Atlantic Fisheries)

INPFC (International North Pacific Fisheries Commission)

I.G.Y. (International Geophysical Year)

"re" is frequently used to imply "in relation to", "in connection with";

"vs." is sometimes used to imply "in contrast to", "as opposed to".

THE LIST OF TITLES

Report Numbers

Among the borrowed Biological Series a few showed an alteration to the Report number originally typed or printed on the cover. In such cases the Board's Office of the Editor verified which is the correct number, and the present lists are correct as far as can be ascertained. This listing should be consulted before quoting the Report number of any copy showing an altered number.

D. Number of Pages in Reports

Some Reports show no page numbers at all. Some number the forepages, others do not. In some Reports blank "spacer sheets" or blank reverse sides of pages are numbered; in others, not. Some number complete pages of illustrations, charts and tables, others leave them un-numbered. Furthermore, many of the early Biological Series of Reports were typed with only a few carbon copies; when more copies were needed, the number of pages became altered in retyping or mimeographing, aggravated by the circumstance that some originally typed Reports included numbered or un-numbered sheets, sheets of mounted photographs, blueprints, hand-drawn illustrations, and the like, which normally did not get reproduced in the retyped or mimeographed later copies. The above inconsistencies have led to variations in the page content stated for a given Report in some lists of Board Manuscript Reports.

The present List on Titles generally shows the number of informational pages (not including blank ones) as actually counted in the Reports when there appeared to be some question about the pagination, but some of the borrowed copies were retypings without the inserted material of the originals. Consequently, before quoting from this List of Titles the length of any Reports, the original Report should be consulted, particularly in the case of early ones in the Biological Series.

E. Dating of Reports

The mention on page v of dated and undated Reports requires further explanation. There is some uncertainty in respect to the dates given after author names in the List of Titles, particularly for many early Reports in the Biological Series. The dates given in the listings are those shown on the cover or title page of the Reports, but may be either the time when the manuscript was prepared, or typed, or when the Report was later incorporated into the Manuscript Reports number series. Some Reports were assigned in one of the series several years after the investigation or writing of the Report, as is frequently evident from a date mentioned in the title; consequently many Report numbers are chronologically out-of-step with their issue date.

By undated is meant that neither the cover nor the title page shows a date, and no date is mentioned in the title itself. In such cases information in the text may date the investigation but not necessarily the preparation of the Report.

ACKNOWLEDGMENT

The author is grateful to the Board's Editorial Office in Ottawa and to the librarians and others of several of the Board's establishments for their assistance and forbearance in enabling him to locate a copy of all but two of the 1190 Reports in the three discontinued Manuscript Report Series and allowing him to borrow those Reports for preparing this compilation at his home during his retirement.

West Vancouver, B.C.
November 1969.

- A -

Abalone (Haliotis kamtchatkana)

B 425:27 (B.C. production)

Abbott-Smith, K.B.

OL 63 (N Pac. Survey oceanographic data record)

Abstracts (see also Bibliographies)

B 294 (of Nanaimo Station oceanographic & chemical investigations)

Abundance (see also Catch per unit effort; Census; Fishery, commercial;

Fishery, sport; Mathematical treatment of data; Populations;

Productivity; Productivity, primary; Stocks)

B 123 (effect of moon, etc. on Margaree R. salmon, N.S.); 157 (oysters, Charlottetown region, P.E.I.); 210(7) (chironomid larvae, Goldmine Brook, N.S.); 218 (plankton: fluctuations in a lake); 310 (estimating absolute, W coast Vancouver Is. spawning herring); 325 (B.C. herring: causes of fluctuations); 329(18); 335(3) (lack of salmon, Margaree R., N.S.); 381(1) (assessing, young Atl. salmon in streams); 429 (B.C. pilchard); 437 (fluctuations in diatom); 439 (eels, Petitcodiac R., N.B.); 461; 485 (beluga, Churchill, Man.); 471 (quahaugs in Maritimes); 526 (fluctuations in Bay of Fundy scallops); 594:23 (whitefish, L. Winnipeg); 629; 700; 719; 736; 761; 825; 850; 875 (northern fur seal); 653:111 (Atl. walrus); 656 (salmons, N Pac. Ocean); 668 (herring, Passamaquoddy region, N.B.); 675 (commercial Canadian fishes, shellfishes, marine mammals, seaweeds, etc.); 707 (zooplankton, Passamaquoddy region, N.B.); 786; 823 (pink salmon, NE Pac. Ocean)

Acadian Forest Reserve, N.B.

B 189(D) (damming Burpee Millstream)

Acanthocephala

B 303 (in haddock); 316 (in Pac. salmon and flounders); 624; 641 (re Asiatic vs. N Pac. pink & sockeye salmon stocks)

Acara, A.

OL 134 (warm & cold years in N Pac. Ocean)

Acetic acid

E 1 (effect on fish muscle tensile strength); 4; 10 (in wood smoke); 44 (in canning of scallops)

Achromobacteria

B 27; 39 (in haddock slime or feces)

Acipenser fulvescens (see Sturgeon, lake)oxyrhynchus (see Sturgeon, (American) Atlantic)Acmaea testudinalis (see Limpet)

Acoustics, underwater (see Echo scattering layer; Sonar; Sound, velocity in seawater; Sounding, echo)

Activity

B 542 (diel, Heming L., Man., pike, walleye, whitefish, sucker); 670 (effect on spawning sea lamprey ventilation); 838 (patterns of Atl. cod & redfish re photoperiods)

Adams, James R.

B 472 (oyster investigations, Malagash, N.S.)

Adrenaline

B 186 (effect on skate blood osmotic pressure)

Age composition; Age distribution (for age determination, see next heading)

B 59; 907 (salmon, Miramichi R., N.B.); 68 (winter flounders, St. Andrews, N.B.); 98:34; 907 (salmon, St. John R., N.B.); 112 (Atl. mackerel); 223:3 (eulachon); 227:3 (clams, Vancouver Is.); 298:21 (pilchard); 348:42; 405:27 (lemon sole, B.C.); 361:42 (yellowtail flounder); 374; 415:6; 420; 648 (giant scallop); 405:31 (Pac. cod); 427:15; 498:21; 563 (salmon, Shubenacadie R. system, N.S.); 427:33; 498:77 (striped bass, Shubenacadie R. system, N.S.); 525:13 (longnose sucker, Great Slave L.); 565; 601 (whitefish & lake trout, Great Slave L.); 573 (cutthroat trout, Lakelse L., B.C.); 587; 600; 601 (whitefish, Great Slave L.); 588 (harp seal); 629:6; 700; 719; 736 (northern fur seal); 665; 683; 766 (salmons from open NE Pac. Ocean exploratory fishing); 666; 667; 688; 704; 734; 735 (chum salmon, N Pac. Ocean & B.C. coast); 695 (Pac. salmons re maturity of stocks); 718; 785 (sockeye & pink salmon, Skeena R. system); 735 (chinook salmon continental stocks: ocean distribution); 752 (female fin whales off B.C.); 772; 818 (sockeye salmon, Rivers Inlet, B.C.); 776 (coho & chinook salmon, B.C. fisheries); 870:8 (capelin)

Age determination (see Baculum; Claws; Otoliths; Scales, fish; Size; Teeth; Tusk)Aglantha digitale (a coelenterate) (see also Zooplankton)

OL 202 (at Pac. Ocean Weather Station "P")

Agonus decagonus (see Sea poacher, Atlantic)Ainslie, Lake, N.S. (see also Margaree River system)

B 116(26-29) (salmon investigations near Scotsville); 117(31); 118(32); 123(12); 126(1); 129(4); 132 (trout in Trout Brook)

Alaska (see also Alaska, Gulf of; also certain localities)

728; 729 (B.C. catches re exploitation of Alaska-bound pink & sockeye salmon)

Alaska, Gulf of (see also International North Pacific Fisheries Commission; Oceanography, Pacific, N open ocean)

B 731; 732; 766; 892-894 (tagging & exploratory fishing of salmons); 757 (scale studies re sockeye salmon stocks origin); 759 (Canadian salmon fishing); 767; 768 (Canadian exploratory trawling); 786 (pink salmon re central B.C. coast stocks); 866 (Canadian exploratory salmons longlining);
OL 28; 29; 50; 87; 101; 103; 138 (oceanography); 66; 143; 169 (bathythermograms re salmon researches)

Albacore (Thunnus alalunga)

B 78 (statistics, Halifax region); 286 (feed; canning); 425 (B.C. fishery); 675 (past, present & future of B.C. fishery)

Alberni Harbour, B.C.

B 413; 442; 514 (hydraulic model)

Alberta (see also certain individual localities)

B 469; 470 (L. Claire goldeye investigations); 675 (survey of past, present & future trends of fisheries)

Albumen, fish

E 29 (cold storage denaturation)

Alewife (Alosa pseudoharengus) (gaspereau)

B 97:7 (biological study of Maritimes fishery statistics); 116(25:12); 117(30:30); 118(37:4); 126(6) (Margaree R. system, N.S.); 129(8:9) (in Pomquet R., N.S.); 263 (effect of piscicides on); 390(9); 427:39; 498:79; 539:86,98; 401:27 (migration, fishery, etc., Shubenacadie R. system); 426:12 (trapped, Rawdon R., N.S.); 563:30 (movements re light); 675 (past, present & future of Canadian fishery)

E 8 (commercial pickling)

Aleutian Islands, Alaska (see Alaska, Gulf of; Oceanography, Pacific, N open ocean)

Algacides

B 138 (for preventing mortality in trout pond); 853; 905 (toxicity to eelgrass & effects on fishes & shellfishes)

Algae (see also Algacides; Flora; Seaweeds)

B 138 (cause of trout mortality in a P.E.I. pond); 143 (re Atl. oyster feeding); 192; 338 (re trout waters fertilization for feed); 208(10:3) (Goldmine Brook, N.S.); 270 (Spider L., B.C.)

OL 203 (growth rates & cell yields from axenic mass culture of 14 marine species)

Algonquin Park, Ont.

B 301 (parasites in fishes)

Alkalinity of waters (see Analysis, chemical; Carbon dioxide and carbonates; pH; Limnology; Oceanography, general)

Allen, K. Radway

B 898 (fitting Gompertz growth equation)

Allergy

B 886 (re paralytic shellfish poisoning)

Alley, Armine

B 101; 133; 194 (effect of lobster & marine fishes flesh ingestion on gastric secretions)

Alligatorfish, northern (see Sea poacher, Atlantic)

Almy, Lloyd H.

B 452 (fishes flesh chemistry; bibliography)

Alosa aestivalis (see Herring, blueback)
pseudoharengus (see Alewife)
sapidissima (see Shad, American)

Ameiurus species (see Ictalurus species; Bullhead)

Amia calva (see Bowfin)

Amino acids (see also Proteins; Proteolysis)
 B 14; 15 (of haddock muscle protein); 26 (as indicators of haddock muscle spoilage); 452:21 (of fishes flesh)

Ammocoetes (see Lamprey species)

Ammodytes americanus (see Sand lance, American)
hexapterus (see Sand lance, Pacific)

Ammonia (see also Nitrogenous constituents and products; Quality of fishery products; Trimethylamine)
 B 26 (indicator of haddock muscle spoilage); 37; 38; 52 (ammonium nitrogen in haddock, etc. muscle autolysis); 71 (determination in seawater); 135 (in skate & lobster muscle)
 E 9; 11; 33 (from fish spoilage); 53; 55 (in fish muscle extractives)
 OL 19 (standard analysis method for seawater); 30; 211 (in B.C. coastal waters); 55 (at Pac. Ocean Weather Station "P" re water fertility); 181 (in St. John R., N.B.)

Amphipods (see also Plankton, lists of; Zooplankton)
 B 63; 64; 340 (Gammarus reactions to temperature, pH & O₂); 100 (life history & reactions of some marine); 404 (distributional records of Maritimes marine); 707:29 (in Passamaquoddy region plankton); 733 (pulpmill pollution effects on various, Prince Rupert area); 803 (in L. Superior bottom fauna)
 OL 174; 201 (NE Pac. Ocean); 211 (Strait of Georgia, B.C.)

Analogs, electric
 OL 184; 185 (for solving oceanographic hydrodynamic problems)

Analysis, chemical (methods) (see also Composition, chemical)
 B 12; 13-15 (haddock muscle proteins); 71 (ammonia, nitrate plus nitrite, in seawater); 139 (Winkler method for dissolved O₂); 276 (glycogen in oysters); 277 (chloride in presence of phosphate); 293 (phosphate in seawater); 294 (abstracts of various, for seawater); 299 (fish oil determination in B.C. herring); 403 (manual of oceanographic methods)
 E 4; 10; 27 (wood smoke); 9; 33 (protein spoilage products); 14; 17; 25 (vitamin A in liver oils); 17 (vitamin A in oils); 20; 40 (moisture & fat in various Atl. fishes flesh); 31 (oil in Pac. salmon); 46; 51 (bound & free water in fish muscle); 47 (Atl. seaweeds); 47; 54 (iodine); 53; 55 (non-protein nitrogenous extractives; protein factor)
 OL 18; 19 (standard methods for seawater); 148; 180 (Cu, Pb and Zn traces in river water); 168 (seawater dissolved carbohydrate); 189 (metal bases of silicates in marine sediments); 200 (solubility product of CaCO₃ in seawater)

Analysis, chemical (results) (see Composition, chemical; also names of elements and certain compounds)

Analysis, proximate (see Analysis, chemical (methods); Composition, chemical; Fats and oils; Proteins; Water content; also names of organisms and types of products)

Anarhichas lupus (see Wolffish, Atlantic; Wolffishes)

Anatomy (see also Cytology; Histology; Meristic characteristics; Morphology)
B 236 (B.C. pilchard)

Anchovy (Engraulis mordax)
B 425:23; 675 (B.C. fishery)
OL 199 (Saanich Inlet, B.C.)

Anderson, F.R.
B 93 (Halacaridae of Canso, N.S.)

Andrews, Cater W.
B 335 (marking Atl. salmon smolts); 365; 379(3); 381(2:9; 4) (salmon smolt trap, Pollett R., N.B.); 366 (salmon scale readings, Pollett R.); 379(4) (perch, eel & sucker light sensitivity & lethal high temperatures); 382(11) (sucker light behaviour re depth)

Anglemouth, veiled (Cyclothone microdon) (small-eyed lanternfish)
B 651 (description of, Laurentian Channel)

Angling (see Fishery, sport)

Anguilla rostrata (see Eel, American)

Animal feed (see also Fishmeal; Mink)
B 800; 802 (fish for Indian dogs, Great Slave L.); 872 (landings for, in B.C. trawl fishery)

Annelids (see also Fauna, bottom; Leeches; Plankton, lists of; Zooplankton)
B 707:26 (in Passamaquoddy Bay plankton, N.B.); 883 (St. John R., estuary & harbour, N.B.)
OL 174 (larvae, NE Pac. Ocean)

Anoplopoma fimbria (see Sablefish)

Antia, N.J.
OL 135 (oceanic productivity data records); 168 (determination & differential analysis of seawater dissolved carbohydrate); 203 (growth rates & cell yields from 14 marine phytoplankter species)

Apisula solidissima (see Clam, bar)

Aplodinotus grunniens (see Drum, freshwater)

Apparatus (see also Gear; Fishing methods)
B 28; 33 (heat effect on fishes muscle tensile strength); 35; 72 (degree of rigor in fish); 131(13) (hydrograph for water-level fluctuations); 149 (Atl. oyster rearing); 206(3); 403 (measuring wind force); 211(13:16) (drift bottles with drags); 319; 322 (plankton collecting); 359 (ecological spectrophotometer); 367(1); 503; 562 (measuring soft-shell clam

Apparatus (cont'd)

- pumping rate & self cleansing); 384 (underwater camera); 402 (Atl. salmon tagging); 403 (physical & chemical oceanography); 413; 442, 514 (model of Alberni Harbour, B.C.); 477 (seawater sampling bottle); 566 (trammel net for northern pike control); 643 (aquarium for young Atl. salmon behaviour); 622 (lobster respirometer); 670 (sea lamprey spawning behaviour); 710:12 (penetrometer for river-bottom mud hardness); 711; 724; 747 (hydraulic clam-harvesting rake); 742:14 (lamprey ammocoete electrofishing); 749 (testing behaviour of control devices in Pac. salmon fishing); 785:33 (sampling beds for Pac. salmon spawning suitability); 855 (hydrostatically operated benthic grab); 887 (hydrodynamics & trials of perforated-pipe plankton sampler)
- E** 5 (bacteriocidal effect of wood smoke); 10; 27 (wood smoke constituents determination); 20 (fish muscle latent & specific heat); 21 (cold-storage temperature effect on thawed fish muscle drip); 23 (fish & crustacean flesh shrinkage from salt concentration & temperature); 26 (fish muscle freezing rate); 34; 39 (freezing whole fish & fillets by direct & indirect immersion); 54 (iodine determination in tissues); 56 (water-jet velocity in tank); 60 (multi-stage molecular still; reverse-phase chromatography)
- OL** 61; 102; 188 (airborne radiation thermometer); 76 (drift pole for sea surface currents); 107; 121 (echo sounding); 110; 130; 158; 159; 172 (Hecate Strait region hydraulic oceanographic model); 130 (TIDAC tide prediction); 133 (electrical sea-surface temperature recorder); 173 (plastic bag for in situ marine photosynthesis); 182 (sea-bed drifter); 196 (moored self-recording current meter); 198 (oceanographic observations through ice); 200 (seawater CaCO₃ solubility product determination); 203 (axenic mass culture of marine phytoplankters); 214 (Coulter cell & particle counter applications to marine research)

Appendicularians

- B** 707:31 (in Passamaquoddy region plankton)

Apple River, N.S.

- B** 328(12) (salmon management); 396(7:7) (mingling of salmon stocks)

Aquaria

- B** 643 (for young Atl. salmon behaviour); 646 (for sea lamprey predatory behaviour)

Archipelago, Canadian (see also Arctic, Canadian; Oceanography, Arctic (Canadian))

- OL** 89 (marine sediments of eastern)

Arctic, Canadian (see also Archipelago, Canadian; Oceanography, Arctic (Canadian)); also names of bodies of water, islands and localities)

- B** 653 (Atl. walrus biology); 673 (survey of past, present & future trends of fisheries); 716 (weather re seal hunting from boats); 748 (marine benthos, oceanography & ethology interrelations); 810 (marine decapod crustaceans)

- OL** 6; 12; 60 (ice studies); 33; 40; 144 (data taken during ice-island drifts); 89 (marine sediments)

Arctica islandica (see Quahaug, ocean)Argentina silus (see Argentine, Atlantic)

Argentine, Atlantic (*Argentina silus*)

B 863 (exploratory fishing, catches & biology, offshore N.S.)

Argulus (see Lice, fish)

Aro, K.V.

B 569 (morphometry of Nilkitkwa L., B.C.); 708 (1946-60 salmon enumeration & sampling data, Babine R. counting weir, B.C.); 728; 730 (exploitation of pink and sockeye migratory salmon by Canadian & U.S. commercial fisheries)

Arctediellus uncinatus (see Sculpin, arctic hookear)Arthropods (see also Amphipods; Barnacles; Isopods; Mysids; also other classifications and common names)

B 883 (St. John R., estuary & harbour, N.B.)

Ash (see also Composition, chemical)

B 277 (chloride determination in presence of phosphate)

Association (see Commensalism)Asterias (see Starfishes)Atheresthes stomias (see Flounder, arrowtooth)

Atkinson, W.

OL 91 (Coastal & Seaways Project oceanographic data record); 106; 125 (Ocean Weathership Station "P" oceanographic data records)

Atlantic Ocean (see Atlantic Oceanographic Group; Exploration; Fishery, commercial; Hydrography; International Commission for the Northwest Atlantic Fisheries; Oceanography, Atlantic; Plankton; Production, primary; Tagging; etc.)Atlantic Oceanographic Group (A.O.G.) (Note: The following references under this author heading are those for which the only authorship given is the name of this Group; for other Reports by this Group see item C of the Introduction, also author names, Oceanography, Atlantic, and other headings pertaining to Atlantic oceanography)

B 535 (Scotian Shelf temperature distribution); 578 (temperature & salinity distribution, Laurentian Channel); 605 (Laurentian Channel temperature & salinity); 606 (SW Gulf of St. Lawrence temperature & salinity)

OL 15 (Canadian Atl. coast drift bottle data); 34 (Canadian I.G.Y. Deep Water Circulation Project); 35 (Scotian Shelf temperature distribution); 90 (Canadian oceanographic and Great Lakes research vessels); 57 (temperature & salinity re Passamaquoddy & Fundy current measurements)

Atmospheric pressure (see Pressure, atmospheric)Aurelia (see Jellyfishes)

Austin, K.H.

OL 32 (combined phosphorus in surface waters, Departure Bay, B.C.)

Autolysis

B 16 (clam muscle); 25; 26; 37; 38; 52 (haddock and other Atl. fishes muscle)

Availability (see also Catch per unit effort)

B 483 (ciscoes, Great Bear Lake, N.W.T.)

- B -

Babine Lake and River, B.C. (see also Nilkitkwa Lake; Skeena River system)

B 531; 532; 534; 536; 637; 664; 675; 690; 699; 708; 718; 744; 762; 785 (salmon tagging ratio re escapement & migration); 708 (1946-60 salmon enumeration & sampling data at river weir); 819 (lake morphology); 820 (lake thermal structure); 821 (lake pelagic entomostracan zooplankton)

Babkin, B.P.

B 134 (skates nervous system re stomach motility & secretions)

Bacillariophycosa (see also Algae)

OL 203 (growth rates & cell yields from axenic mass culture of 3 species)

Bacillus salmonicida (see Furunculosis)Bacteria (general) (see also Disease; Pollution)B 21; 27 (in slime and flesh of living & dead haddock); 23 (tolerance of halophiles to NaCl); 39 (in slime & feces of haddock); 144 (re Malpeque disease of Atl. oysters); 250 (re pulp mill pollution, Bay of Chaleur); 258; 295; 296 (Bacillus salmonicida re furunculosis); 321 (salmonoid fishes diseases); 440; 503; 562 (in softshell clams & their self-cleansing of)Bacteria (in handling, processing and spoilage of fishery products) (see also Quality of fishery products)

B 16 (causing autolysis & decomposition of clam muscle); 18 (re blackening of canned lobster); 19 (frozen haddock); 20 (in haddock slime & flesh); 25; 26; 37; 52 (re haddock muscle autolysis); 440; 503; 562 (re self-cleansing of softshell clams)

E 3; 9 (responsible for fish spoilage); 5 (effect of smoke on); 45 (in cold-stored fillets)

Baculum

B588:49 (growth re age of male harp seal); 653:22 (re Atl. walrus age)

Baffin Bay, N.W.T. (see also Oceanography, Arctic (Canada))

OL 89 (bottom sediments)

Baffin Island, N.W.T.

B 709 (Ogac L. hydrography & zooplankton)

OL 56 (physical oceanography field data re "Calanus" Expedition)

Bailey, W.B.

B 386 (Labrador Current vertical temperature structure); 387 (increasing Atl. water influence in Hudson Bay); 422 (Belle Isle Strait hydrography); 455; 528; 551; 633 (Bay of Fundy oceanography); 456 (Gulf of St. Lawrence oceanography); 572 (hydrography & oceanography of ICNAF Convention Area waters); 584 (temperatures & salinities of waters off Nfld.); 603 (oceanographic reconnaissance, Canadian Archipelago); 614 (ice & iceberg incidence, Gulf of St. Lawrence & Nfld. coast)

Bailey, W.B. (cont'd)

OL 2 (Passamaquoddy region oceanographic features); 7 (Belle Isle Strait region oceanographic conditions); 10 (oceanographic survey, Trinity Bay, Nfld.); 38 (N Atl. Ocean water conditions re sonar); 41 (Canadian contribution to I.G.Y. Polar Front Survey, N Atl.); 74 (Grand Banks region temperature & salinity annual variations)

Bait (see also Baitworms)

B 17 (considerations re commercial fishing near Digby, N.S.); 31 (trials with set hooks); 60; 111 (for cod, Halifax area); 197; 373:47 (scallop viscera & mantle); 288:19 (softshell clams, Bay of Fundy)

Baitworms (bloodworm and sandworm)

B 675 (past, present & future of Canadian Atl. production)

Bajkov, A.D.

B 200; 201 (feed of various fishes, Chamcook Lakes, N.B.); 202 (freshwater investigations)

Balaenoptera physalus (see Whale, finback)

Balanus (see Barnacles)

Balch, R.E.

B 357 (maggots in smoked Atl. herring)

Ball, E.A.R.

B 677-679 (Juan de Fuca Strait coho salmon studies); 772 (age, sex & size distribution, Rivers Inlet sockeye salmon)

Bankia setacea (see Shipworm)

Banks, R.E.

B 585 (Canadian Atl. coast oceanography review)

Barkley Sound, B.C. (see also Oceanography, Pacific)

B 260 (salmon fishery off); 645 (plankton production & biomass of their predators)

Barnacles (Balanus)

B 91 (B. balanoides temperature & salinity reactions)
OL 211 (Strait of Georgia nauplii & cyprid stages in zooplankton)

Barner, W.

OL 176 (midwater trawl salmon catches, N Hecate Strait)

Barnes, Clifford A.

B 403 (oceanographic methods)

Barometric pressure (see Pressure, barometric)

Barraclough, W.E.

B 712 (midwater trawling through an echo-scattering layer); 753 (salmon catches in B.C. coastal herring purse seining)
OL 199 (echo-scattering layers study, Saanich Inlet, B.C.); 213 (Pasiphaea pacifica shrimp distribution & parasitism, Strait of Georgia, B.C.)

Barracudina, white (Paralepis rissoi kroeyeri)

B 651 (Laurentian Channel)

Bass, smallmouth (Micropterus dolomieu)

B 246 (Maritimes)

Bass, striped (Roccus saxatilis)

B 401:15; 427:30; 498:74; 539:93 (Shubenacadie L., N.S.)

Bass, white (Roccus chrysops)

B 760(1;2;3) (1904-56 daily catches of a L.Erie commercial fishing company)

Bathurst Harbour, N.B.

B 250:2 (pulpmill pollution)

Bathylagus ochotensis (see Blacksmelt)

Bathythermograms (see also Oceanography; Temperature, water; Thermometer, air-borne, for temperature data not recorded as bathythermograms)

B 642; 683 (open N & NE Pac. Ocean)

OL 4; 14; 16; 28; 29; 31; 43; 44; 49; 54; 59; 63; 66; 82; 84; 87; 91; 98; 101; 106; 111; 113; 125; 129; 135; 138; 139; 154 (open N & NE Pac. Ocean, including Ocean Weather Station "P"); 8; 22; 37; 47; 49; 62; 76; 91; 99; 206 (off mouth of Juan de Fuca Strait); 17; 30; 36; 47; 49; 52; 54; 58; 87; 91; 111; 113; 129; 135; 142; 146; 209 (inshore & offshore B.C. coastal); 66; 143 (NE Pac. & W coast Vancouver Is. re salmon & fur seal exploratory fishing); 70; 76; 84; 91; 94; 111; 113; 129; 135; 146 (W coast Vancouver Is.); 103; 105 (OCEAN System of data transmission and assessment); 108; 143; 169 (NE Pac. re Gulf of Alaska salmon tagging programme); 171 (re scale-length of internal waves in seasonal thermocline at Pac. Ocean Weather Station "P"); 208 (Nanoose Bay, B.C.); 211 (Strait of Georgia)

Battle, Helen I.

B 88 (Asterias vulgaris embryo development); 264 (Atl. hake feed); 421 (Atl. mackerel fishery, Fundy area); 434; 454 (Atl.hake life history, Fundy area survey)

Bay of ... (see name of bay)

Bay View, N.S.

B 66; 67 (hatchery lobster rearing)

Bayne, P.M.

B 17 (fish bait, Digby Neck, N.S.)

Baynes Sound, B.C.

B 441 (winter oceanography)

Beairsto, Frances I.

B 845 (Polinices clam drill investigations)

Beall, Desmond

B 269; 299 (B.C. herring chemical composition seasonal changes)

Beamish, F.W.H.

B 838 (cod & redfish activity patterns re photoperiods)

Beatty, S.A.

B 14; 15; 38 (haddock muscle proteins); 20 (formaldehyde-cured cod & haddock fillets toxicity)

Beaver

B 379(1) (affecting Atl. salmon dams)

Beef

B 284 (pH changes in liver stored for fish feed)

E 1 (muscle tensile strength)

Behaviour (see names of organisms; also types of behaviour, e.g. Activity; Currents, reaction to; Captivity; Diel effects; Ethology; Feed; Light, reaction to; Migration; Pressure, hydrostatic; Salinity, reaction to; Sound, reaction to; Spawning; Temperature, reaction to; etc.)

Belize Inlet, B.C. (see also Inlet and Fiord oceanography)

B 737 (feasibility of converting into freshwater sockeye-producing basin)

Bell, W.H.

OL 110; 158; 159 (Hecate Strait model construction & operation); 130 (tide predicting with TIDAC); 170 (fixed wave suppressors theoretical analysis); 188 (airborne radiation thermometer)

Belle Isle, Strait of (see also Oceanography, Atlantic, NW inshore; St. Lawrence, Gulf of)

B 422 (hydrography & oceanography)

OL 7 (oceanography)

Belliveau Cove, N.S.

B 371; 372; 383; 398; 447 (Polinices clam drill; clams)

Beluga (Delphinapterus leucas) (white whale)

B 461 (biology; morphometry; marking by tattoo); 675 (Canadian Atl. & Arctic fishery)

Bennie, Alice

B 39 (haddock slime & feces bacteria)

Benson, C.C.

B 30; 32 (fish muscle juice heat coagulation); 34; 36 (factors affecting rigor)

Benthos (see also Fauna, bottom; Invertebrates, lists of)

B 748 (oceanography & ethology interrelations with, E Canadian Arctic); 853; 905 (effect of eel-grass algacides on); 855 (hydrostatically operated grab for sampling)

OL 145 (Gulf of St. Lawrence)

Bere, Ruby

B 259 (Vancouver Is. marine parasitic copepods)

Bering Sea (see also Oceanography, Pacific, N open ocean)

- B 656 (salmons distribution & abundance); 731 (chum salmon distribution & origin)
 OL 28 (oceanography)

Berkeley, A.A.

- B 272 (conditions controlling B.C. shrimp industry)

Bernard, Frank

- B 855 (hydrostatically operated benthic grab); 860 (B.C. shellfish toxicity records)

Bibliographies (see also Publications, lists of)

- B 55 (trout fry hatchery handling & rearing); 285 (FRB work on B.C. salmons migration); 294 (abstracts of Nanaimo Station oceanography & chemistry); 389 (physiochemical oceanography to 1949, by authors); 407 (ocean wave studies); 452 (fishes flesh chemistry); 585 (Canadian oceanography); 631; 826 (Canadian fish parasites & diseases); 673 (ultrasonic waves effect on organisms); 794 (NW Atl. herring research by Canada, USSR & U.S.A.)
 OL 86 (re possible effects of radioactive wastes disposal on marine fishes & fisheries)

Bideford River (estuary), P.E.I.

- B 109; 151 (hydrography re oyster beds); 150; 160; 163; 249; 265; 292; 347; 370 (oyster investigations); 187 (environment effect on quahaugs); 292; 337; 684; 685 (bivalve larvae); 370:31 (blister worm on oysters); 414:19 (clams)

Big Salmon River, N.B. (see also Salmon River, N.B.)

- B 390(11) (salmon management possibilities)

Bilton, H.T. (T.H.)

- B 573 (creel census re Lakelse L., B.C., cutthroat trout population); 666; 667; 688; 704; 734; 758 (chum salmon scale variations, N Pac. Ocean); 702 (ocean distribution of Rivers & Smith Inlet sockeye); 757 (sockeye scale studies re Gulf of Alaska stock origins); 772; 818 (age, sex & size compositions of Rivers Inlet sockeye); 786; 823 (pink salmon distribution & abundance, B.C. offshore & Gulf of Alaska); 848 (sockeye size re their egg size); 866 (salmons longlining surveys, Gulf of Alaska)

Biological Board of Canada (see Fisheries Research Board of Canada)

Biomass (see also Production, primary)

- B 645 (of young salmons re plankton feed, Barkley Sound, B.C.)
 OL 201 (atlas of net zooplankton in NE Pac Ocean)

Biota (see Ecology; Fauna; Fishes, lists of; Flora; Invertebrates, aquatic; Invertebrates, lists of; Limnology; Phytoplankton; Plankton; Plankton, lists of; Zooplankton; etc.)

Birds, predatory

- B 115(16:11;20); 116(25:1); 117(30:75); 118(38); 119(43); 122(1); 131(13;14); 132:34; 207(7); 328(9); 329(20); 335(9) (Margaree R. system, N.S.); 206(5); 208(10:6;11); 210(11); 213(17); 329(20) (Moser R., N.S.); 131(14) (control, Margaree R.); 206(5) (of islands off mouth of Moser R., N.S.);

Birds, predatory (cont'd)

B 341(3) (Miramichi region, N.B.); 453 (merganser control, Miramichi R.)

Bishop, S.O.

OL 208 (physical, chemical & biological oceanography, Nanoose Bay, B.C.);
211 (physical, chemical & biological data, Strait of Georgia, B.C.)

Bittern, American

B 131(14:17) (Margaree R. system, N.S.)

Bivalve molluscs (see also Clam; Mussel; Oyster; Quahaug; Scallop)

B 158 (unidentified larvae, Malpeque Bay, P.E.I.); 160; 292; 337; 684; 685
(larvae, Bideford R., P.E.I.); 161 (Northumberland Strait, N.S.); 265
(Malpeque Bay, P.E.I.)

Black, W.F.

B 627 (feeding nematode-infected mysids to Atl. cod, re codworm infectivity);
671 (biology of mysids as fish feed, Bras d'Or L., N.S.)

Blackcod (see Sablefish)

Blackford, B.L.

OL 183 (Gulf of St. Lawrence average wind stress data); 184 (electric analogs
in physical oceanography); 185 (electric analog model for Gulf of St.
Lawrence wind-driven circulation); 190 (SE Gulf of St. Lawrence oceanographic
observations); 196 (moored-current-meter results, Kouchibouguac
Bay, N.B.)

Blacksmelt (Bathylagus ochotensis)

OL 175 (in N Pac. midwater trawlings)

Blair, A.A.

B 59 (Atl. salmon migrations, Miramichi R., N.B.); 98 (drift salmon, St. John
R., N.B.); 185 (Atl. salmon scale regeneration); 238 (factors affecting
Atl. salmon scale growth); 861 (Atl. salmon, Georges Bay, Nfld.)

Blenny, snake (Lumpenus lumpretaeformis)

B 799 (eggs & larvae in zooplankton)

Bloater (Coregonus (Leucichthys) hoyi)

B 10 (description & habits, L. Ontario)

Blood (see also Heart)

B 186 (histidine, adrenaline, & spinal cord destruction effect on osmotic
pressure of skate); 340 (heart rate of Gammarus); 653:46 (weight, in
Atl. walrus); 726 (electrophoretic patterns of proteins, in sea lamprey)

Bloodworm (Glycera dibranchiata) (see Baitworms)

Bloom (of algae)

B 305; 306 (cause of Pac. salmon sudden mortality); 437 (cause of diatom
maxima, Passamaquoddy Bay, N.B.)

Blubber

653:46 (weight, Atl. walrus)

Boar's Back Lake, N.S.

B 190(B) (poisoning to remove coarse fish)

Boats, research and commercial fishing (see Vessels)

Bolton, Lloyd L.

B 275 (Piper's Lagoon, B.C.); 281 (B.C. sea lion expedition); 319 (plankton net efficiency); 323 (digestive tract histology of some B.C. fishes)

Bonavista, Nfld.

B 430:61; 444 (cod longlining investigations)

Bone (see Otoliths; Ribs; Vertebrae)

Boothia, Gulf of (see also Oceanography, Arctic)

OL 13 (oceanography); 89 (bottom sediments)

Borden, Mabel A.

B 350 (sea scallop growth, feed, larvae, parasite, etc.); 436 (Acmaea testudinalis limpet habitat & viability)

Boston, N.

OL 110 (Hecate Strait region oceanographic model)

Bottle, drift (see Currents)

Bottom fauna (see Fauna, bottom)

Boughton Island, P.E.I.

B 415 (scallop investigations)

Boundary Bay, B.C.

B 217 (Dungeness crab growth); 222 (Dungeness crab tagging)

Bourne, Neil

B 806 (giant scallops fuller utilization); 807-809 (giant scallop surveys, Gulf of St. Lawrence); 888 (comparison of 2 odometer types for scallop drags)

Bousfield, E.L.

B 404 (Maritimes marine amphipods distribution); 574 (physical features of Miramichi R. estuary, N.B.)

Bowfin (Amia calva)

B 706(1,2,3) (1904-1956 daily catches of a L. Erie commercial fishing company)

Boyce, Farrell M.

OL 101 (N Pac. Surveys oceanographic data record); 227 (study of protected deep-sea reversing thermometer performances)

Boyce, N.P.

B 877 (B.C. pink salmon parasites)

Brachyura

B 221 (Canadian Pac.)

Branion, Hugh

E 25 (cod & other Atl. fish liver oils processing & vitamin A content)

Brannen, R.E.

B 374 (giant scallop growth rate & age distribution); 473(A;B) (factors affecting scallop productivity, Digby, N.S.)

Bras d'Or Lakes, N.S.

B 153; 159; 162; 164 (oysters and their culture)

Breton, Cape, N.S. (see also Ainslie, Lake; Bras d'Or Lakes; Cheticamp River; Grand Etang; Margaree River)

B 129 (salmon in National Park); 142; 153 (oysters & their culture); 449 (giant scallops)

Brill (see Sole, petrale)

Brine; Brining (see Curing; Drying; pickling; Salting; Salts; Smoking)

British Columbia (see also International North Pacific Fisheries Commission; International North Pacific Fur Seal Commission; International Pink Salmon Co-ordinating Committee; Pacific Marine Fisheries Commission; Oceanography, Pacific; Vancouver Island; also names of localities and bodies of water and names of commercial fishes)

B 279; 429 (pilchard fishery); 425 (brief on fishery wealth); 575 (trends in marine air & water temperatures); 675 (survey of past, present, & future trends of fisheries); 717; 746 (deepwater clam survey)

OL 86 (review of B.C. commercial fishes & fisheries re radioactive wastes disposal)

Brocklesby, H.N.

E 14; 30 (Pac. dogfish liver oil vitamin A, D determination); 31 (oil chemistry of cold-stored Pac. salmon & steelhead trout)

Brosme brosme (see Cusk)

Brown, A.W.

OL 178 (Canadian Atl. drift-bottle programme)

Brownlee, W.J.

B 562:1 (self-cleansing of softshell clams)

Buctouche, N.B.

B 184:28 (oyster-bed pollution)

Buerkle, U.

B 838 (cod & redfish activity patterns re photoperiods)

Bullhead, brown (Ictalurus (Ameiurus) nebulosis)

B 57 (sudden mortality in a N.B. lake); 246 (Maritimes); 263 (effect of piscicides on); 507:41 (L. Winnipeg catches); 563:29 (movements re light)

Bumpus, Dean F.

OL 182 (drifter for sea-bed current observations)

Burbot (*Lota lota*)

- B 445; 543; 544; 554; 567; 597; 609 (L. Winnipeg fishery: availability, sizes, dressed weights); 451:5; 519; 556; 595:32; 620; 634; 680; 738; 741; 764; 773; 774; 777-780; 782-784; 800; 802; 827; 831; 832; 835; 836; 839-841; 856-859 (Great Slave L. fishery); 519 (possibilities for mink feed, Great Slave L.); 524; 721 (in 3 N.W.T. lakes); 579 (parasitism re spawning & fecundity, Heming L., Man.); 680; 738 (Indian fishery for domestic use, Great Slave L.); 739 (basic biological meristic data, Heming L., Man.); 741 (tagging, Great Slave L.)
- E 20; 40 (muscle latent & specific heat); 20 (muscle moisture & fat content and freezing point); 25 (liver oil yield, colour & vitamin A)

Bute Inlet, B.C. (see also Inlet and fiord oceanography)

OL 30 (oceanography)

Butler, Margaret R.

- E 47 (*Laminaria digitata* & Irish moss chemical composition)

Butler, T.H.

- B 775 (efforts to introduce Atl. lobster into B.C. waters)
- OL 213 (*Pasiphaea pacifica* shrimp distribution & parasitism, Strait of Georgia)

Butters, J.

- OL 91 (Coastal & Seaways Projects Pac. oceanographic data record)

- G -

Cabot Strait (see also Oceanography, Atlantic; St. Lawrence, Gulf of)

- B 594 (hydrography)
- OL 97 (temperatures, salinities & densities, Cape Breton to Nfld.)

Caddisflies (Trichoptera)

- B 803:12 (in L. Superior bottom fauna)

Caeca (see Pyloric caeca)Calanus copepods (see also Copepods; Zooplankton)

- B 87 (in marine feed cycle); 89 (illumination re vertical distribution); 195 (behaviour, & as Atl. herring feed); 707 (in Passamaquoddy region zooplankton)
- OL 202 (at Pac. Ocean Weather Station "P")

"Calanus" Expeditions

- OL 56 (1949-1954 field data)

Calcium compounds

- OL 140 (CaCO_3 distribution in sediments of St. Lawrence R., estuary & gulf)

Calder, A.E.

- B 213(8) (salmon tagging, Margaree R., N.S.)

Caligus (see Lice, fish)Callorhinus ursinus (see Seal, northern fur)

Camera (see Photography)

Cameron, M. Helen

B 61 (white perch growth rate)

Cameron, William M.

B 229 (pink salmon spawning, incubation & alevinage); 230 (tagging ratio use for spawning Pac. salmon population estimation); 669 (pink salmon freshwater mortality)

Campbell, James

B 135 (skate & lobster muscle nitrogenous constituents)

E 55 (Atl. fishes muscle non-protein-N constituents chemical & physiological properties)

Campbell, N.J.

B 613 (Foxe Basin oceanography)

OL 6 (Foxe Basin ice discoloration); 12 (Hudson Bay oceanography); 46

(N Hudson Bay, Foxe Channel & Hudson Strait oceanographic features);

60 (Atl. Oceanographic Group ice studies); 90 (introduction)

Canadian Archipelago (see Archipelago, Canadian; Arctic, Canadian)

Cancer magister (see Crab, Dungeness)

Cannibalism

B 80 (lobster larvae); 210(6); 335(9) (Atl. salmon parr on fry)

Canning; Canned products

B 18 (bacteria in lobster); 286:4 (albacore); 288:15; 399 (softshell clam); 425 (B.C. canned salmon statistics)

E 28; 50 (discoloration of lobster); 40 (temperature-time relation for processing); 43 (scallop)

Canso, Strait of, N.S.

B 93 (Halacaridae); 552 (seawater conditions)

Cape ... (see name of cape)

Capelin (Mallotus villosus)

B 97:11 (biological study of Maritimes fishery statistics); 424:12 (predation by Atl. cod); 430:28 (Nfld. investigations); 651 (Laurentian Channel); 675 (past, present & future of Canadian Atl. & Pac. fishery); 870 (life history, Nfld. waters)

Captivity

B756 (effects on Pac. salmon)

Carapace (see also Moulting)

E 23 (weight loss on boiling lobster & Atl. crab)

Caraquet Bay, N.B. (see also Chaleur, Bay of)

B 74; 155; 156 (oysters)

- Carbohydrates (see also Glycogen; Irish moss; Productivity, primary)
 E 47 (in Atl. seaweed)
 OL 55; 135 (in NE Pac. Ocean waters); 168 (determination & differential analysis of dissolved, in seawater)
- Carbon, particulate and soluble
 B 904 (re marine primary productivity)
 OL 55 (in waters at Pac. Ocean Weather Station "P")
- Carbon dioxide and carbonates
 OL 18 (standard analysis method for seawater); 27 (computer programming of data); 30 (B.C. coastal waters); 55 (in Pac. Ocean Weather Station "P" waters re fertility); 140 (CaCO₃ distribution in St. Lawrence R. sediments); 200 (temperature variation effect on seawater CaCO₃ solubility product)
- Cardium pinnulatum (see Cockles)
- Careproctus longipinnis (see Seasnail, longfin)
- Carl, G.C.
 B 231 (marking brown trout fry, Vancouver Is.); 300 (losses from chinook salmon & coho salmon stripped eggs)
- Carotenoids
 OL 55; 81; 135-137 (re photosynthesis at Pac. Ocean Weather Station "P"); 81 (re primary production, Pendrell Sound & Departure Bay, B.C.); 135 (B.C. offshore waters); 179 (NE Pac. Ocean); 211 (Strait of Georgia)
- Carp (Cyprinus carpio)
 B 507:42 (L. Winnipeg catches); 706(1;2;3) (1904-1954 daily catches of a L. Erie commercial fishing company)
- Carpenter, Kathleen E.
 B 41 (trout water supply toxicity)
- Carpiodes cyprinus (see Quillfish)
- Carrageen (see Irish moss)
- Carrothers, P.J.G.
 B 813 (studies of European trawl engineering research)
- Carson, W. Victor
 OL 148; 180; 192; 210 (chemical conditions & heavy metal concentrations, NW Miramichi R., N.B.); 212 (geochemical survey of streams around Mt. Pleasant, N.B.)
- Carswell, J.
 OL 188 (airborne radiation thermometer)
- Carter, Neal M.
 B 220 (oceanographic chemical data reporting); 294 (abstracts of Nanaimo Station oceanography & chemistry); 312 (mining effluent pollution, Puntledge R., B.C.); 403 (oceanographic methods); 900 (FRB MS Reports index)
 E 59 (Canadian fisheries technological aspects); 60 (marine oil research status)

Cassidy Lake, N.B.

B 263 (poisoning undesired fishes)

Cat

B 376 (susceptibility to shellfish toxin)

Catch per unit effort (see also Fishery, commercial; Fishery, sport; Exploration)

B 98:26 (Atl. salmon); 390(3) (as abundance indicator); 405:12,29 (lemon sole; Pac. cod); 429 (B.C. pilchard); 445; 450; 508; 510; 543; 544; 554; 567; 570; 571; 597; 598; 599; 871:17 (L. Winnipeg fisheries); 451; etc. (see B 852 for complete list of series re Great Slave L. fisheries); 469; 470 (goldeye, L. Claire, Alta.); 483:3 (coregonine fishes, Great Bear L.); 484:10 (L. Manitoba fishes); 523 (Thunder Bay lakes, Ont.); 526 (giant scallop, Bay of Fundy); 567; 594 (L. Winnipeg commercial whitefish); 573 (cutthroat trout angling, Lakelse L., B.C.); 583 (eulachon, Fraser R.); 616 (geographic and seasonal variation, Atl. cod); 663; 872 (standardization of statistics for Pac. coast trawl fisheries); 678 (coho salmon, Juan de Fuca Strait); 706(1;2;3) (1904-1956 daily catch records of a L. Erie commercial company); 784 (with Atl. clam rake); 788; 789 (comparison of degree of effort by Atl. offshore fishing vessels); 789 (species association in Atl. offshore fishing); 796 (recent trends for cod & haddock, E Scotian Shelf); 812; 867; 869 (Pac. ocean perch in experimental catches); 854 (exploratory lobster fishing offshore N.S.); 872 (B.C. trawl fisheries)

Catches (see also Fishery, commercial; Fishery, sport; Exploration)

B 97 (biological study of Maritimes fisheries; monthly)

Catfish, channel (Ictalurus punctatus)

B 507:41 (L. Winnipeg catches); 609 (evaluation in L. Winnipeg trap net experiments); 706(1;2;3) (1904-1956 daily catch records of a L. Erie commercial fishing company)

Catostomus catostomus (see Sucker, longnose)

commersonii (see Sucker, white)

Caviar

706(1;2;3) (1904-1956 production from sturgeon by a L. Erie fishing company)

Cell and particle counter, Coulter

OL 214 (applications to marine research)

Census

B 254; 725 (efficient method for taking creel); 281 (northern sea lion, Vancouver Is.); 291 (clams, N.S.); 485 (aerial, for beluga near Churchill, Man.); 573 (sport fishery re cutthroat trout population, Lakelse L., B.C.); 588; 591 (harp seal); 800; 802 (Indians & dogs, re Great Slave L. domestic fish supply & requirements)

Centroscyllium fabricii (see Dogfish, black)

Cephalopods (see also Squid; Squids)

OL 174; 201 (in NE Pac. Ocean)

Cestoda (see also Diphyllbothrium; Parasites; Triaenophorus)

- B 303 (various, in haddock); 419:14 (Phyllobothrium loliginis in long-finned squid); 576 (in fishes of Heming L., Man.); 624; 641 (re distinguishing between Asiatic & N American pink & sockeye salmon stocks); 834:10 (parasitic in shortfinned squid); 870:20 (Eubothrium parvum in capelin); 877 (Phyllobothrium in early sea life pink salmon)

Chaetognatha (see also Plankton, lists of; Zooplankton)

- B 707:27 (in Passamaquoddy region plankton)
OL 174; 201 (NE Pac. Ocean); 202 (at Pac. Ocean Weather Station "P");
211 (Strait of Georgia)

Chaisson, A.F.

- B 134 (skates nervous system re stomach mobility & secretion); 186 (experimental effects on skate blood osmotic pressure)
OL 52 (improved shipping of live lobsters)

Chaleur, Bay of, N.B. and Que. (see also Caraquet Bay)

- B 182 (hydrography re lobsters); 250; 497(B); 903 (pulpmill pollution);
607 (sudden herring mortality)

Chambers, Robert

- B 68 (winter flounder ages, lengths, maturity, etc.)

Chamcook Lakes, N.B.

- B 200 (limnology; lake trout; landlocked salmon; feed); 201 (investigation of American smelt, sucker, minnows, killifish); 202 (general survey of fishes, etc.)

Champlain, Lake, Que., N.Y. & Vermont

- B 58; 245(B) (yellow perch stomach contents); 245(A) (yellow perch biology)

Chandler, Ross A.

- B 828 (ocean quahaug resources, SE Northumberland Strait)

Char, arctic (Salvelinus alpinus)

- B 675 (past, present & future of Canadian Atl. & Arctic fisheries);
833 (survey, Fort Chimo region, Ungava, Que.)

Charlotte County, N.B.

- B 188 (stocking lakes with brook trout)

Charlottetown region, P.E.I.

- B 145; 147; 155; 204 (oyster disease); 157 (oyster surveys)

Charts, marine

- B 743; 874 (requirements for Canadian Atl. fishing fleet)

Checklists (see Fishes, lists of; Invertebrates, lists of; Plankton, lists of)

Cheese skipper (see Maggots)

Chemical analysis and composition (for methods, see Analysis, chemical (methods); for results, see Composition, chemical; Oceanography, general)

Cheticamp River and estuary, N.S.

B 210(4) (salmon research); 352(7) (herring)

Chiasson, Leo P.

B 395; 423; 449 (Maritimes scallop investigations & explorations)

Chicken

B 376 (susceptibility to shellfish toxin)

Chionoecetes opilio (see Crabs, spider)

Chipman, H. Ritchie

E 17 (various Atl. fish liver oils vitamin A content); 18 (Atl. cod liver oil extraction); 19 (glazing Atl. cod fillets); 32 (effect of NaCl solutions on Atl. cod muscle)

Chippendale, N.K.

OL 101; 138 (N Pac. Ocean Surveys oceanographic data record)

Chiputneticook Lakes, N.B.

B 57 (sudden mortality of certain fishes)

Chironomids (see Midges)

Chisholm, W.M.

B 396(4;5); 400; 426 (salmon trap operation, Rawdon R., N.S.)

Chlamys sp.

B 717; 746 (deep-water scallop in B.C. waters)

Chlamys islandicus (see Scallop, Iceland)

Chlorine compounds; Chloride (see also Salt; Salting; Salts)

B 47 (Na hypochlorite as haddock preservative); 277 (chloride determination in presence of phosphate); 443 (freezing effect on SO_4/Cl ratio of seawater)

Chlorophyceae (see also Algae)

OL 203 (growth rate & cell yields from axenic mass culture of 2 species)

Chlorophylls re primary production

OL 55; 81; 126; 135-137; 209 (at Pac. Ocean Weather Station "P"); 81 (Pendrell Sound & Departure Bay, B.C.); 135 (B.C. offshore); 179; 209 (NE Pac. Ocean); 208 (Nanoose Bay, B.C.); 211 (Strait of Georgia)

Chondrus crispus (see Irish moss)

Chrosomus erythrogaster (see Dace, southern redbelly)

Chrysophyceae (see also Algae)

OL 202 (growth rate & cell yields from axenic mass culture of 3 species)

Chub, creek (Semotilus atromaculatus)

B 246 (Maritimes)

Chub, lake (Hybopsis plumbea)

B 201(D) (feed, Chamcook Lake, N.B.)

Churchill, Man. (see also Hudson Bay)

B 461; 485 (beluga: biology, abundance, marking, etc.); 555 (river fishes; ciscoes growth re taxonomy)

Cirripedia (see Barnacles)Cisco (Coregonus (Leucichthys) artedii) (lake herring) (see also Ciscoes)

B 10 (description & habits, L. Ontario); 320:18 (biology, parasite, etc., Clear L., Man.); 445 (L. Winnipeg fishery: availability, sizes, dressed weights); 483 (biology, Great Bear L., N.W.T.); 672 (feed & Triaenophorus infection, Heming L., Man.); 706(1;2;3) (1904-1956 daily catches by a L. Erie commercial fishing company); 833 (survey, Fort Chimo region, Ungava, Que.)

Cisco, blackfin (Coregonus (Leucichthys) nigripinnis) (see also Ciscoes)

B 446 (re ciscoes of Heming L., Man., & Triaenophorus parasite); 481 (taxonomy re other L. Winnipeg ciscoes)

Cisco, Nipigon (Coregonus (Leucichthys) nipigon) (see also Ciscoes)

B 446 (re ciscoes of Heming L., Man., & Triaenophorus parasite); 481 (taxonomy re other L. Winnipeg ciscoes)

Cisco, shortjaw (Coregonus (Leucichthys) zenithicus) (see also Ciscoes)

B 446 (re ciscoes of Heming L., Man., & Triaenophorus parasite); 481 (taxonomy re other L. Winnipeg ciscoes)

Cisco, shortnose (Coregonus (Leucichthys) reighardi) (see also Ciscoes)

B 10 (description & habits, L. Ontario)

Ciscoes (including Tullibee) (Coregonus) (Leucichthys)

B 445; 450; 507:41; 508:10; 510:12; 544; 545; 554; 558 (L. Winnipeg fishery); 446; 479 (key to Manitoban, & parasitization by Triaenophorus); 451:5; 519; 556; 620; 634; 680; 738; 741; 827; 831; 832; 839-841; 856-859 (Great Slave L. fishery); 481; 482; 483; 509; 557; 581; 615 (taxonomy re meristic characters, growth, infestation, etc.); 482; 483 (Triaenophorus infection, Great Slave L. & Great Bear L.); 484 (L. Manitoba catches); 510 (morphometry re growth, L. Winnipeg); 519 (possibilities for mink feed, Great Slave L.); 545 (differential infection by Triaenophorus); 555 (growth & parasites re taxonomy, Churchill R. region, Man.); 557 (growth in 2 Great Lakes & 3 Man. lakes, re taxonomy); 581; 615 (taxonomy difficulties); 579 (parasitism re spawning & fecundity, Heming L., Man.); 558 (availability in L. Winnipeg trap net experiments); 680; 738 (Indian fishery for domestic use, Great Slave L.); 706(1;2;3) (daily catch records of a L. Erie commercial fishing company, 1904-1956); 741 (tagging, Great Slave L.)

Claire, Lake, Alberta

B 469; 470 (goldeye investigations)

Clam (a vererid)

B 717 (Humilaria kennerlyi in B.C. waters)

Clam, Atlantic surf (see Clam, bar)Clam, bar (Apisula (Spisula) solidissima) (Atlantic surf clam)

B 371:16 (predation by Polinices drill); 376 (case histories of toxicity to

- Clam, bar (cont'd)
 man & domestic animals); 644 (current & new harvesting gear); 675 (fishery potential); 807-809 (association with giant scallop)
- Clam, butter (Saxidomus giganteus)
 B 216 (survey, W coast Vancouver Is.); 227 (ecology, growth, feed); 675 (past, present & future of B.C. fishery); 717; 746 (in B.C. deep-water clam surveys); 860 (B.C. toxicity records)
- Clam, geoduck (Panope generosa)
 B 717 (in B.C. waters)
- Clam, horse (Schizothaerus nuttalli)
 B 216 (survey, W. coast Vancouver Is.); 717 (in B.C. waters); 860 (B.C. toxicity records)
- Clam, littleneck (native) (Paphia (Protothaca) staminea)
 B 216 (survey, W. coast Vancouver Is.); 227 (ecology, growth, feed); 675 (past, present & future of B.C. fishery); 860 (B.C. toxicity records)
- Clam, Manila (littleneck) (Venerupis japonica)
 B 860 (B.C. toxicity records)
- Clam, mud (Mya arenaria)
 B 216 (survey, W. coast Vancouver Is.); 860 (B.C. toxicity records)
- Clam, northern propeller (Cyrtodaria siliqua)
 B 650:13; 807-809 (re scallop beds, Gulf of St. Lawrence)
- Clam, razor (Atlantic) (Ensis directus)
 B 337; 684 (larvae identification); 675 (fishery potential)
- Clam, razor (Pacific) (Siliqua patula)
 B 216 (survey, West coast Vancouver Is.); 235 (discoloration, Queen Charlotte Is., B.C.); 675 (B.C. fishery); 860 (B.C. toxicity records)
- Clam, softshell (Atlantic) (Mya arenaria) (see also Drills)
 B 16 (muscle autolysis & bacterial decomposition); 40; 371; 398; 447 (predation by Polinices drills); 101 (digestibility); 124; 337; 684 (larvae in plankton); 161; 333 (re oyster beds); 239:43 (shell proportions); 265; 337; 414 (life history, etc., P.E.I.); 288 (Bay of Fundy fishery & parasites); 291; 378 (survey of N.S. flats); 326; 378; 414 (habits, survival, crowding, etc., Sissiboo R., N.S.); 367(1) (pumping rate); 371:2 (fossil, near Belliveau Cove, N.S.); 372:7 (seed abundance, Belliveau Cove, N.S.); 376 (case histories of toxicity to man & domestic animals); 378; 414 (various Maritimes biological investigations); 378:21; 399 (yield & dry solids content of shucked meats); 414; 644; 711; 747; 784 (various harvesting gear); 440; 503; 562 (self-cleansing experiments); 447: 70 (survival, re Polinices predation on); 503; 562 (bacteriology of self-cleansed, & trial commercial uses); 675 (past, present & future of fishery); 763; 793 (survey of population, Eel R. Cove, N.B.)
 OL 217 (re paralytic shellfish poisoning, Bay of Fundy)
- Clam, softshell (Pacific) (see Clam, mud)

Clam, sunset (Psammobia californica)
 B 860 (B.C. toxicity tests)

Clam, wedge (Mesodesma)
 B 886:16 (subject to toxicity, Que.)

Clam drill (see Drills, clam and oyster)

Clams (Atlantic) (species not stated)
 B 265; 337; 684; 685 (larve of unidentified); 685 (Macoma, Mactra, etc. larvae description); 853 (effect of eel-grass algacides on); 886:16 (toxic, Que.)

Clams (Pacific) (species not stated)
 B 216 (survey & culture possibilities, W. coast Vancouver Is.); 416 (unexplained mortality, Nanaimo Harbour, B.C.); 425:27 (B.C. fishery); 717; 746 (survey for deep-water, & commercial prospects); 733 (Macoma, etc. re pulpmill pollution effects, Prince Rupert region); 860 (toxicity tests for B.C., 1942-1965)

Clams, fingernail (Pisidium and Sphaerium spp.)
 B 803 (in L. Superior bottom fauna)

Clandinnin, G.M.
 B 315 (scale development from trouts integument)

Clark, J.G.
 OL 178 (Canadian Atl. drift bottle programme)

Clark, J.P.
 B 115(17;18;19) (topography, meteorology & hydrology, E Margaree R., N.S.); 115(20) (notes on birds & fishes, E Margaree R.)

Claspers and clasper glands
 B 242 (function in Atl. skates)

Classification (see also Keys; Taxonomy)
 B 635 (comparative, of fishes, to order level)

Claws
 B 652:23 (re Atl. walrus age determination)

Clear Lake, Riding Mountain Park, Man.
 B 320 (limnology; biology; management suggestions); 464 (trout survival re commercial fishery)

Clearwater Lake, N.S.
 B 189(A) (survey re fish culture)

Clemens, W.A.
 B 215 (Pac. salmon clipped fin regeneration); 232 (Mesodinium rubrum coloration of sea & shellfishes); 234 (phosphorescence in ocean); 285 (bibliography of FRB work on B.C. salmon migration); 305 (chinook salmon mortality in Sooke trap, B.C.); 306 (sockeye salmon mortality in English Bay, B.C.); 318 (productivity of waters)

Climate (see Weather)

Clinocardium nuttalli (see Cockles)

Cliona (see Sponges)

Clione limacina (see Sea butterfly)

Clupea harengus (see Herring, Atlantic)
harengus pallasi (see Herring, Pacific)

Coarse fishes, removal of (see Piscicides)

Cockles

B 684 (Cardium pinnulatum larvae description); 717; 746 (Clinocardium nuttalli in B.C. waters); 860 (B.C. C. nuttalli toxicity records)

Cod, Atlantic (biology) (Gadus morhua) (see also Cod, Atlantic (technology);

Codworm; International Commission for the Northwest Atlantic Fisheries)

B 17 (baits for); 84 (life history); 97:17; 252 (biological study of Maritimes fishery statistics); 111 (Halifax area fishery for inshore); 342 (muscle physiology); 363 (otter trawl savings gear); 364; 424; 435 (migrations); 410:8 (tagging review); 430:1; 61; 444 (Nfld. fishery, biology, tagging, etc.); 435 (sea temperature re feeding & migration); 616 (geographic & annual variations); 630 (optimum size for first capture); 636 (analyses of tag records re N.S. mortalities); 651 (Laurentian Channel, & their feed); 675 (past, present & future of Canadian Atl. & Arctic fisheries); 781 (codworm incidence in fillets); 787 (homogeneity of Canadian samples for lengths & ages of commercial); 790 (selective fishing possibilities in Atl. commercial offshore fishery); 795 (trawling discards at sea); 799 (eggs & larvae in W Gulf of St. Lawrence & N.S. Banks zooplankton); 801 (increased trawl mesh size effect on Nfld. fishery); 815 (eggs & larvae off W Greenland); 816; 879 (Nfld. inshore fishery catches by types of gear); 838 (activity patterns re photoperiods); 844 (growth under controlled temperature & feed conditions); 878 (axial skeleton compared with that of haddock)

Cod, Atlantic (technology)

B 20 (formaldehyde-cured fillets toxicity); 23 (halophile bacteria re salting); 30; 32 (muscle juice heat coagulation); 34; 36; 38 (rigor phenomena); 38 (protein changes during spoilage); 101 (digestibility); 420:42 (drying light-salted; liver oils); 781 (codworm incidence in fillets)

E 1 (muscle tensile strength); 8 (handling & processing); 9; 11 (course & products of spoilage); 12; 35 (structural changes during freezing & storage); 14; 17; 25 (liver oil vitamin A); 18; 25; 48 (liver oil extraction & yield); 20; 34; 40 (muscle latent & specific heat); 20; 40; 51 (muscle freezing point); 20 (muscle moisture & fat content); 21; 24 (freezing, storage & thawing effect on drip); 23 (muscle shrinkage on heating); 26 (muscle specific conductivity & freezing rate); 32 (muscle weight changes on brining); 34; 39 (freezing whole & filleted, by direct & indirect immersion); 39 (preservation by freezing methods); 40 (muscle density); 42; 49 (trypsin hydrolysis); 45 (bacteria of refrigerated fillets); 51 (muscle bound & free water); 53; 55 (non-protein nitrogenous extractives); 55 (secretagogue action of muscle extracts)

Cod, gray or true (see Cod, Pacific)

Cod, Pacific (*Gadus macrocephalus*) (gray cod; true cod)

- B 405 (trawl fishery, Cape Lazo & Nanoose Bay, B.C.); 675 (past, present & future of B.C. fishery); 767;768; 890; 891 (in Gulf of Alaska & B.C. experimental trawling); 872 (B.C. trawl fishery)
- OL 86 (B.C. fishery re radioactive wastes disposal)

Codworm (*Phocanema decipiens*)

- B 420:3 (in Nfld. cod); 616:21 (re Atl. cod geographic & seasonal variations); 627 (effect of feeding mysids infected with, to Atl. cod); 781 (incidence in Atl. cod fillets); 847 (gray seal vs. other seals as vector of)

Coelenterates (see also Jellyfishes)

- OL 174; 202 (NE Pac. Ocean); 211 (Strait of Georgia)

Cold storage (see Refrigeration; Thawing)

Collin, A.E.

- B 613 (Foxe Basin oceanography, Canadian Arctic)
- OL 6 (Foxe Basin discoloured ice); 13 (oceanography of Prince Regent Inlet, Gulf of Boothia & adjacent waters); 33; 40 (oceanographic activities on I.G.Y. Drift Station "Bravo")

Colour (see also Discoloration; Pigment)

- B 329(23) (re guanine in Atl. salmon scales)
- E 25 (of Atl. fish & fish liver oils)

Columbia River, Washington and Oregon

- B 897 (chinook salmon hatchery evaluation programme)

Colwell, D.R.

- B 440 (self-cleansing of softshell clam)

Commensalism

- B 378:43 (oyster crab with Atl. oysters); 378:46 (*Odostoma* snail with soft-shell clam)

Communities

- B 46 (animal, of Passamaquoddy Bay intertidal zone)

Comox Lake, B.C.

- 312 (mining effluent pollution)

Competition (see also Behaviour)

- B 720 (for food, etc., of young Pac. salmon & trouts)

Composition, chemical (see also Analysis, chemical (methods); also names of organisms, types of constituents and types of products)

- B 12-15; 26; 37; 38; 52 (haddock muscle proteins); 16 (Atl. clam muscle); 135 (skate & lobster muscle); 208(14;15) (waters of Moser R., N.S.); 220 (reporting of seawater analyses); 269; 299 (proximate, & seasonal changes in, of B.C. herring); 358 (Irish moss); 370:32 (Atl. oyster shell); 452 (fish flesh & products: bibliography)

Composition, chemical (cont'd)

E 4; 10; 27 (wood smoke); 9; 33 (fish protein spoilage products); 14; 17; 25 (fish oils vitamin A content); 31 (Pac. salmon oils); 46; 51 (free & bound water in fish muscle); 47 (Atl. seaweeds)

Compsomyax subdiaphana (a Pacific deep-sea clam)

B 717 (in B.C. waters)

Computer programming (see Mathematical treatment of data)

Condition; Condition factor

B 122(5); 126(7) (changes in salmon, Margaree R., N.S.); 162:48; 184:2; 331:2; 370:29,37 (Atl. oyster); 206(1;2;4) (sea trout salmon, Moser R., N.S.); 245(A) (L. Champlain yellow perch); 276; 765 (Pac. oyster); 299 (B.C. herring seasonal changes); 329(22;23) (salmon, Moser R., N.S.); 452 (re fishes flesh chemistry); 427; 498 (salmon & striped bass, Shubenacadie L., N.S.); 505; 755:22 (Atl. herring)

Conductivity, electrical

OL 148; 180; 192; 210 (NW Miramichi R. waters, N.B.); 211 (Mt. Pleasant area streams, N.B.)

Conductivity, heat (see Heat conductivity)Continental Shelf (see also Georges Bank; Grand Bank; Scotian Shelf; also under appropriate Oceanography headings)

B 564 (physiography, geology & oceanography of Canadian Atl.)
OL 107; 127 (bottom sediment layers off Canadian E coast, re acoustical reflection)

Control (see also Algacides; Birds; Drills; Eel, American; Insecticides; Lamprey, sea; Management; Parasites; Pesticides; Piscicides; Predators; Shipworms; Starfishes; Triacnophorus; etc.)

B 371:20; 408 (Polinices); 439:33 (eels); 462 (jackfish, Heming L., Man.); 453 (mergansers, Miramichi R. system, N.B.); 566 (northern pike)

Conversion factors (see Tables)

Cook, A. Stanley

E 28 (canned lobster discoloration)

Cooke, N.E.

E 57 (vitamin A metabolism mathematical theory)

Cooking

B 28; 33 (effect on fishes muscle opacity & tensile strength); 101; 133; 194 (re digestibility of lobster & some fishes flesh)

Coombs, J.A.

OL 106 (Pac. Ocean Weather Station "P" oceanographic data record)

Cooper, D. LeB.

E 10; 27 (wood smoke chemistry re fish smoking); 38 (fish muscle decay rate)

Copepods (see also Calanus)

- B 42; 81; 87 (re diatoms & fish in marine feed cycle); 89; 137 (illumination re vertical distribution); 195 (6 species as Atl. herring feed; behaviour to light; etc.); 115(16:12); 210(14) (Atl. salmon-lice); 210(14) (brook trout-lice; life history); 259 (parasites, Vancouver Is.); 297 (fish-lice control); 624; 641 (re parasitization of Asiatic vs. N American pink & sockeye salmon stocks); 707:15 (quantitative distribution, Passamaquoddy region, N.B.); 877 (Centropages abdominalis as vector for Lecithaster trematode)
- OL 174; 201 (NE Pac. Ocean); 202 (at Pac. Ocean Weather Station "P"); 211 (Strait of Georgia, B.C.)

Copper and its compounds

- B 138; 190; 191 (sulphate as algicide); 272 (pipe effect on B.C. shrimps)
- OL 148; 180; 192; 210 (re mine effluent pollution of NW Miramichi R. waters, N.B.; also analysis methods); 212 (re mine effluent pollution of Mt. Pleasant area streams, N.B.)

Coracidia (see Triaenophorus)

Cordova Bay, B.C.

- OL 197 (current observations re sewage disposal)

Coregonus (Leucichthys) artedii (see Cisco)

clupeaformis (see Whitefish, lake)

hoyi (see Bloater)

kiyi (see Kiyi)

nigripinnis (see Cisco, blackfin; also Ciscoes)

nipigon (see Cisco, Nipigon)

reighardi (see Cisco, shortnose)

zenithicus (see Cisco, shortjaw)

Corkill, J.B.M.

- B 117(31) (climatology of L. Ainslie area, N.S.); 118(32); 126(1) (brook trout of Trout Brook, N.S.)

Cormack, H.E.

- B 673 (ultrasonics as possible control method for sea lamprey)

Cormorant (see also Birds; Predators)

- B 115(16:12); 119(43:25); 213(17); 329(20) (feed & as fish predators); 465:13 (goldeye predator)

Couesius spp. (see Hybopsis)

Coulter cell and particle counter

- OL 214 (applications to marine research)

Cowichan Lake, B.C.

- B 231 (marking brown trout); 300 (salmon egg losses)

Cox, Dorothy

- B 51 (Magdalen Is. mackerel, Gulf of St. Lawrence)

Cox, E.L.

- B 382(9); 391(15) (study of artificial cover for young Atl. salmon)

- Cox, J.W.B.
B 83 (salinity effect on Atl. oyster growth)
- Cox, Philip
B 112 (Atl. mackerel age determination)
- Crab, Dungeness (Cancer magister)
B 217 (larval & post-larval growth, Boundary Bay, B.C.); 221 (characteristics & distribution); 222 (tagging, Boundary Bay); 253 (effect of smelter silt on, Observatory Inlet, B.C.); 257 (effect of sediment, Nass River, B.C.); 313 (Queen Charlotte Is. fishery); 314 (moulting & growth); 425:27 (B.C. production); 675 (past, present & future of B.C. fishery)
OL 8 (B.C. fishery, re radioactive wastes disposal)
- Crab, king (Paralithodes camtschatica)
B768 (in experimental trawling off Kodiak Is., Alaska)
- Crab, oyster (Pinnotheres ostreum)
B 378:43 (occurrence in Atl. oysters)
- Crab, red (Geryon quinquedens)
B 895 (exploratory trapping, offshore N.S.)
- Crabs (Pacific) (see also individual species)
B 221 (Canadian Pac. Brachyura); 416 (unexplained mortality of shore crabs, Nanaimo harbour, B.C.)
- Crabs, rock (Atlantic) (Cancer irroratus and C. borealis)
B 675 (fishery potential); 810:112 (biology)
E 23 (muscle shrinkage from heat & brines)
- Crabs, spider (Chionoectes opilio and Hyas araneus)
B 884 (biology, Gulf of St. Lawrence, & potential commercial importance of C. opilio)
- Craig, A.
B 629; 700; 719; 736; 754; 761; 825; 850 (Canadian pelagic seal research)
- Crassostrea gigas (see Oyster, Pacific)
virginica (see Oyster, Atlantic)
- Crayfish
B 803:9 (ecology & sexual phenomena, L. Superior)
- Crean, P.B.
OL 111; 113; 129; 142 (Monitor Project Pac. oceanographic data record)
- Creel census (see Census; Fishery, sport)
- Cristivomer spp. (see Salvelinus trout species)
- Crofton, B.C.
B 765 (pulpmill pollution effect on Pac. oysters)

Crowe's Brook, N.B.

B 4 (Atl. salmon fry planting)

Crowding, effects of

B 336(14:24) (Atl. salmon & parr); 326; 378:7; 414 (softshell clam);
361:58 (yellowtail flounder); 440:22 (re self-cleansing of softshell clam)Crustaceans (see also subclassifications; also scientific and common names of species)B 707:29 (in Passamaquoddy region plankton, N.B.); 810 (decapod, of Nfld.,
Labrador, & E Canadian Arctic)

OL 174 (in NE Pac. Ocean)

Crytophyceae (see also Algae)

OL 203 (growth rates & cell yields from axenic mass culture of 3 species)

Ctenophores

OL 211 (Strait of Georgia, B.C.)

Cucumaria (see Sea cucumbers)Culture, fish (see also Feed; Feedstuff; Hatchery; Stocking)B 22 (Maritimes survey); 56 (brook trout, Forbes Creek, P.E.I.); 86; 138;
253 (Atl. salmon fry mortality); 118(37:16) (salmon, Margaree R., N.S.);
138; 241(B); 351 (brook trout mortality in Maritimes ponds); 189; 190; 191
(brook trout in Maritimes); 207(9); 210(5) (salmon fry, Goldmine Brook,
N.S.); 211(15) (Atl. salmon artificial spawning beds); 212(3;5); 327(8);
336; 381(5) (salmon fry, Petitcodiac R., N.B.); 212(4) (selecting streams
for Atl. salmon fry); 231 (tagging brown trout, Cowichan L., B.C.);
253 (review of trout planting success in Maritimes); 263 (poisoning
unwanted fishes, Cassidy L., N.B.); 266 (Jasper Park lakes suitability for
trout); 273 (Quamichan L. trout, B.C.); 317 (halibut meal for Pac. salmon
hatchery); 336(13); 380(6); 381(6); 382(8); 391(13;14) (Pollett R., N.B.);
390(6); 392(17) (Sebago salmon); 737 (possibility of converting a B.C.
inlet system into freshwater area for sockeye salmon)

Culture, invertebrates

B 65; 66; 67; 80 (lobsters: Atl. coast); 76; 146; 149; 153; 159; 160; 162;
164 (Atl. oysters: spat collection, trays, improving beds); 216 (clams &
Pac. oyster: possibilities on W coast Vancouver Is.); 226 (Pac. oyster,
Ladysmith, B.C.); 288; 378(1); 414 (softshell clam); 414 (clams & Atl.
oyster); 472(B;C) (Atl. oyster, Malagash, N.S.); 471:14 (quahaug);
473:9 (giant scallop); 775 (lobster: efforts to introduce into B.C. waters)
OL 55; 173; 203; 208 (phytoplankton); 228 (lobster: suitability of Fatty
Basin, B.C., for rearing)

Cultus Lake, B.C.

B 3; 8 (salmon investigations); 261 (protozoan salmon hatchery disease);
478 (predator control re sockeye salmon production)Cumacea (see Arthropods)

Cumberland Sound, Baffin Is., N.W.T.

OL 56 (physical oceanography field data from "Calanus" Expeditions)

Cunner (Tautogolabrus adspersus)

- B 182 (re temperature conditions on lobster grounds); 799 (eggs & larvae in zooplankton)
E 1 (muscle tensile strength)

Cunningham, C.C.

- OL 53 (track charts of A.O.G. oceanographic cruises)

Curing (see also Drying; Pickling; Salting; Smoking)

- E 1 (re fish muscle tensile strength)

Currents; Current measurement (see also Currents, reactions to; Drift bottles; Flow; Hydrodynamics; Oceanography; Tides; Transport of oceanic waters)

- B 386 (Labrador Current vertical temperature distribution); 412; 459; 547 (re sewage disposal); 424:6 (effects on Atl. cod migrations); 432 (measurements, Grand Manan Chan., N.B.); 527 (surface, at Sambro lightship off N.S.); 528 (surface tidal, Juan de Fuca Strait); 530 (tidal, Hecate Strait); 550 (B.C. offshore oceanic); 552 (Canso Strait, N.S.); 572:3 (ICNAF Convention Area waters); 574 (Miramichi R. estuary, N.B.); 592 (Cabot Strait hydrodynamics); 610 (B.C. inlets); 613 (Foxe Basin, NE Canadian Arctic); 621 (circulation of geostrophic)
OL 12 (Hudson Strait); 15; 178 (N Atl., re Canadian drift-bottle releases); 51 (hydrodynamics); 65 (list of A.O.G. drift-bottle programmes); 70; 76 (Juan de Fuca Strait & off W coast Vancouver Is.); 76 (drift pole for measuring sea-surface); 110; 158; 159 (representation in Hecate Strait region hydraulic model); 141 (drift-bottle data, NE Pac.); 147 (drift-bottle data, B.C. inshore & W coast Vancouver Is.); 178 (drift-bottle data, Atl. coastal); 182 (sea-bed drifter for measuring); 186 (structures, subarctic Pac. Ocean); 196 (moored self-recording meter data, re lobster studies); 197 (tracking by floating paper strips)

Currents, reactions to (see also Swimming)

- B 127(13); 336(14:13); 382(10:10); 643 (Atl. salmon fry, parr & smolts); 127(14); 132 (Atl. brook trout); 283 (re rheotropism literature); 390(6) (planted sebago salmon); 393(1;3) (Atl. salmon & eels in laboratory troughs); 396(1;2) (Atl. salmon & eels in circular vs. oval ponds); 424:6 (re Atl. cod migrations); 504 (re Atl. herring weirs); 539:85 (American eel in rapids)

Cusk (Brosme brosme)

- B 675 (past, present & future of Canadian fishery); 815 (eggs in W Greenland plankton)

Cyanea (see Jellyfishes)Cyanophyceae (see also Algae)

- B 138 (cause of trout pond mortality)

Cyclopidae (see Cyclops; Triaenophorus)Cyclops crustaceans (as intermediate host of Triaenophorus, see Triaenophorus)Cyclopterus lumpus (see Lumpfish)Cyclothone microdon (see Anglemouth, veiled)

Cymatogaster aggregata (see Perch, shiner)

Cyprinus carpio (see Carp)

Cyrtodario siliqua (see Clam, northern propeller)

Cystophora cristata (see Seal, hooded)

- D -

Dabs, Atlantic

B 363 (otter trawl savings gear selection)

Dace, blacknose (Rhinichthys atratulus)

B 246 (Maritimes)

Dace, longnose (Rhinichthys cataractae)

B 246 (Maritimes)

Dace, southern redbelly (Chrosomus erythrogaster)

B 246 (Maritimes)

Daenitis truttae (see Nematodes)

Dalhousie, N.B.

B 250:7 (pulpmill pollution of streams)

Dams

B 189(D) (to improve Burpee Millstream, N.B.); 209(3) (construction details & hydrology of Round L., Moser R., N.S.); 247 (use of lights to guide fish through fishway); 327(6) (operation re freshet production, Moser R., N.S.); 379(1) (beaver altering Atl. salmon); 468 (Saskatchewan R., re goldeye management)

Darter, stargazing (Percina uranidea)

B 4 (in Crowe's Brook, N.B.)

Dauphin Lake, Man.

B 557 (ciscoes growth re taxonomy)

Dauphin River, Man.

B 506 (recovery of tagged whitefish)

Dauphinee, J.A.

E 2 (smoke effect on fish muscle tensile strength); 4 (production & chemistry of wood smoke); 9 (fish flesh spoilage & estimation of products formed)

Davidson, Viola M.

B 343 (Halifax area summer phytoplankton); 345; 368 (Passamaquoddy Bay autumn maximum diatom growth); 393(1) (Atl. salmon & eel movement in constant circular current); 396(1) (Atl. salmon movement in decreasing current speed); 396(2); 563 (Atl. salmon movement in oval pond of still water); 396(3); 427; 539; 563 (survey of Shubenacadie R. lakes, N.S.); 401; 427; 498; 539; 563 (sport fishes survey, Shubenacadie L. & Rawdon R., N.S.); 437 (causes of diatom maxima, Passamaquoddy Bay); 563:20 (reaction of Atl. salmon to light)

Davis Strait, northwest Atlantic Ocean
OL 64; 65 (oceanography)

Dawson, A.B.

B 50 (small lobster distribution, Egmont Bay, P.E.I.); 66; 67 (lobster rearing & hatching, Bay View, N.S.)

Day, Lewis R.

B 210(4) (Atl. salmon research); 213(12) (elver eel migrations into Moser R., N.S.); 213(13) (water heights & temperatures, Moser R.); 214(19) (freshet effects on Atl. salmon & trout ascent from an estuary)

Decapods (see also Crab; Crabs; Crayfish; Lobster; Shrimp; Shrimps)

B 810 (marine, of Nfld., Labrador & E Canadian Arctic: biology, feed, etc.)
OL 174; 201 (NE Pac. Ocean); 211 (Strait of Georgia)

Defrosting (see Thawing)

Delphinapterus leucas (see Beluga)

Denaturation (see also Drip; Muscle)

B 28; 30; 32; 33 (various fishes muscle or muscle juice by heat)
E 29 (various Atl. fishes muscle during cold storage)

Denman Island, B.C.

B 713 (Pac. oyster disease & mortality)

Density (see also Oceanography; Specific gravity) (Note: The numerous data on density of seawater in the OL Series are not indexed unless having special significance)

B 457; 458 (B.C. offshore waters)

E 40 (of various Atl. fishes muscle)

OL 95; 207 (Halifax to Scotian Shelf oceanographic section water); 97 (Cabot Strait section water)

Departure Bay, B.C. (see also Nanaimo, B.C.)

B 232 (red plankton); 411 (juvenile herring studies); 416 (sudden mortality of shore invertebrates); 547 (sewage pollution)

OL 32 (surface waters combined phosphorus); 81 (chlorophylls, carotenoids & particulate organic matter re primary production)

Desiccation (see also Drying)

E 21; 39 (wrapping refrigerated fish to minimize)

Diaphus theta (see Lanternfish, theta)

Diatoms (see also Plankton; Phytoplankton; Plankton, lists of)

B 42; 81; 87; 437 (re copepods in marine feed cycle); 201; 202 (as fish feed, Chamcook Lakes, N.B.); 228 (as B.C. oysters feed); 345; 368 (autumn maximum growth, Passamaquoddy Bay, N.B.); 437 (causes of maxima, Passamaquoddy Bay)

OL 9 (under-ice, Gulf of St. Lawrence); 211 (Strait of Georgia)

Dickie, L.M.

B 415 (scallop investigations, Boughton Is., P.E.I.); 449 (hydrography re Gulf of St. Lawrence scallop mass mortalities); 526 (scallop biology, fishery, etc., Digby area, Bay of Fundy); 650 (Gulf of St. Lawrence scallop explorations); 787 (homogeneity of samples of commercial Atl. cod & haddock re length & age); 796 (recent trends in cod & haddock landings, E Scotian Shelf)

Diel effects (see also Light, reaction to)

B 213(11) (on Atl. salmon & trout angling success); 336(14:28) (Atl. salmon & parr & smolt migration); 352; 755:28 (Atl. herring larvae & adults); 411:7 (juvenile Pac. herring); 542 (Heming L., Man., walleye, sucker, whitefish & pike); 670 (spawning sea lamprey ventilation); 749 (adult sockeye & coho salmon migration, Robertson Creek, B.C.); 838 (cod & redfish activity patterns)

Digby, N.S. (see also Fundy, Bay of)

B 140; 473(A;B); 526 (scallop investigations off)

Digestibility (see also Feed; Feedstuff)

B 101 (Atl. haddock, mackerel, cod, lobstr, clam); 133 (haddock, lobster); 194 scallop, lobster, Atl. salmon, haddock, beef heart); 452:32 (various fishes flesh)

Digestion (see also Digestibility)

B 134 (mechanism of skates, re nervous system); 323 (digestive tract histology of some B.C. fishes); 755:22 (Canadian Atl. herring)
E 55 (effect of fishes muscle non-protein-N constituents on dog)

Dinoflagellates (see also Paralytic shellfish poison)

B 160:39 (parasitism on Atl. mussel larvae)

Dinophyceae (see also Algae)

OL 203 (growth rate & cell yield from axenic mass culture of Amphidinium carteri)

Diphyllobothrium (cestode)

B 301 (plerocercoid in lake trout); 624; 641 (in Asiatic vs. N American pink & sockeye salmon stocks)

Discards of fish at sea

B 795 (notes on Canadian Atl. fisheries data)

Discharge of rivers (see Flow; Freshets)Discoloration (see also Pigment)

B 232 (clams & oyster flesh by red Mesodinium feed); 235 (razor clams, Queen Charlotte Is., B.C.)
E 23; 50 (canned lobster); 31 ("rusting" of refrigerated Pac. salmon); 43; 44 (canned scallop)

Disease (see also Mortality)

B 55 (in hatchery rearing of trout); 101 (fish feed re dog ulcers); 120 (eel-grass); 144; 145; 147; 155; 204; 287; 661 (Atl. oyster, P.E.I.); 214 (Atl. salmon, Moser R., N.S.); 258 (furunculosis in grayling & trout,

Disease (cont'd)

Elk R., B.C.); 261 (protozoan, Cultus L. hatchery, B.C.); 295; 296 (examination of B.C. brown trout & Atl. salmon eggs for B. salmonicida); 321 (various, & infections of salmonids, with key); 415:22 (P.E.I. scallop); 471:11 (P.E.I. quahaug); 607 (fungus cause of Atl. herring mortality); 631; 826 (Canadian fishes: bibliography of); 713 (& mortality of Pac. oyster, Denman Is., B.C.)

Disinfection (see Disease)

Distribution of organisms (see also Marking; Migration; Tagging; Limnology; Distribution of organisms, vertical):

ATLANTIC MARINE:

B 31 (St. Andrews, N.B., area); 42 (copepods & diatoms, Passamaquoddy Bay); 50 (small lobsters, Egmont Bay, P.E.I.); 78 (bluefin tuna, Halifax area); 85; 421 (mackerel, Halifax area & Bay of Fundy); 92 (re Hudson Strait Expedition); 95 (swordfish, Halifax area); 97 (monthly catches in Maritimes commercial fisheries); 111 (cod, Halifax area); 115(16); 131(17) (Atl. salmon); 145; 153(B); 157; 158:2; 160; 161; 163(D); 203; 289 (Atl. oyster); 187 (environmental effect on quahaug); 264; 454 (hake); 288:28 (softshell clam, Bay of Fundy); 331:100 (Irish moss, N.B.); 341(1;2) (seaweeds, Bay of Fundy & Miramichi area); 361:8 (yellowtail flounder); 372:1; 339:123; 398:138 (Polinices clam drill, Belliveau Cove, N.S.); 392(9) (fishes, Petitcodiac R. estuary, N.B.); 394(8) (fishes, King County, N.S.); 404 (Maritimes amphipods); 410 (determined by marking or tagging); 423; 449; 650 (giant scallop, Gulf of St. Lawrence); 430 (fishes, Nfld. waters); 447:43 (Polinices re their locomotion); 471 (quahaug: limiting factors); 582:26,88,130; 596 (winter flounder); 588:8 (harp seal); 589 (lobster, re temperature, salinity & dissolved O₂); 596 (flounders); 629:35; 700; 719; 736; 761; 825 (northern fur seal); 648 (giant scallop, W & SW Nfld.); 652 (herring larvae, Bay of Fundy); 653:111 (walrus); 870:2 (capelin)

FRESHWATER:

B 57 (Chiputneticook Lakes fishes, N.B.); 58 (fishes & their feed, L. Champlain); 129 (Maritimes brook trout); 115(20); 116(25); 117(30); 118(37); 129; 130(10); 200(B;D); 202; 211(16); 212(3;4); 327(3;4); 329(19); 336(11); 390(7); 393(5); 396(4); 400; 427:2 (Atl. salmon freshwater stages); 211(16) (trout & eel, Goldmine Brook, N.S.); 225 (Man. gastropods & pelecypods); 246 (Maritimes fishes); 247 (fishes, Cowie Falls, Mersey R., N.S.); 263 (poisoned fishes, Cassidy L., N.B.); 346 (fishes, Stephenson's Pond, N.B.); 370:48 (molluscs, Bideford R., P.E.I.); 410 (determined by marking or tagging); 445; 450 (fishes, L. Winnipeg); 451; 487:9; 489:9; 491:7 (fishes, Great Slave L.); 453 (Miramichi R. system, N.B.); 462 (fishes, Heming L., Man.); 464 (fishes, Clear L., Sask); 466; 468 (goldeye, etc., Saskatchewan R.); 469; 470 (goldeye, etc., L. Clair, Alta.); 478:10 (fishes, Cultus L., B.C.); 480 (fishes, Nueltin L., N.W.T. & Man.); 483 (coregonine fishes, Great Bear L., N.W.T.); 498:13 (salmon, Shubenacadie L., N.S.); 555 (Churchill R., Man.); 710 (sea lamprey ammocoetes in 8 N Lake Superior rivers); 770 (Canadian stoneflies)

Distribution of organisms (cont'd)

PACIFIC MARINE:

- B 216 (clams, W coast Vancouver Is.); 221 (crabs, B.C.); 272 (shrimps, B.C.: limiting factors); 279 (pilchard, B.C.); 348:5 (lemon sole, B.C.); 410 (determined by marking or tagging); 425 (fishes, B.C.); 642; 656; 689; 690; 701; 702; 728-732; 734; 759; 766; 824 (salmons in open NE Pac. Ocean); oceanic, of Smith & Rivers Inlets sockeye salmon); 731; 734 (& origin of chum salmon in N Pac. Ocean & Bering Sea); 735 (coho & chinook salmon in NE Pac. Ocean); 786; 823 (pink salmon, NE Pac. Ocean)
- OL 213 (Pasipheae pacifica pelagic shrimp, Strait of Georgia)

Distribution of organisms, vertical (see also Diel effects; Distribution of organisms; Temperature, air; Temperature, water; Thermocline; Limnology)

- B 24 (Diaptomus minutus plankton, re light); 75 (Atl. oyster growth re depth); 89; 137; 195 (copepods re light); 148 (Teredo navalis); 158:11; 160:16 (Atl. oyster larvae); 198 (zooplankton, St. Croix R., N.B.); 371(4) (Polinices, Belliveau Cove, N.S.); 382(9) (sucker behaviour re depth & light); 394(6) (re Atl. salmon behaviour); 414:39 (Atl. clams re size); 671 (mysids as fish feed); 689; 701 (salmons in open Pac. Ocean); 718:34 (sockeye salmon & other fishes, Babine L., B.C.); 863 (argentine & silver hake); 895 (lobster & red crab)

Diurnal effects (see Diel effects; Light, reactions to; Migration)

Dixon Entrance, B.C. and Alaska (see Oceanography, Pacific inshore; Queen Charlotte Islands region)

Doan, K.H.

- B 462; 479 (northern pike control re whitefish parasitization); 464 (trout survival, Clear L., Man.); 484 (gill-net mesh sizes, L. Manitoba fisheries)

Dobson, F.W.

- OL 111 (Monitor Project Pac. oceanographic data record); 138 (N. Pac. Ocean Survey oceanographic data record); 149-153; 164; 166 (N Pac. Ocean transport computations); 154 (Pac. Ocean Weather Station "P" oceanographic data record); 156; 162; 165 (N Atl. Ocean transport computations)

Dobson, H.H.

- OL 142 (Monitor Project Pac. oceanographic data record)

Dodge, D.P.

- B 745 (Welland Canal, Ont., re lamprey migratory route)

Dodimead, A.J.

- B 824 (Gulf of Alaska salmons winter distribution re oceanography)
- OL 20 (NE Pac. oceanographic investigation); 63; 69; 82; 101; 138 (N Pac. Ocean Survey oceanographic data records); 92; 186 (oceanographic atlas of N Pac. subarctic region); 141 (Canadian drift-bottle releases & recoveries, N Pac. Ocean)

Doe, L.A. Earlston

- B 403 (oceanographic methods); 476; 550 (B.C. offshore oceanography)

Dogfish, black (Centroscyllium fabricii)

B 651 (Laurentian Channel, Gulf of St. Lawrence)

Dogfish, Pacific (Squalus suckleyi)

B 278 (life history); 405 (trawl fishery, Cape Lazo & Nanoose Bay, B.C.);
425:16 (B.C. fishery & vitamin products); 675 (past, present & future of
B.C. fishery); 712 (in echo-scattering layer, Saanich Inlet, B.C.);
872 (B.C. trawl fishery)
E 14 (liver oil vitamin A); 30 (liver oil vitamin D)
OL 86 (B.C. fishery re possible radioactive wastes disposal); 199 (Saanich
Inlet, B.C.)

Dogfish, spiny (Squalus acanthias)

B 32 (muscle juice heat coagulation); 392(16:8) (Petitcodiac R. estuary,
N.B.); 430:29 (Mfld. investigations); 651 (Laurentian Channel, Gulf of
St. Lawrence); 675 (past, present & future of Canadian fishery)
E 1 (muscle tensile strength); 17; 25 (liver oil vitamin A)

Dogs

B 800; 802 (census, re Great Slave L. fish as feed)

Dohaney, V.C.

B 503 (bacteriology of N.B. shellfish area)

Dolly Varden (Salvelinus malma)

B 262 (feed, Revelstoke, B.C.); 478 (Cultus L., B.C.)

Douglas, C.W.

B 461; 485 (biology, marking, etc. of Hudson Bay beluga)

Dow, Dorothy

B 28; 33 (heat effect on opacity & tensile strength of fish muscle)

Downer, P.J.

B 693; 696-698 (trial introduction of European oyster to Canadian Atl. coast);
698 (hydrographic & biotic study of Sam Orr Pond, N.B.)

Dragonfish, arrow (Tactosoma macropus)

OL 175 (in NE Pac. midwater trawling)

Dragonflies (Odonata)

B 210(6) (Boyeria nymphs killing Atl. trout fingerlings); 339 (eating sockeye
salmon fry); 803:12 (in L. Superior bottom fauna)

Drags (see also Gear)

B197:4; 373:11; 395; 415:2; 423:1; 449:3,15; 648; 650; 807-809; 842; 880; 881
(for Atl. giant scallop); 888 (2 types of odometer for measuring scallop
drag travel)

Dredge (see also Gear)

B 644 (for Atl. shellfish harvesting)

Dreyer, N.B.

E 6 (protein changes in pickled & salted Atl. fish); 11 (ammonia & trimethyl-
amine in fish)

Drift bottles; Drift pole; Drift indicators (see also Currents)

- B 126(2); 211(18:16) (bottles with or without drags)
 OL 65 (list of A.O.G. drift bottle programmes); 76 (floating vertical pole);
 182 (sea-bed drifter); 196 (moored self-recording current meter); 197
 (floating paper strips)

Drills, clam and oyster (whelks) (see also Snail, moon)

- B 40; 371; 372; 383; 398; 447; 845 (Polinices heros & P. triseriata life
 history & habits); 159:33; 161; 333; 371 (P. heros re Atl. oyster); 187:70;
 371; 398; 414:70 (P. heros re quahaugs & Atl. clams); 370:40; 472(D) (Urosal-
pinx cinerea re Atl. oysters); 371; 372 (P. triseriata re Atl. clams);
 383 (Polinices nomenclature); 398; 408 (control); 447 (biology, morphology
 & taxonomy of P. heros, P. triseriata & P. duplicata); 471:10 (re quahaugs)

Drinnan, R.E.

- B 862 (Zn compounds accumulation in Atl. oysters from pollution)

Drip (see also Denaturation; Refrigeration)

- E 21; 24; 36 (resulting from fish muscle freezing & cold storage temperatures)

Drugs

- B 186 (effect on skate blood osmotic pressure)

Drum, freshwater (Aplodinotus grunniens) (sheepshead; sunfish)

- B 507:24; 543; 544; 554 (L. Winnipeg commercial fishery); 609 (evaluation in
 L. Winnipeg trap net experiments); 706(1;2;3) (1904-1956 daily catches of a
 L. Erie commercial fishing company)

Drying (see also Desiccation; Salting)

- B 430:42 (light-salted Atl. cod); 436 (re variability of an Atl. limpet)
 E 1 (effect on fish muscle tensile strength); 8 (commercial procedures);
 21; 39 (effect of wrapping during fish cold storage); 46; 51 (re Atl.
 fishes muscle bound water)

Ducks

- B 213(17) (as fish predators, Moser R., N.S.); 886:18 (black, subject to
 paralytic shellfish poisoning)

Duff, D.C.B.

- B 258 (furunculosis of grayling & trout, Elk R., B.C.); 261 (protozoan hatch-
 ery disease, Cultus L., B.C.); 295 (examination of Atl. salmon eggs in B.C.
 for furunculosis); 296 (examination of B.C. brown trout eggs for furuncu-
 losis); 317 (halibut meal as Pac. salmon hatchery feed)

Duff, G.L.

- B 84 (Atl. cod life history)

Dulse (Rhodymenia palmata) (see also Seaweeds)

- B 341(1) (utilization, Bay of Fundy); 675 (Canadian Atl. production)

Dunbar, M.J.

- OL 56 (field data for published paper on N.W.T. waters physical oceanography)

Dunlop, H.A.

- B 339 (Pac. salmon fry habits & sockeye scale growth rate, Harrison L., B.C.)

Dunne, E.

B 879 (Nfld. inshore cod catches by types of gear)

Dymond, J.R.

B 5 (description of B.C. cutthroat, Kamloops, rainbow & steelhead trouts);
262 (cutthroat & Dolly Varden trout feed, Revelstoke, B.C.)

Dzendolet, D.P.

B 894 (Gulf of Alaska salmon tagging localities & recoveries data)

- E -

Eagle, bald

B 115(16:13) (Margaree Harbour, N.S.)

Eagle River, B.C.

B 2; 9 (sockeye salmon investigations)

Echinoderms (see Benthos; Fauna, bottom; Invertebrates, aquatic; Invertebrates, lists of; also names of species)

Echo-scattering layer

B 712 (midwater trawling in, Saanich Inlet, B.C.)

OL 199 (studies, Saanich Inlet & Strait of Georgia)

Echo sounding (see Sounding, echo)

Ecology (see also various aspects of)

B 113 (Margaree R. system, N.S.); 208(10) (Goldmine Brook, N.S., re salmon fry planting); 227 (B.C. clams); 275 (Piper's Lagoon, B.C.); 341 (seaweeds, Miramichi Bay, N.B.); 362 (Gulf of St. Lawrence halibut); 472(D) (Atl. oyster drill Urosalpinx cinerea); 720 (young Pac. salmon & trouts, Somass R., B.C.); 803:11 (L. Superior crayfishes)

Economics (see also Fishery, commercial; Fishery, sport; Management)

B 649 (Atl. salmon); 675 (Canadian fisheries: past, present & future prospects); 755:37 (Atl. herring: literature review); 760 (sport vs. commercial fishing controversy, Great Lakes region)

E 59 (technological aspects of Canadian fisheries)

Edmundston, N.B.

B 250(11) (pulpmill pollution of waters)

Eel, American (Anguilla rostrata)

B 28 (heat effect on muscle opacity); 36 (rigor); 117(30:43) (Margaree R. system, N.S.); 129(8:9) (Pomquet R., N.S.); 208(10:appendix 1); 210(6;8); 211(16); 213(16) (feed & predation on salmon, Moser R., N.S.); 213(12) (silver migration into Moser R.); 263 (effect of piscicides on); 379(4) (lethal temperature; light sensitivity); 393(1); 396(1); 539:85 (response to currents); 426:1; 427:28; 498:68 (trapping, Shubenacadie L. & Rawdon R., N.S.); 439 (biology, predators, control by electrofishing, etc., Petitcodiac R., N.B.); 539:45 (shipping mortality); 563:29 (movements re light); 675 (past, present & future of Canadian fishery)

Eel River Cove, N.B.

B 763; 793 (softshell clam population survey)

Eel-grass (*Zostera marina*)

B 120 (Atl. diseased); 187:34,62 (re quahaugs); 853 (chemical control)

Eelpout, Vahl's (*Lycodes vahllei*)

B 651 (Laurentian Channel, & their feed)

Eelpouts (Atlantic)

B 35; 36 (rigor phenomena); 342 (muscle physiology); 651 (*Lycodes vachoni* & *Melanostigma gelatinosum* in Laurentian Channel)

Eggs (see also Embryology; Fecundity; Reproduction; Roe products)

B 2; 9 (transplanting sockeye salmon); 3; 8 (artificially spawning sockeye); 11 (whitefish: obtaining by pumps); 22 (Atl. salmon, in hatcheries); 29; 77 (lobster: condition, etc.); 53 (Atl. mackerel: salinity & temperature effects); 66; 67 (lobster: hatchery procedures); 73; 419 (hatching squid); 100 (*Gammarus* amphipods); 121; 373:149 (Bay of Fundy scallop); 141 (Atl. oyster: salinity & temperature effects); 210(12) (Atl. salmon & trout eating smelt eggs); 229 (pink salmon: incubation); 248:27 (giant scallop); 278 (Pac. dogfish); 296 (examination, in B.C., of Atl. salmon, for *B. salmonicida*); 297 (examination of B.C. brown trout, for *B. salmonicida*); 300 (expelling coho & chinook salmon); 302; 493 (*Triacnophorus*); 307 (size of developing sockeye); 344 (salinity & temperature effects on hatching trout & whitefish); 371:41; 372:8 (frequency of *Polinices*); 373:149 (parasites of *Polinices*); 383:24; 398:81; 408; 447:12,36; 845 (*Polinices* egg collars); 434 (Atl. hake); 669 (mink salmon: mortality); 848 (sockeye salmon size re their egg size)

Egmont Bay, P.E.I.

B 50 (small lobsters distribution)

Electricity (see also Electrofishing)

B 493:20 (for control of *Triacnophorus* coracidia); 646 (spike potentials produced by sea lamprey)

E 41 (electrical method of determining fish muscle decay rate)

Electrofishing

B 439 (eels in Petitcodiac R., N.B.); 710; 742 (for sea lamprey ammocoete & adult control); 803 (L. Superior bottom fauna collected during lamprey larvae survey)

Electrona arctica (see Lanternfish, bigeye)

Electrophoresis

B 726 (of blood serum proteins of landlocked sea lamprey)

Elk River, B.C.

B 258 (grayling & trout furunculosis infection cause)

Ellis, D.V.

B 720 (ecology & behaviour of young salmonids, Somass R., B.C.); 748 (review of interrelations between marine benthos, oceanography & ethology, E Canadian Arctic); 749 (adult migratory Pac. salmon behaviour when subjected to

- Ellis, D.V. (cont'd)
control devices); 756 (captivity effects on Pac. salmon); 876 (sockeye salmon spawning migration behaviour in Thompson & lower Fraser R.)
- Else, C.R.
B 233 (transplantation of Atl. oysters to B.C.)
- Elson, Paul F.
B 113(4) (plans for 1935 Margaree R. salmon investigation); 113(5) (meteorological methods for above investigation); 114; 126(3) (Margaree R., N.S., meteorology & hydrology); 115(10-15); 123(9;10); 126(4); 131(15) (Margaree R. salmon netting & trapping); 115(16) (Margaree Harbour marine invertebrates, fishes, birds); 123(7;13) (Margaree Harbour water conditions); 123(8); 126(5) (Margaree salmon tagging); 126(2) (drift bottle experiments, Margaree); 126(6) (Margaree salmon smolts, alewife, brook trout); 127(13;14); 132(19); 329(19) (young Atl. salmon & trout behaviour); 210(5); 381(2:15) (high-water effect on hatchery-reared Atl salmon fingerlings); 210(6); 213(16) (Atl. salmon fingerlings predators); 210(7) (chironomid larvae limiting factors); 210(8) (Atl. salmon; trout & eel feed); 211(16); 213(14;16); 329(19) (Goldmine Brook, N.S., fishes re Atl. salmon smolt production); 212(3); 327(8); 336(12;13); 380(6); 381(5;6); 382(8); 391(13;14) (Atl. salmon fingerlings experimental plantings); 213(9) (aeration while transporting Atl. salmon fingerlings); 329(19) (physical causes of Atl. salmon parr distribution); 453; 694 (merganser control)
- Elver (see Eel, American)
- Embiotoca lateralis (see Seaperch, striped)
- Embody, D.R.
B 254 (sampling method for creel census)
- Embryo (see name of mature organism, also next heading)
- Embryology (see also Cystology; Histology; Eggs)
B 53 (Atl. mackerel); 73; 419 (Loligo squid); 88 (Asterias vulgaris starfish re limiting physical factors); 307 (size variation in developing sockeye salmon eggs); 408 (Polinices drill collar formation); 439:24 (Atl. salmon eggs affected during eel electrocution)
- Enchelyopus cimbricus (see Rockling, fourbeard)
- Energy transformations in seawater (see also Thermodynamics)
OL 109 (theory)
- English Bay, Vancouver, B.C.
B 306 (sockeye salmon mortality); 412 (oceanography re pollution)
- Engraulis mordax (see Anchovy)
- Enhydra lutris (see Sea otter)
- Ensis directus (see Clam, razor (Atlantic))

Entomostracan plankton (see also Triaenophorus)

B 561 (counts, Lakelse L., B.C.); 821 (quantitative, of Babine & Nilkitkwa Lakes, B.C.)

Entosphenus (see Lampetra)

Environment (see also Currents, reactions to; Ecology; Feed; Light, reactions to; Salinity, reactions to; Temperature, reactions to)

B 46 (Passamaquoddy Bay, N.B., intertidal belt animal communities); 187 (effect on quahaugs); 695 (effects on some characters for distinguishing Pac. salmon & steelhead trout stocks)

Enzymes

B 16 (autolytic, in softshell clam muscle); 101; 103; 194 (re Atl. fish & shellfish peptic digestibility)

E 7; 42; 49 (trypsin hydrolysis of haddock muscle); 42; 49 (trypsin hydrolysis of mackerel & cod muscle); 55 (secretagogue action of fishes & ox muscle enzymes)

Eopsetta jordani (see Sole, petrale)Ephemeroptera (see Mayflies)Erdman, I.E.

B 503 (bacteriology of self-cleansing of softshell clam)

Erie, Lake (see also Great Lakes)

B 706(1;2;3) (daily catch records of a commercial fishery, 1904-1956); 742 (lamprey ammocoete biology & control)

Escapement (see Migration; Spawning)Esox lucius (see Pike, northern)

niger (see Pickerel, chain)

Estuaries (see also the names of the rivers below, and of other rivers)

B 113(5;6); 122(6); 208(16); 210(4); 328:16 (Margaree R., N.S.); 130(9); 883 (St. John R., N.B.); 131(12); 208(16) (Moser R., N.S.); 392(16) (Petitcodiac R., N.S.); 412; 459 (Fraser R., B.C.); 574 (Miramichi R., N.B.); 586 (types of, Maritimes); 413; 442; 514 (Somass R., B.C., hydraulic model)
OL 140 (CaCO₃ distribution, St. Lawrence R.); 158 (reproduction of structure in a hydraulic model)

Ethology (see also Behaviour)

B 748 (oceanography & marine benthos interrelations with, in E Canadian Arctic); 749 (spawning migratory Pac. salmon in modified fishway); 876 (spawning migratory sockeye salmon in Thompson & lower Fraser R., B.C.)

Eucalia inconstans (see Stickleback, brook)Eukronia hamata

OL 202 (at Pac. Ocean Weather Station "P")

Eulachon (Thaleichthys pacificus)

- B 223; 256 (B.C. investigations); 425:22; 675 (B.C. fishery); 583 (Fraser R. fishery); 768 (in experimental trawling off Kodiak Is., Alaska)
 OL 199 (Saanich Inlet, B.C.)

Eumetopias jubata (see Sea lion, northern)Euphausiids (see also Copepods; Plankton; Zooplankton)

- B 712 (as fish feed in echo-scattering layer of Saanich Inlet, B.C.)
 OL 174; 201 (in NE Pac. Ocean); 199; 211; 213 (Strait of Georgia)

Europe

- B 568 (herring fishing & research methods); 705 (oceanography of 2 Scotland lochs re pulpmill pollution); 813 (studies re trawl engineering research); 377 (Danish seining in Scandinavia)

Expeditions

- B 92 (Hudson Strait, 1928: biology)
 OL 56 ("Calanus", in NE Canadian subarctic waters: physical oceanography field data)

Exploitation (see Catch per unit effort; Catches; Fishery, commercial; Fishery, sport; Management; Overfishing)

Exploration; Prospecting; Surveys (see also Expeditions)

- B 157 (oysters, Charlottetown area, P.E.I.); 189; 190 (Maritimes lakes & streams surveys for trout suitability); 395; 423; 449; 648; 650; 807-809; 842; 880; 881; 888 (giant scallop, Canadian Atl. coast); 430:12,14,20 (Nfld. cod, haddock, redfish); 524 (fishes of Willow L., N.W.T.); 553; 755:34; 864 (Atl. herring); 642; 656; 659; 665; 681-683; 701; 766 (salmons in open NE Pac. Ocean); 717; 746 (deepwater clams & scallops, B.C.); 767; 768; 890; 891 (B.C. & Alaska trawling); 812; 867; 869 (Pac. ocean perch); 854; 894; 895 (lobsters offshore N.S.)
 OL 66 (Pac. salmons & fur seal)

Extractives (see Drip; Juice, muscle; Nitrogenous constituents; Muscle; Protein)

Eye (see also Vision)

- B 738 (measurements re Heming L., Man., burbot taxonomy)

- F -

Fallfish (Semotilus corporalis)

- B 246 (Maritimes)

Fasmer, Helge

- B 322 (plankton apparatus standardization)

Fats and Oils (see also Composition, chemical; Lipids; Liver; Liver oils; Vitamins)

- B 269; 299 (seasonal changes in yield from B.C. herring); 299 (oil determination method); 452:8 (analytical constants of fishes); 465:10 (beluga); 505 (fat content of Gulf of St. Lawrence herring)

Fats and Oils (cont'd)

- E 17 (Atl. salmon & herring vitamin A); 20; 40 (content of various Atl. fishes muscle); 31 (effect on, during Pac. salmon cold storage); 60 (1960 research status, Halifax Station)

Fatty Basin, Vancouver Is., B.C.

- OL (suitability for Atl. lobster transplants)

Fauna, aerial (see Birds; also Insects)Fauna, aquatic (general) (see also Invertebrates; also names of fishes and mammals)

- B 122(6:47) (Margaree R. estuary, N.S.); 189 (Maritimes trout streams & lakes); 206(5) (islands off Moser R. mouth, N.S.); 272 (Piper's Lagoon, B.C.); 371:2; 398:5 (Belliveau Cove, N.S.); 617 (zones, Canadian Atl. coast); 698 (Sam Orr Pond, N.B., re transplantation of European oysters into)

Fauna, bottom (see also Benthos; Invertebrates, aquatic; Invertebrates, lists of)

- B 81 (re fate of diatoms); 190(A;B) (L. Jesse, etc., N.S.); 200(B); 202:6 (Chamcook Lakes, N.B.); 320:11 (Clear L., Man.); 382(7) (insects as Atl. salmon feed, Petitcodiac R., N.B.); 463 (Heming L., Man.); 494 (Nesslin L., Sask.); 717; 746 (encountered during B.C. deepwater clam surveys); 733 (pulpmill pollution effects on various, Prince Rupert area); 803 (collected during electrofishing lamprey larvae, L. Superior); 853; 855 (effect of eel-grass algacides on); 855 (hydrostatically operated benthic grab); 883 (St. John R., estuary & harbour, N.B.)

Fauna, terrestrial (general) (see also Birds; Insects; also names of species)

- B 115(16:14) (Margaree Harbour, N.S.); 208(10:6) (amphibia, Goldmine Brook, N.S.); 117(30:86) (Scotsville, N.S.)

Favorite, F.

- OL 92 (oceanographic atlas of Pac. subarctic region)

Feces

- B 39 (bacteria in haddock)

Fecundity (see also Eggs)

- B 1; 6; 65 (lobster); 100 (*Gammarus* amphipods); 278 (Pac. dogfish); 462:9 (northern pike); 525:38 (longnose sucker); 579 (of 6 fish species re parasitization, Heming L., Man.); 594 (whitefish); 595 (lake trout); 629:8 (northern fur seal); 645 (young Pac. salmon re plankton feed); 718:27 (pink salmon, Skeena R., B.C.); 870:12 (capelin)

Feed; Feeding habits; Stomach contents (see also Feedstuff; Life history; Predation; also names of organisms);

AQUATIC INVERTEBRATES:

- B 81 (copepods on diatoms); 65; 67; 80; 183 (lobster fry & adults); 87 (diatoms:copepods:jellyfishes); 98; 210(7;8;12); 213(10;11); 336 (14:25); 382(7); 498:20; 538:73; 643 (Atl. salmon); 100:14 (of amphipods); 121:54; 198; 350:20; 373; 415:21 (giant scallop); 143; 160:49; 228 (Atl. oyster); 227 (B.C. clams); 228 (B.C. oysters on diatoms); 232 (*Mesodinium* cause of red flesh in oysters); 272 (B.C. shrimps);

Feed; Feeding habits; Stomach contents (cont'd)

AQUATIC INVERTEBRATES (cont'd):

- B 367(1) (softshell clam pumping rate); 368; 437 (jellyfish on diatoms);
371:9; 383:48; 398:42; 845 (Polinices drill); 415 (long-finned squid);
810 (of marine decapods, Nfld., Labrador, & E Canadian Arctic);
834 (short-finned squid)

AQUATIC VERTEBRATES:

- B 42; 81; 87 (fishes: copepods role in feed cycle); 58; 245 (yellow perch,
L. Champlain); 68 (winter flounder); 98; 210(7;8;12); 213(10;11);
336(14:25); 382(7); 498:20; 538:73; 643 (Atl. salmon); 102; 110; 213(10;11)
(brook trout fingerlings); 111:21; 252; 424:8; 435 (Atl. cod); 117(30);
122(3) (salmon, Margaree R. system, N.B.); 128; 199 (haddock); 131(13;14)
(winter, of merganser & other birds, Margaree R.); 195; 755:20 (Atl.
herring); 200(B;D) (lake trout & landlocked Atl. salmon, Chamcook Lakes,
N.B.); 200(C) (estimation of daily feed consumption of fishes under natural
conditions); 201(C) (white sucker); 201(D) (creek shiner & lake chub);
201(E) (banded killifish); 208(10:appendix 1); 210(8); 439:9 (American eel);
208(11); 329(20) (merganser, Moser R., N.S.); 210(8;12) (brook trout,
Moser R.); 238 (effect on Atl. salmon scale growth); 262 (cutthroat &
Dolly Varden trout); 264 (Atl. hake); 281 (northern sea lion); 286
(albacore); 309 (flounders, Strait of Georgia); 320 (various fishes,
Clear L., Man); 435 (Atl. cod: temperature effect on feeding); 461:38;
485:25 (beluga); 462; 672 (various fishes, Heming L., Man.); 463; 522;
523 (lake whitefish); 465:12 (goldeye); 483:21 (ciscoes & whitefish,
Great Bear L., N.W.T.); 498:77 (striped bass); 591:19 (harp seal);
629:9; 700; 719; 736; 761; 825; 850; 875 (northern fur seal); 642 (salmons,
open NE Pac. Ocean); 643 (young Atl. salmon: behaviour in aquarium);
646 (sea lamprey prey-catching behaviour); 651 (various fishes, Laurentian
Channel); 653:65 (Atl. walrus); 671 (fishes: mysids as feed, Bras d'Or
Lake, N.S.); 712 (euphausiids as fish feed in echo-scattering layer,
Saanch Inlet, B.C.); 844 (Atl. cod metabolism); 848 (gray seal);
863 (Atl. argentine & silver hake)

Feedstuff (see also Culture; Feed; Hatchery; Fishmeal)

- B 55; 284; 317; 538:73 (fish hatchery); 284 (storage of beef liver for fish
hatchery); 519 (Great Slave L. coarse fishes for fur farming); 675 (B.C.
scrapfish for mink); 800; 802 (Great Slave L. fish for work dogs)

Fence

- B 2; 9 (re sockeye salmon investigations, Eagle R., B.C.); 805 (daily counts
of salmon at a NW Miramichi R., N.B.)

**Fertility (see Fecundity; Limnology; Oceanography; Photosynthesis; Plankton;
Productivity, primary; Productivity; etc., also names of organisms)**

Fertilizing

- B 162:36 (effect on Atl. oyster growth); 191:13; 192 (organic & inorganic
for trout waters); 338 (organic for fresh waters); 369 (Aurelia flavidula
for diatom growth)

Filletts (see also Quality of fishery products)

- B 20 (toxicity of, when formaldehyde-cured); 781 (incidence of codworm in Atl. cod); 878 (rib bones for identifying Atl. cod from haddock)
 E 8 (filleting Atl. fishes); 19 (effect of temperature on glazing);
 34 (freezing by direct & indirect immersion); 45 (bacteriology of frozen)

Filtration

- B 851 (of seawater for biological laboratories)

Fingerling (see names of adult salmon and trouts)**Finn, D.B.**

- B 257 (gillnet sinkage cause, B.C.)
 E 16 (fresh haddock muscle specific heat determination); 34 (freezing whole fish & fillets by direct & indirect immersion)

Finnan haddie

- E 8 (commercial processing)

Fins (see also Marking)

- B 215 (regeneration after clipping Pac. salmon); 361:74 (rays, yellowtail flounder); 481 (rays, re L. Winnipeg ciscoes taxonomy); 695 (rays, re distinguishing Pac. salmon & steelhead trout stocks); 738 (ray counts, Heming L., Man., burbot re taxonomy)

Fiords (see Inlet and fiord oceanography)**Fish culture** (see Culture, fish; Hatchery; Stocking; etc.)**Fisher, H.D.**

- B 430:54-57 (Nfld. harp seal fishery); 588 (NW Atl. harp seal reproduction);
 591 (harp seal problem review)

Fisheries Research Board of Canada

- B 639 (historical summary of research & establishments); 660; 843 (extensive history of, and its predecessors)

Fishery, commercial (see also Fishery, sport; Gear; Management; also names of international fishery commissions):**BRITISH COLUMBIA MARINE:**

- B 260 (salmon off Barkley Sound); 271; 279; 429 (pilchard); 272 (shrimp);
 311 (competition in chinook salmon trolling); 313:6 (Dungeness crab);
 405 (Cape Lazo & Nanoose Bay trawl); 425 (history & statistics of; also products); 575 (effect of long-term temperature trends on NE Pac.);
 629:35 (northern fur seal); 637; 664; 690; 699; 718; 744; 762; 785 (Skeena R. salmon); 663 (standardization of catch per unit effort statistics for trawling); 675 (survey of past, present & future trends); 677-679 (coho salmon, Juan de Fuca Strait); 728-732 (exploitation of northward-migrating salmon); 735 (coho & chinook salmon in N Pac.); 750; 751 (pink salmon catches, Howe Sound to N tip Vancouver Is.); 753; 849 (salmon catches in coastal herring purse-seining); 722; 818 (sockeye salmon, Rivers Inlet);
 776 (chinook & coho salmon in troll, & Fraser R. gill-net); 872 (trawl)
 OL 86 (review of, re possible disposal of radioactive wastes)

Fishery, commercial (cont'd)

CANADIAN EAST COAST MARINE:

B 60 (herring, Halifax area); 76 (oyster, Shediac Bay, N.B.); 78 (bluefin tuna, Halifax area); 85; 421 (mackerel, Halifax area); 95 (swordfish, Halifax area); 97 (biological study of catches, etc. statistics); 98; 129(2) (salmon off St. John R., N.S.); 111 (inshore cod, Halifax area); 114(10-14); 115(11-14); 119(48); 123(9;10); 126(4); 131(15); 210(4); 335(2;4); (salmon off Margaree R., N.S.); 129(8;9) (alewife); 140; 197; 373; 415:14; 423:5; 449:11; 473:9; 526 (giant scallop); 142 (oyster, Cape Breton, N.S.); 154 (oyster, Northumberland Strait N shore); 156 (oyster, prospect for in Caraquet Bay, N.B.); 209(1); 212(2); 327(1); 649 (salmon, Moser R., N.S.); 237 (American smelt box-net mesh size); 252; 616; 630 (cod); 288; 378 (softshell clam); 362:4 (halibut: early history of Gulf of St. Lawrence); 390(7) (salmon trap catch records, Rawdon R., N.S.); 390(8;12) (salmon, Minas Channel, N.S.); 391(12) (herring & lobster, Minas Channel, N.S.); 392(16) (salmon & shad, Petitcodiac R., N.B.); 394(8) (fishes, King's County, N.S.); 430 (fishes, whales, invertebrates, Nfld.); 435; 616 (temperature effect on cod); 444 (cod longlining, Nfld.); 454 (hake: survey of Fundy area); 461; 485 (beluga, Churchill, Man.); 471:13 (quahaug); 586 (estuarine); 588; 591 (harp seal); 596 (flounder, & history of); 625 (sardine: oceanography re Bay of Fundy); 675 (survey of past, present & future trends); 743; 874 (marine chart desirable requirements for); 755 (herring: history of); 763; 793 (softshell clam, Eel R. Cove, N.B.); 787; 788 (degree of effort in catch per unit effort, in off-shore); 789 (species association in offshore); 791; 794 (herring: review of); 792 (large pelagic fishes: review of in ICNAF area); 795 (groundfish trawling discards at sea); 796 (recent trends in cod & haddock landings, E Scotian Shelf); 801 (fishing & trawl mesh size effects on Nfld.); 816; 879 (Nfld. inshore cod catches by types of gear); 847 (salmon: Canadian re Greenland populations); 861 (salmon, St. George's Bay, Nfld.); 885 (salmon, Nfld. & Labrador)

CANADIAN RIVERS AND LAKES:

B 209(1); 212(2); 327(1); 649 (salmon, Moser R., N.S.); 390(7) (salmon trap catch records, Rawdon R., N.S.); 392(16) (salmon & shad, Petitcodiac R., N.B.); 401; 427:12 (various, Shubenacadia R. system, N.S.); 451 etc. (for complete references to Great Slave L. commercial fisheries, see heading Great Slave Lake); 445 etc. (for complete references to L. Winnipeg commercial fisheries, see heading Winnipeg, Lake); 464 (whitefish, Clear L., Man.); 464; 467; 469; 470 (goldeye, Man., Sask., Alta.); 480 (Nueltin L., N.W.T. & Man.); 484 (gillnet, L. Manitoba); 586 (estuarine, Maritimes); 675 (survey of past, present & future trends); 706(1;2;3) (1904-1956 daily catch records of a L. Erie commercial fishing company); 760 (controversial economics of commercial vs. sport, Great Lakes region); 871 (history of inland Canadian)

OTHER THAN CANADIAN:

B 568 (herring, Europe); 677-679 (Washington State coho salmon, Juan de Fuca Strait); 686 (Japan); 728-732 (U.S.A. exploitation of Pac. salmon migrating northward); 735 (salmon, Japan); 813 (trawling, Europe)

Fishery, exploratory (see Expeditions; Exploration)

Fishery, Indian domestic use

B 680; 738; 800 (Great Slave L.); 721 (Tathlina & Kakisa Lakes, N.W.T.)

Fishery, sport (see also Census; Management; also names of sport fishes, e.g. Trout; Salmon)

B 113(1;3); 119(46); 328(15); 335(5;6) (salmon, Margaree R. system, N.S.); 132:25 (trout, L. Ainslie area, N.S.); 209(1); 212(2); 327(1); 649 (salmon & trout, Moser R., N.S.); 212(1) (re effect of prior handling of Atl. salmon & trout); 253; 725 (efficient creel census method); 266 (stocking Jasper Park lakes); 394(6;7) (depth & shelter effects on Atl. salmon movements); 401 (Grand L., N.S., angling records); 427; 498; 539:1,93; 563 (various, Shubenacadie R. system, N.S.); 485:42 (beluga, Churchill, Man.); 573 (creel census re cutthroat trout population, Lakelse L., B.C.); 675 (in Canadian waters); 725 (survey, Great Slave L.); 727 (establishing & managing Maritimes ponds for trout); 750 (pink salmon); 760 (vs. commercial re controversial economics, Great Lakes region)

Fishery potential (see also Abundance; Catch per unit effort; Exploration; Fishery, commercial; Fishery, sport; Overfishing; etc.)

B 675 (of Canadian fishes, shellfishes, marine mammals, seaweeds, etc.)

Fishes, lists of

B 30 (taken in set-hook trials, St. Andrews, N.B.); 58 (in L. Champlain yellow perch stomachs); 115(16:3) (Margaree Harbour, N.S.); 128 (in haddock stomachs); 116(25:12) (Margaree Forks, N.S.); 117(30) (L. Ainslie region, N.S.); 118(37) (NE Margaree R., N.S.); 246 (in keys to Maritimes freshwater fishes); 336(11) (Petitcodiac R., N.B.); 634 (comparisons of classifications for many fishes); 651 (Laurentian Channel, Gulf of St. Lawrence, & their feed); 774:12 (Great Slave L.); 803:22,80 (taken during lamprey larvae survey, L. Superior); 863 (taken during exploratory fishing offshore N.S.); 871:2 (in Canadian inland commercial fisheries)
OL 174 (larvae in NE Pac. zooplankton hauls); 199 (Saanich Inlet, B.C.)

Fishing, exploratory (see Exploration)

Fishing methods (see also Gear)

B 60 (herring, Halifax area); 288; 414; 711; 724; 747; 784 (softshell clam rakes); 313 (Dungeness crab); 330 (lobster); 373:11 (giant scallop); 391(12) (Minas Basin, N.S.); 421 (Atl. mackerel); 430:43; 596 (Nfld. groundfish); 439:3 (electrofishing for eels); 444 (Nfld. cod longlining); 454:19 (hake, Bay of Fundy); 461:12 (harpooning beluga); 464:5 (trout, Clear L., Man.); 507 (L. Winnipeg); 518 (Great Slave L.); 568 (herring, in Europe); 596 (Atl. flounders); 644 (Atl. shellfish); 710; 742 (electrofishing for sea lamprey); 828 (ocean quahaug)

Fishmeal

B 192; 338 (Atl. herring, as water fertilizer); 317 (Pac. halibut, for salmon hatchery feed)

E 8 (commercial processing of Atl.)

Fitzgerald, D.N.

B 781 (codworm incidence in Atl. cod fillets)

Five Islands, N.S.

B 414:31 (clams)

Fjarlie, Robin L.I.

B 403 (oceanographic methods); 412 (oceanography re Vancouver sewage problem); 477 (seawater sampling bottle)

Flatworm (platyhelminth)

B 350:26 (unidentified in giant scallop stomach)

Flavobacteria

B 27; 39 (in haddock slime or feces)

Flavour (see also Quality of fishery products)

E 53; 55 (re fish muscle non-protein nitrogenous extractives)

Flesh (see Fillets; Muscle; Quality of fishery products)

Fletcher River, N.S. (see Shubenacadie River system, N.S.)

Flooding (see also Freshets)

B 189(E) (areas near Kentville, N.S., for rearing ponds); 191 (re fish cultural methods); 202 (Loch Lomond, N.B., prior to stocking); 241; 346 (flushing piscicide from stream pond); 351 (for improving P.E.I. trout angling)

Flora (general) (see also Algae; Irish moss; Plants, terrestrial; Seaweeds)

B 122(6:43) (Margaree R. estuary, N.S.); 189 (Maritimes trout streams & lakes); 206(5) (islands offshore from Moser R. mouth, N.S.); 208(10:2) (Goldmine Brook, Moser R. system, N.S.); 371:2; 398:5 (Belliveau Cove, N.S.); 698 (Sam Orr Pond, N.B., re transplantation of European oysters)

Florence Lake, B.C.

218 (plankton abundance fluctuation)

Flounder, arrowtooth (Atheresthes stomias) (Pacific turbot)B 767; 768; 890; 891 (in B.C. & Gulf of Alaska experimental trawling); 872 (in B.C. trawl fishery)
OL 199 (Saanich Inlet, B.C.)Flounder, smooth (Liopsetta putnami)

B 90 (temperature re respiratory rhythm); 596 (Canadian Atl. fishery, etc.)

Flounder, starry (Platichthys stellatus)

B 316 (acanthocephalan parasites); 323 (digestive tract histology); 872 (B.C. trawl fishery)

Flounder, winter (Pseudopleuronectes americanus) (lemon sole)

B 68 (age composition; maturity; lengths; etc.); 90 (temperature re respiratory rhythm); 582 (seasonal movements, Canadian Atl. coast); 596 (Canadian Atl. fishery, etc.); 795 (trawling discards at sea)

Flounder, witch (Glyptocephalus cynoglossus)

B 430:23 (Nfld. investigations); 596 (Canadian Atl. fishery, etc.); 651 (Laurentian Channel, & their feed); 801 (trawl mesh size effect, Nfld.)

Flounder, yellowtail (*Limanda ferruginea*)

B 361 (life history, etc.); 596 (Canadian Atl. fishery, etc.)

Flounders (Atlantic) (species not stated)

B 28 (heat effect on muscle opacity); 35 (rigor onset); 42 (stomach content);
47 (preservatives for); 675 (past, present & future of Canadian fishery);
790 (selective fishing possibility re cod & haddock)

Flounders (Pacific) (species not stated)

B 309 (key; characteristics, etc.; Strait of Georgia); 425:14 (B.C. fishery)

Flow (rate or volume) (see also Currents; Freshets; Tides; Transport of oceanic waters)

B 119(45;46) (Margaree R., N.S.); 207(6) (Moser R., N.S.); 412; 459 (Fraser R., B.C.); 574 (Miramichi R., N.B.); 611 (river discharges into B.C. inlets); 676 (Qualicum R., B.C.)

Flukes (see Trematoda)Flushing (see Flooding; Freshets; Piscicides; Tides)

Foerster, R.E.

B 2; 9 (sockeye salmon investigation, Eagle R., B.C.); 3; 8 (salmon investigations, Cultus L., B.C.); 307 (variation in developing sockeye salmon egg size); 478 (predator control re sockeye production, Cultus L., B.C.)

Fofonoff, N.P.

OL 21 (interpretation of thermodynamical oceanographic measurements); 24 (sea-water physical properties tables); 25 (digital computer program for oceanographic station data); 27 (digital computer program for seawater properties data); 72 (digital computer program for miscellaneous oceanographic purposes); 77-80; 85; 93; 128; 149-153; 164; 166 (N Pac. Ocean transport computations); 109 (energy transformations in the sea); 112; 114-124; 156; 162; 165 (N Atl. Ocean transport computations)

Food (for man) (see also Feed; Feedstuff; Quality of fishery products)

B 101; 133; 194 (fish & shellfish digestibility as tested on dogs)

Foraminifera

OL 6 (in discoloured Foxe Basin ice, Canadian Arctic)

Forbes, J.C.

E 1 (fish muscle tensile strength as affected by various salts solutions);
2 (smoke effect on fish muscle tensile strength)

Forbes Creek, P.E.I.

B 56 (planting trout fry)

Forecasting

B 158; 203 (Atl. oyster spawning & settling); 265; 337; 684; 685 (settling of Malpeque Bay oysters, P.E.I.); 675 (fishery potential of Canadian fisheries)
OL 1 (sea surface temperatures, St. Andrews, N.B.); 7; 60 (ice conditions in Gulf of St. Lawrence & E Canadian Arctic); 130 (tides with TIDAC); 132 (oceanic surface layers transient temperature structure); 197 (sewage dispersion by currents)

Forgeron, F.D.

OL 45 (Foxe Basin bottom sediments preliminary study)

Formaldehyde

B 20 (toxicity of fish fillets treated with); 47 (as haddock preservative);
370:29 (effect on preserving Atl. oysters)

E 1 (effect on fish muscle tensile strength); 4; 5; 10; 27 (in wood smoke);
5 (as bactericide in smoking); 44 (in scallop canning)

Forrester, C.R.

B 872 (report on B.C. trawl fishery & investigational aspects)

Fort Chimo, Ungava, Que.

B 833 (freshwater survey)

Fothergill, N.O.

B 527 (oceanography at Sambro lightship, off N.S.)

Fowler, A.G.

OL 218:8 (Fofonoff transport computations for mass transport in N Pac. Ocean)

Foxe Basin, Canadian Arctic

B 613 (oceanography, ice movements & discoloration)

OL 5 (ice discoloration); 12 (ice conditions); 45 (sediments mineralogy)

Foxe Channel, N.W.T.

OL 46 (oceanography)

Fraser, I.M.

E 56 (circulation induced by water jets in a rectangular tank)

Fraser, Roy

B 144 (Malpeque oyster disease pathology)

Fraser River and estuary, B.C.

B 223; 256; 583 (eulachon); 412; 459 (re sewage disposal); 459 (estuarial
hydrography); 675 (salmons: past, present & future fishery); 876
(spawning migratory sockeye salmon behaviour in lower canyon)

Freezing of fishery products (see Freezing point; Refrigeration; Thawing)

Freezing of seawater (see also Ice)

B 443 (effect on SO₄/Cl ratio of seawater)

Freezing point

E 20; 40; 46; 51 (of various Atl. fishes muscle); 46 (of gelatin gels)

Freshets (see also Water height)

B 119(45;46); 335(5) (effects on salmon & angling, Margaree R., N.S.);
132:19; 210(9); 214(19); 327(6) (artificial, re Atl. salmon & trout);
207(6); 327(6); 335(7); 336(10) (control, Moser R., N.S.); 210(5) (effects
on salmon in Goldmine Brook, N.S.); 365(Pollett R., N.B.); 381(2)
(spoiling traps, Petitcodiac R., N.B.); 400:4; 426:13 (Rawdon R., N.S.);
466 (artificial flushing for goldeye management); 498:98 (effect on
plankton, Shubenacadie L., N.S.)

Friedman, M.H.

B 134 (skates nervous system re stomach motility & secretion); 186 (experimental effects on skate blood osmotic pressure); 242 (skate clasper & clasper glands function)

Frobisher Bay, Baffin Island, N.W.T.

OL 56 (physical oceanography field data for "Calanus" Expeditions)

Froese, C.

OL 24 (seawater physical properties tables); 26 (seawater sound velocity calculations); 27 (digital computer programme for seawater properties data); 72 (computer program for miscellaneous oceanographic purposes); 73 (computer program for oceanographic station data); 163 (computer program for ocean mass transport from atmospheric pressure data)

Frozen fishery products (see Refrigeration; Thawing)

Fry (see name of adult form of organism)

Fucus (see Seaweeds)

Fulton, J.D.

OL 208 (physical, chemical & biological oceanography, Nanoose Bay, B.C.);
211 (physical, chemical & biological oceanography, Strait of Georgia)

Fundulus diaphanus (see Killifish, banded)

Fundy, Bay of (see also Minas Channel; Oceanography, Atlantic NW inshore; Passamaquoddy Bay)

B 1 (lobster); 17 (commercial fishing bait); 62 (power project effect on tides); 69 (water replacement re vertical heat transfer); 69; 70; 106; 455; 528; 551; 572:10; 625; 633 (hydrography & oceanography); 121; 124; 197; 373; 374; 526 (scallop); 288 (softshell clam fishery); 341(1) (seaweeds utilization); 352; 612; 625; 652 (herring & sardine); 421 (mackerel fishery); 454 (hake fishery survey)

OL 57 (temperatures & salinities); 64; 65 (oceanography); 217 (paralytic shellfish poison problem & management)

Fungus

B 121 (disease of eel-grass); 607 (infection of Atl. herring organs)

Fur animal feeding (see Dogs; Mink)

Furunculosis

B 258 (cause in Elk R., B.C. grayling & trout); 295 (examination of B.C. Atl. salmon eggs for B. salmonicida); 296 (examination of B.C. brown trout eggs for B. salmonicida); 321:13 (of salmonoid fishes)

- G -

Gadus macrocephalus (see Cod, Pacific)
morhua (see Cod, Atlantic)

Gammarus (see Amphipods)

Gaspereau (see Alewife)

Gasterosteus aculeatus (see Stickleback, threespine)

Gastric secretion (see Digestibility; Digestion)

Gastropoda (see Drills; Snail; Snails)

Gear, fishery (see also Fishing methods; Vessels; also types of gear, e.g. Nets; Traps; Trawl)

B 31 (set-hooks in St. Andrews, N.B., intertidal zone); 60; 78:7; 85:2; 95:5; 111:38 (Halifax area fisheries); 197:4; 373:11; 415:2; 423:1; 449 (giant scallop); 237 (box-net mesh size re American smelt fishing); 257; 280 (cause of gill-net sinkage, B.C.); 288 (softshell clam); 313 (Dungeness crab trap); 319; 322 (plankton nets); 330 (lobster trap specifications re catches); 363 (otter trawl savings gear); 377 (Danish seining observations in Scandinavia); 391(12) (Minas Channel, N.S.); 392(16:12) (Petitcodiac R., N.B.); 414; 711 (clam rakes); 467 (mesh re goldeye maturity); 568 (herring, in Europe); 644; 724 (mechanized, for Atl. shellfish harvesting & culture); 722; 764 (Great Slave L. commercial fishing boats); 767; 768 ("G.B. Reed" research vessel); 816; 879 (Nfld. inshore cod fishery catches by various types of gear); 871 (in inland Canada commercial fisheries)

Gee, A.H.

B 21 (haddock slime & flesh bacteria)
E 3 (microorganisms responsible for fish spoilage)

Gelatin

E 46 (heat capacity of gels)

Gelose (see Irish moss)

Genetics

B 695 (effects on some characters for distinguishing Pac. salmon & steelhead trout stocks)

Geochemistry (see Analysis, chemical (methods); Geology; Mineralogy; Sediments)

Geoduck (see Clam, geoduck)

Geology (see also Physiography)

B 46 (St. Andrews, N.B. area); 113(2) (Margaree R. system, N.B.); 564 (E Canada Continental Shelf)
OL 2 (Passamaquoddy Bay area); 45 (Foxe Basin area, N.W.T.); 89 (Canadian Archipelago, re marine sediments); 140 (re CaCO₃ distribution in sediments of St. Lawrence R., estuary & gulf)

Georges Bank, off N.S. (see also Oceanography, Atlantic, N offshore)

B 619 (slope water oceanography); 714 (haddock mortalities estimation)
OL 107; 127 (sediments re acoustic reflection)

Georgia, Strait of, B.C. (see also Juan de Fuca, Strait of; Oceanography, Pacific inshore)

B 294 (abstract of oceanography); 309 (flounders); 412 (oceanography re sewage pollution); 513 (internal waves)

Georgia, Strait of, B.C. (cont'd)

- OL 100 (possible pollution problems from radioactive wastes); 147 (drift-bottle releases & recaptures); 193 (primary production factors); 199 (echo-scattering layers); 211 (physical, chemical & biological data); 213 (Pasiphaea pacifica shrimp distribution & parasitism)

Geotropism

- B 436:2 (Atl. limpet)

Geryon quinquedens (see Crab, red)

Gibbons, Norman E.

- B 25; 37; 52 (autolysis of haddock muscle re bacterial decomposition)
E 45 (frozen fillet bacteriology)

Gibbons, R.J.

- B 376:20 (case histories of Atl. shellfish toxicity to man)

Gibson Lake, N.B.

- B 24 (plankton distribution)

Giglioli, M.E.C.

- B 398; 447 (Polinices biology, taxonomy, etc.)

Gilbertidia sigalutes (see Sculpin, soft)

Gill nets (see Gear, fishery; Nets)

Gills (see Respiration)

Giovando, L.F.

- OL 82 (N Pac. Surveys oceanographic data record); 105 (bathythermogram assessment system); 132 (forecasting transient temperature structure in ocean surface layers); 157 (Ocean Weather Station "P" seasonal thermocline); 205 (NE Pac. surface layer characteristics)

Glazing (of frozen fish)

- E 19 (temperature effects)

Glossary

- B 246 (for key to Maritimes freshwater fishes)

Glycera dibranchiata (bloodworm) (see Baitworms)

Glycerides (see Fats and Oils)

Glycogen (see also Carbohydrates)

- B 276 (routine assay method, for oysters)

Glyptocephalus cynoglossus (see Flounder, witch)
zachirus (see Sole, rex)

Godfrey, H.

- B 439 (American eel investigations in N.B. streams); 681 (young & maturing salmon in open NE Pac. Ocean); 735 (coho & chinook salmon continental

- Godfrey, H. (cont'd)
stocks, ocean distribution, exploitation, tagging, age composition, etc.);
B 759; 766 (high-seas Canadian exploratory salmon fishing & tagging);
892; 893 (Canadian salmon tagging in Gulf of Alaska, & recoveries);
897 (U.S. Columbia R. chinook salmon hatchery evaluation)
- Goldeye (Hiodon alosoides)
B 465; 466; 467; 468; 469; 470 (life history, distribution, management, etc.,
in Man., Sask. & Alta.); 507:41 (L. Winnipeg catches); 620; 634; 827;
831; 832; 840; 856-859 (in Great Slave L. fishery)
- Goldmine Brook, N.S.
B 207(9) (stocking salmon fry); 208(10) (ecology; hydrology; limnology);
208(13) (stoneflies); 210(5) (freshets effects on salmon fingerlings);
210(6) (predators of salmon fingerlings); 210(7;8) (salmon feed);
210(8); 211(16) (brook trout & eel feed); 211(16) (comparison with a
nearby brook); 329(19) (factors affecting salmon parr distribution)
- Gompertz growth equation
B 898 (notes on fitting)
- Gonads (see also Maturity; Ovary; Testes)
B 125:1; 163(D) (P.E.I. starfish re maturity); 350:12 (sea scallop histology);
434 (Atl. hake); 465:6 (goldeye); 493:34 (northern pike histology);
588:49 (harp seal histology); 629; 700 (northern fur seal); 653:79,88
(Atl. walrus); 681 (weights, open Pac. Ocean salmons)
- Gonatus fabricii (see Squid, red; Squids)
- Gonyaulax (see Paralytic shellfish poison)
- Goosefish (see Monkfish)
- Grab, bottom
B 855 (hydrostatically operated)
- Graham, D.E.
B 896 (Maritimes experimental offshore lobster trap fishing)
- Graham, E.L.
B 384 (underwater camera)
- Graham, R.D.
OL 11 (Gulf of St. Lawrence ice potentials & heat budget computations)
- Grainger, E.H.
OL 71 (SE Hudson Bay & James Bay physical oceanography)
- Grand Bank, off Nfld. (see also Cod, Atlantic)
B 632 (slope water oceanography)
OL 41 (Polar Front I.G.Y. oceanography); 64; 65 (oceanography); 74 (annual
variations of temperature & salinity); 107; 127 (sediments re acoustic
reflection)

Grand Etang, N.S. (see also Margaree R. system and estuary, N.S.)

B119(48); 131(15); 210(4) (commercial salmon catches)

Grand Lake, N.S. (see Shubenacadie River system, N.S.)

Grand Manan, N.B. (see also Fundy, Bay of)

B 189(C) (investigation of ponds); 352:10 (herring); 432; 433; 502 (oceanography of channel)

Granite Lake, N.S.

B 189(A) (survey re fish culture)

Grant, T.A.

OL 96 (track charts of Atl. oceanographic cruises); 97 (Cabot Strait Section temperature, salinity & density distributions)

Grayling, arctic (*Thymallus arcticus*) (*T. signifer*)

B 258 (source of furunculosis infection, Elk R., B.C.); 451:5; 620; 634; 725; 738; 741; 827; 831; 832; 840; 856-859 (in Great Slave L. fishery); 496 (effect of 3 insecticides on); 725 (Great Slave L. sport fishing survey); 738 (Indian fishery for domestic use, Great Slave L.); 741 (tagging, Great Slave L.)

Great Bear Lake, N.W.T.

B 438 (hydrography; coregonine fishes biology)

Great Lakes (see also names of the five individual lakes)

B 397 (vertical temperature distribution); 745 (Welland Canal re lamprey migration from L. Ontario to L. Erie); 760 (employment re controversy between commercial vs. sport fishing); 871 (commercial fisheries history & gear)

Great Slave Lake, N.W.T. (Note: The MS Report (Biological Series) numbers of a series of reports on Great Slave Lake investigations bearing sub-series numbers 1-55 are given in the first entry below (the sub-series numbering is often chronologically out-of-step with date of issue, and some issues do not show the sub-series number; Report B 852 is a list and general index to the first 50 of these). The other entries below indicate some of the special topics in this sub-series, plus one report (B 871) not in the sub-series)

B 451; 482; 487-492; 515-519; 525; 556; 560; 565; 580; 587; 595; 600-602; 620; 634; 680; 715; 722; 725; 738; 741; 764; 773; 774; 777-780; 782; 783; 800; 802; 827; 831; 832; 835; 836; 839-841; 852; 856-859 (numbered sub-series on research, & investigations re commercial fisheries); 482 (tullibee ciscoes investigation); 515 (fishery comparison with B.C. halibut fishery); 516 (vs. L. Winnipeg re *Triaenophorus* infestation); 519 (coarse fish at Hay R. for fur farm feed); 565; 601 (trout & whitefish spawning populations); 587 (whitefish ages); 600 (whitefish spawning, Rae Arm); 680; 738; 800; 839 (domestic fishing survey); 715 (commercial catch regulations review); 722; 764 (types of commercial fishing vessels); 725 (sport fishery survey); 741 (tagging studies analysis & review); 773 (fishes round weight conversion factors); 774; 777-780; 782; 783; 800; 802; 827; 831; 832; 835; 836; 839-841; 856-859 (computerized data on commercial fishery fishes size, catch, etc.); 774:12 (list of fish species); 783:12 (fish species); 800 (census, fish supply, domestic utilizations, etc.); 852 (index & list of titles to sub-series Nos. 1-50); 871:20 (commercial fisheries history & gear)

Green Bay, Lake Michigan
B 557 (ciscoes growth)

Greenland

B 572:3 (W coast currents & oceanography); 815 (fish eggs & larvae collections off W coast); 847 (fishery re effect on Canadian Atl. salmon population)

Grenadier, common (see Marlin-spike)

Grey ... (see Gray)

Gribble (Limnoria)

B 91; 240 (temperature & salinity effects on N.B. L. lignorum);
837 (biology, origin, & introduction into B.C., of L. tripunctata)

Groot, C.

B 646 (sea lamprey prey-catching behaviour)

Groundfish (see also names of Atlantic and Pacific species)

B 675 (past, present & future of Atl. & B.C. fisheries); 795 (notes on Canadian Atl. discards data); 890; 891 (in Alaska & northern B.C. experimental trawling)

OL 86 (B.C., review re radioactive wastes disposal)

Growth; Growth rate (see also Age determination; Baculum; Claws; Otoliths; Scales, fish, for age determination; Shell; Size; Teeth; Tusk; Weight; also names of organisms):

INVERTEBRATES:

B 1 (young lobsters); 75; 83; 143; 146(B):15; 149; 184; 347; 331:10; 370:14 (Atl. oyster); 100 (amphipods); 121:16; 124; 140; 248; 350:5; 373:52; 374; 395:5; 415:6; 420; 449:6; 526 (giant scallop); 125; 163 (starfish); 187; 471:12 (quahaug: limiting factors); 196; 326; 378; 414 (Atl. soft-shell clam); 217 (Dungeness crab: larval & post-larval); 227 (B.C. clams); 239 (Atl. oyster & mussel re light); 272 (B.C. shrimps); 314 (Dungeness crab); 345; 368; 437 (diatoms, Passamaquoddy Bay, N.B.); 383:7 (Polinices clam drill); 693; 696; 697 (European oyster transplanted to Canadian waters); 834 (shortfinned squid)

OL 203 (rate, of 14 species of cultured phytoplankton); 208 (rate, of phytoplankton, Nanoose Bay, B.C.)

VERTEBRATES:

B 61 (white perch); 84; 844 (Atl. cod); 102 (brook trout fingerlings); 206(2) (sea-run brook trout, Moser R., N.S.); 206(4); 391(14); 427:15; 498:22; 563 (Atl. salmon); 298:23 (B.C. pilchard); 348 (B.C. lemon sole); 352 (Atl. herring larvae); 361:25,58 (yellowtail flounder); 362:61 (Atl. halibut); 446:7 (ciscoes, Heming L., Man.); 463 (lake whitefish, Heming L., Man.); 465:10 (goldeye); 483:17 (coregonine fishes, Great Bear L., N.W.T.); 509; 511 (re L. Winnipeg ciscoes morphometry & taxonomy); 521 (yellow perch, re Triacnophorus infection, Heming L., Man.); 525 (long-nose sucker, Great Slave L.); 555 (ciscoes, Churchill R., Man.) 557 (ciscoes from 2 Great Lakes & 3 Man. lakes, re taxonomy); 565; 601 (lake

Growth; Growth rate (cont'd)

VERTEBRATES (cont'd)

trout, Great Slave L.); 565; 587; 600; 601 (whitefish, Great Slave L.); 582:20 (winter flounder); 592 (whitefish, L. Winnipeg); 629:7; 736 (northern fur seal); 653:43 (Atl. walrus); 699; 718 (salmons, Skeena R., B.C.); 776:9 (coho salmon); 844 (Atl. cod under controlled temperature & feed conditions); 898 (notes on fitting Gompertz growth equation)

Guanine (see also Scales, fish)

B 329(23) (re Atl. salmon scale condition)

Guiding

B247 (Atl. salmon smolts through fishway by lights)

Gulf of ... (see name of Gulf)

Gulf Stream (see also Oceanography, Atlantic, offshore)

B 572:8 (oceanography in ICNAF Convention Area)

Gulls

B 115(16:12); 116(25:1); 117(30:79); 119(43:26); 329(20) (predation & feed, Margaree & Moser R., N.S.)

Gunnel, rock (Pholis gunnellus) (rock eel)

799 (eggs & larvae in zooplankton)

- H -

Habits (see subjects referred to after heading Behaviour)

Hachey, H.B.

B 62 (Passamaquoddy Power Project re Bay of Fundy tides); 69 (Bay of Fundy waters replacement by heat transfer); 70; 79; 108; 175-181 (Canadian Atl. coast surface temperatures analyses); 94; 105; 136; 167-174; 388 (Scotian Shelf hydrography); 96 (air re sea temperatures, St. Andrews, N.B.); 103; 106 (St. Andrews & Halifax hydrography); 165 (western N Atl. oceanography status); 166 (Saint John Harbour hydrography, N.B.); 353-356 (depth, temperature & salinity data off N.S.); 385 (vertical temperature distribution, Canadian Atl. coast); 386 (vertical temperature structure, Labrador Current); 387 (increasing Atl. water influence in Hudson Bay); 389 (physicochemical oceanography bibliography); 397 (Great Lakes vertical temperature distribution); 417 (Gulf of St. Lawrence surface oceanography); 422 (Belle Isle Strait hydrography); 455; 528 (Bay of Fundy hydrography); 527 (oceanography at Sambro lightship off N.S.); 564 (E Canada continental shelf physiography, geology & oceanography); 572 (hydrography & oceanography of ICNAF Convention Area); 585(1) (review of Canadian oceanography); 625 (oceanography re Bay of Fundy sardine fishery); 843 (history of the Fisheries Research Board of Canada & its predecessors)

OL 33 (Foreword); 38 (water conditions in N Atlantic re sonar)

Haddock (biology) (Melanogrammus aeglefinus) (see also Haddock (technology))

B 21; 27 (slime bacteria); 97:24 (biological study of Maritimes fishery statistics); 128; 199 (feed & feeding habits); 303 (internal parasites); 342 (muscle physiology); 363 (otter trawl savings gear selection);

Haddock (biology)(cont'd)

- B 430:14 (Nfld. waters); 636; 714 (analysis of tag records re N.S. mortalities); 651 (of Laurentian Channel, & their feed); 675 (past, present & future of Canadian fishery); 787 (homogeneity of Canadian samples for lengths & ages of commercial); 790 (selective fishing possibility in Atl. commercial offshore fishery); 795 (trawling discards at sea); 796 (recent trends in landings, E Scotian Shelf); 799 (eggs & larvae in zooplankton); 801 (increased trawl mesh size effect on Nfld. fishery); 878 (axial skeleton compared with that of Atl. cod)

Haddock (technology)

- B 12-15 (muscle proteins); 19 (bacteriology of frozen); 20 (toxicity of formaldehyde-cured fillets); 21; 27; 39 (bacteria of living & dead); 25; 26; 37; 52 (autolytic & bacterial decomposition rates); 28; 33 (heat effect on muscle opacity & tensile strength); 30; 32 (muscle juice heat coagulation); 34; 36; 38; 72 (rigor phenomena); 35 (temperature effect on rigor); 39 (slime & feces bacteria); 47 (Na hypochlorite & formaldehyde as preservatives); 101; 133; 194 (digestibility)
- E 1; 2; 16; 20; 22; 26; 40 (various physical properties of muscle); 2; 4; 6; 15 (smoking); 6 (pickling); 7; 42; 49 (trypsin hydrolysis of muscle); 8 (commercial processing); 9; 11; 33 (course of spoilage); 12; 15; 29 (structural changes during freezing & storage); 17; 25 (liver oil vitamin A); 20; 26; 39; 40 (muscle freezing point; freezing rate; preservation by freezing); 20; 40 (muscle moisture & fat content); 37 (muscle temperature rise during rigor); 45 (bacteria of cold-stored fillets); 53; 55 (non-protein nitrogenous extractives); 55 (secretagogue action of muscle extracts)

Haight, C.G.

- B 680; 738; 800 (Great Slave L. domestic fishing surveys)

Hagfish, northern (Myxine glutinosa)

- B 651 (Laurentian Channel)

Hake (Atlantic) (species not stated)

- B 30; 32 (muscle juice heat coagulation); 34; 36; 38 (rigor phenomena); 38 (protein changes); 42 (stomach contents); 342 (muscle physiology)
- E 12 (structural changes during freezing & storage); 17; 25 (liver oil vitamin A); 38 (spoilage rate measured by heat liberated); 53 (non-protein nitrogenous extractives)

Hake, Pacific (Merluccius productus)

- B 675 (as B.C. scarpfish for mink feed); 712 (in echo-scattering layer, Saanich Inlet, B.C.); 890 (in B.C. & Alaska experimental trawling)
- OL 86 (B.C. fishery re radioactive wastes disposal); 199 (Saanich Inlet, B.C.)

Hake, silver (Merluccius bilinearis) (see also Hake (Atlantic))

- B 363 (otter trawl savings gear selection); 675 (past, present & future of Canadian fishery); 863 (exploratory fishing offshore N.B.; catches & biology)

Hake, squirrel (Urophycis chuss) (see also Hake (Atlantic))

- B 97:29 (biological study of Maritimes fisheries statistics); 264 (feed); 434 (life history; ages); 454 (survey of Fundy area fishery); 675 (past, present & future of Canadian fishery)

Hake, white (Urophycis tenuis) (see also Hake (Atlantic))

- B 97:29 (biological study of Maritimes fisheries statistics); 264 (feed);
434 (life history; ages); 454 (survey of Fundy area fishery); 675 (past,
present & future of Canadian fishery)

Halacaridae (see Mites)

Halibut, Atlantic (Hippoglossus hippoglossus)

- B 97:33 (biological study of Maritimes fishery statistics); 362 (growth &
ecology, Gulf of St. Lawrence); 430:26 (Nfld. investigations); 444 (Bona-
vista, Nfld., longlining); 675 (past, present & future of Canadian fishery)
E 12 (structural changes during freezing & cold storage)

Halibut, Greenland (Reinhardtius hippoglossoides) (Atlantic turbot)

- B 430:27 (Nfld. investigations); 651 (Laurentian Channel, & their feed);
675 (past, present & future of Canadian Atl. & Arctic fisheries); 815 (larvae
in W Greenland zooplankton)

Halibut, Pacific (Hippoglossus stenolepis)

- B 317 (meal as salmon hatchery feed); 410:5 (tagging re migrations);
425:9; 675 (B.C. fishery); 515 (comparison of B.C. fishery with Great Slave L.
managed fishery); 767; 768; 890; 891 (in B.C. & Gulf of Alaska experimental
trawling, & size composition)
OL 86 (B.C. fishery, re radioactive wastes disposal)

Halichoerus grypus (see Seal, gray)

Halifax region, N.S. (see also Oceanography, Atlantic, NW inshore; Hydrography)

- B 60 (herring fishery); 78 (bluefin tuna fishery); 85; 99 (mackerel fishery);
95 (swordfish fishery); 103; 106 (hydrography); 111 (inshore cod fishery);
343 (summer phytoplankton)
OL 42 (temperatures & salinities re I.G.Y. sea-level recording)

Haliotis kamchatkana (see Abalone)

Hall, W.S.

- B 344 (salinity effects on trout & whitefish eggs)

Hallam, Jack C.

- B 654 (river & stream temperatures, N L. Superior)

Halocline (see also Oceanography; Salinity of waters (and note to that heading))

- OL 158 (reproduction of, in hydraulic model)

Handling (see also Transplantation; Transportation)

- B 55 (trout fry hatchery operation); 212(1) (re later behaviour of Atl. salmon
& trout for angling); 288 (softshell clam)
E 8 (commercial, of Atl. fishery products)

Hanson, R.M.

- B 556; 560; 595 (Great Slave L. commercial fisheries); 600 (whitefish spawning,
Rae Arm of Great Slave L.)

Harling, W.R.

- OL 83; 84 (B.C. Coastal & Seaways Projects oceanographic data records);
111 (Monitor Project Pac. oceanographic data record)

Harris, R.H.D.

- B 518 (Great Slave L. commercial fisheries gear & methods); 525 (Great Slave
L. longnose sucker biology)

Harrison Lake, B.C.

- B 339 (sockeye salmon fry)

Hart, J.L.

- B 11 (lake whitefish investigations, Bay of Quinte, Ont.); 256 (B.C. eulachon
investigation); 286 (albacore feed); 425 (B.C. fishery wealth);
668 (Passamaquoddy Bay herring problems appraisal)

Hart, Josephine F.L.

- B 349 (W coast Vancouver Is. zooplankton)

Hatchery (see also Culture, fish; Stocking)

- B 8 (vs. natural propagation of sockeye salmon); 22 (survey of Maritimes
trout); 55 (trout handling & rearing); 66; 67 (lobster hatching &
rearing); 86 (Atl. salmon fry mortality cause); 253 (literature review
of salmonid stocking success); 261 (salmon protozoan disease, Cultus L.,
B.C.); 284 (pH changes in beef liver stored as feed); 300 (losses from
coho & chinook salmon egg stripping); 317 (halibut meal as feed for Pac.
salmon); 539:73 (Atl. salmon feeding); 897 (U.S. Columbia R. chinook
salmon: evaluation program)

Hay River, N.W.T. (see also Great Slave Lake)

- B 519 (coarse fish for fur farming feed); 680 (domestic fishing survey)

Hayes, F. Ronald

- B 4; 7 (Atl. salmon fry investigations)

Hazen, G.E.M.

- B 494 (whitefish re Triacnophorus, Nesslin L., Sask.); 495 (Nesslin L.
net plankton)

Heart (see also Blood)

- B 340 (rate of Gammarus); 342 (muscle physiology, barndcor skate);
653: 46 (weight, Atl. walrus)

Heat (see also following Heat headings; also Temperature; Temperature, reaction
to; Thermodynamics; Transport of oceanic waters)

- B 12; 13 (effect on haddock muscle); 28 (denaturation of various fishes
muscle); 28; 33 (effect on haddock muscle tensile strength); 30; 32
(coagulation of fishes muscle juice); 35 (produced during haddock rigor)
E 1; 2 (effect on fish muscle tensile strength); 37 (liberation during fish
rigor); 38 (liberation during fish spoilage)

Heat, latent

- E 20; 40 (various Atl. fishes muscle); 34 (Atl. cod muscle)

Heat, specific

- E 16; 20 (fresh haddock muscle); 20; 40 (various Atl. fishes muscle);
34 (Atl. cod muscle)
OL 27 (digital computer programming, re seawater)

Heat capacity

- E 20; 40; 46 (of fishes muscle); 46 (of dilute brine & gelatin gels)

Heat conductivity

- E 22; 26 (of haddock muscle); 26; 40 (of various Atl. fishes muscle)

Heat transfer, coastal and oceanic waters (see also Hydrography; Oceanography; Thermodynamics; Transport of oceanic waters)

- B 69 (vertical, Bay of Fundy); 709:32 (in semitidal Ogac L., Baffin Is., N.W.T.)
OL 11 (Gulf of St. Lawrence heat budget re ice potentials); 109 (energy transformations theory, re seawater)

Hecate Strait, B.C. (see also Queen Charlotte Islands region; Oceanography, Pacific, inshore)

- B 530 (tidal currents)
OL 110; 130; 158; 159; 170; 172 (oceanographic model); 135; 193 (primary productivity); 176 (midwater trawl salmon catches)

Heming Lake, Man.

- B 446; 672 (ciscoes & Triacnophorus parasitization); 462 (northern pike control re whitefish parasitization); 463; 672 (whitefish feed, growth, etc.); 479; 566 (Triacnophorus control); 521 (yellow perch age, growth, & Triacnophorus infection); 542 (diel activity of pike, walleye, whitefish & sucker); 546 (plankton re Triacnophorus); 566 (trammel net for northern pike control); 576 (check list of fish parasites & hosts); 579 (parasitism effect on fecundity of 6 fish species); 604; 622; 623; 804 (Triacnophorus life history); 739 (burbot biological & meristic data); 740 (meteorological data)

Henderson, E.B.

- B 805 (daily salmon counts at fences, NW Miramichi R., N.B.)

Heredity

- B 695 (effects on some characters for distinguishing Pac. salmon and steelhead trout stocks)

Herlinveaux, R.H.

- B 529 (Juan de Fuca Strait surface tidal currents); 712 (midwater trawling through an echo-scattering layer)
OL 58; 83 (B.C. Coastal Seaways Project oceanographic data records); 82 (N Pac. Surveys oceanographic data record); 108; 146 (Pac. Naval Laboratory underwater sound studies oceanographic data records); 144 (oceanographic observations, Canadian Basin of Arctic Ocean); 198 (Canadian Arctic ICEPACK V Expedition oceanographic observations); 199 (echo-scattering layers studies, Saanich Inlet, B.C.); 208 (physical, chemical & biological oceanographic conditions, Nanoose Bay, B.C.); 228 (oceanography of Fatty Basin, Vancouver Is., re possible lobster transplantations to)

Hermann, F.

- B 572 (hydrography & oceanography of ICNAF Convention Area)

Hermaphroditism (see Sex reversal)

Heron, great blue (*Ardes herodias*)

B 116(25:8); 117(30:75); 118(38); 119(43:24); 131(14:9,16) (Margaree R. system, N.B.); 210(11); 329(20) (predation & feed, Moser R. system, N.S.)

Herring, Atlantic (biology) (*Clupea harengus*) (including sardine) (see also Herring, Atlantic (technology))

B 42; 195 (stomach contents; feed); 60 (fishery, bait, etc., Halifax area); 97:35 (biological study of Maritimes fishery statistics); 195 (temperature effect on feeding); 352 (spawning, behaviour & larval growth); 391(12); 394(8) (commercial fishery methods, Minas Channel, N.S.); 430:32,58 (Nfld. investigations); 448 (migrations; tagging); 504 (rheotaxis at weirs); 505 (experimental drift-net fishing; lengths; fat content; etc.); 553 (explorations on Scotian Shelf); 568 (fishing methods & research in Europe); 607 (fungus disease, Bay of Chaleur); 612 (literature review of Bay of Fundy); 625 (oceanography re Bay of Fundy fishery); 651 (Laurentian Channel); 652 (larvae distribution, Bay of Fundy); 668 (problems assessment, Passamaquoddy Bay); 675 (past, present & future of Canadian fishery); 755 (literature review of Canadian); 791 (review of Canadian fishery & research in ICNAF Area); 794 (bibliography, NW Atl. Canadian, U.S., & USSR research); 799 (eggs & larvae in zooplankton); 864 (exploratory fishing, offshore N.S.: catches & biology)

Herring, Atlantic (technology)

B 17; 60 (as bait); 47 (formaldehyde or Na hypochlorite as preservative); 357 (control of maggots in smoked)
E 8 (commercial processing, including kippering); 9; 11 (course & products of spoilage); 17 (oil vitamin A); 20; 26; 40 (various physical properties of muscle); 20 (muscle moisture & fat content); 26 (muscle freezing rate); 53; 55 (non-protein nitrogenous constituents); 55 (secretagogue action of muscle extracts)

Herring, blueback (*Alosa aestivalis*)

B 97:7 (biological study of Maritimes fishery statistics)

Herring (in general)

B 267 (age from scales)

Herring, lake (see Cisco)

Herring, Pacific (*Clupea harengus pallasii*)

B 269 (chemical composition); 299 (seasonal changes in composition); 310 (estimating abundance of W coast Vancouver Is. spawning); 325 (abundance fluctuations causes); 410 (tagging review); 411 (juvenile stages life history); 425:11; 675 (B.C. fishery); 712 (in echo-scattering layer, Saanich Inlet, B.C.); 753; 849 (salmon catches in B.C. coastal commercial herring purse-seining)
OL 199 (Saanich Inlet, B.C.)

Hess, Ernest

E 5 (smoke constituents effects on bacteria in fish curing); 33 (temperature effect on haddock muscle decomposition rate); 43 (giant scallop canning); 44 (giant scallop preservation)

Hewson, L.C.

B 445; 450; 507; 508; 510; 543; 544; 554; 558; 567; 570; 571; 590; 597-599 (L. Winnipeg fisheries investigations); 488; 489 (Great Slave L. commercial fishery); 519 (Great Slave L. coarse fishes for mink feed); 543 (commercial fishery, Loon L., Man.); 558 (L. Winnipeg trap net experiment & tagging returns); 590; 599 (L. Winnipeg temperature observations); 626 (gill-net exploratory fishing, L. Winnipeg)

Hexagrammidae (greenlings, lingcod)

OL 175 (taken during NE Pac. midwater trawling)

Hibernation

B 184:32 (Atl. oyster); 439:22 (American eel)

Hildebrand, Henry

B 833 (freshwater survey, Fort Chimo area, Ungava, Que.)

Hiodon alosoides (see Goldeye)

Hippoglossoides elassodon (see Sole, flathead)
platessoides (see Plaice, American)

Hippoglossus hippoglossus (see Halibut, Atlantic)
stenolepis (see Halibut, Pacific)

Histidine

B 186 (effect on skate blood osmotic pressure)

Histology

B 144; 145 (Atl. oyster Malpeque disease); 322 (digestive tract of some B.C. fishes); 350:13 (giant scallop gonads); 493:34 (northern pike gonads & Triaenophorus, after pituitary treatment); 588:49 (harp seal gonads); 607 (fungus-diseased Atl. herring organs); 653:83,101 (Atl. walrus gonads); 700; 850 (northern fur seal gonads); 845 (Polinices heros proboscis)
E 23:7 (re lobster & Atl. crab muscle shrinkage)

History (for Life history, see that heading)

B 271; 279; 429 (B.C. pilchard fishery); 288:5 (Bay of Fundy softshell clam fishery); 313 (Queen Charlotte Is. crab fishery); 362:4 (early, of Gulf of St. Lawrence halibut fishery); 425 (early, of B.C. fisheries); 515:4; 518:2 (Great Slave L. commercial fishery); 594:2 (L. Winnipeg fishery); 596 (Maritimes flounder fishery); 639 (Pac. coast of N America fisheries research); 660; 843 (Fisheries Research Board of Canada & its predecessors); 675 (brief, of most Canadian fisheries); 706 (of a L. Erie commercial fishing company & changing fishing methods, 1904-1956); 755:1 (Canadian Atl. herring fishery); 871 (commercial fishing in inland Canada)

Hirudinea (see Leeches)

Hoar, William S.

B 113(4) (plan for Margaree R. salmon investigation); 113(5) (meteorological methods for foregoing investigation); 114; 122(2) (meteorology & hydrology of Margaree R. system, N.S.); 115(10-15) (salmon netting & trapping, Margaree R. system); 115(16) (marine invertebrates, fishes & birds, Margaree Harbour); 122(3-5); 127(9) (feed, scale growth & condition of

Hoar, William S. (cont'd)

Margaree R. salmon); 126(7) (condition changes in Margaree R. salmon); 126(8) (sex ratios of Margaree salmon); 127(10) (salinity reactions of young Atl. salmon); 127(11); 129(2) (miscellaneous notes re Margaree salmon); 129(1) (Atl. salmon scale studies); 206(1); 209(2) (Atl. salmon metamorphosis physiology); 206(2) (brook trout scales); 206(3) (measuring wind force); 206(4); 209(1) (salmon & trout, Moser R., N.S.); 206(5) (notes on Moser R. fauna & flora); 212(1) (handling effect on Atl. salmon & trout subsequent behaviour); 212(2) (catches & life history of Moser R. salmon); 213(10) (young Atl. salmon & trout feeding habits); 213(11) (physical factors affecting Atl. salmon & trout angling)

Hodder, V.M.

B 801 (fishing & trawl mesh size effects on Nfld. fisheries); 817 (Nfld. redfish trawling re ICNAF regulations)

Holler, A.M.

OL 94 (B.C. Monitor & Coastal Projects oceanographic data record)

Hollister, Henry J.

B 403 (oceanographic methods); 549 (B.C. coast daily seawater observations)
 OL 58; 83; 91 (B.C. Coastal & Seaways Project oceanographic data records);
 59; 98; 106; 125; 139; 154 (Pac. Ocean Weather Station "P" data records);
 62; 99; 206 (bathythermograms & meteorological data records, Swiftsure Bank
 & Umatilla Reef lightships off Juan de Fuca Strait); 63; 82; 101; 138
 (N Pac. Survey oceanographic data records); 66 (bathythermogram records
 observed by F.R.B. chartered fishing vessels, B.C.); 67; 104; 131; 160;
 161; 195; 204; 215; 226 (B.C. coast lighthouses seawater temperature &
 salinity observations); 68 (classification of preceding observations);
 70; 76; 84 (Coastal Project Pac. oceanographic data records); 94; 111;
 113; 129; 142 (Monitor & Coastal Projects Pac. oceanographic records);
 141 (Canadian drift bottle releases & recoveries, N Pac. Ocean);
 177 (classification of monthly mean sea surface temperatures & salinities
 at B.C. and adjacent U.S. coast shore stations)

Holmberg, D.M.

B 872 (report of B.C. trawl fishery, & investigational aspects)

Holt's Point, N.B.

B 408 (Polinices drill control)

Homans, R.E.S.

B 128; 199 (haddock feed & feeding habits); 145; 204 (oyster mortality,
 Charlottetown area, P.E.I.)

Homarus americanus (see Lobster)

Homing (see also Migration)

B 695 (instinct of Pac. salmon, re heredity, etc., & stocks)

Hood, E.G.

B 19 (frozen haddock bacteriology)

Hooks (see Gear)

Hourston, Alan S.

- B 411 (Pac. herring juvenile stages biology); 635 (fishes classification comparisons); 645 (plankton production & predator biomass, Barkley Sound, B.C.) 750; 751 (pink salmon catches, Howe Sound to N tip Vancouver Is.)

Hudson Bay

- B 387 (increasing influence of Atl. waters); 461; 485 (beluga near Churchill, Man.)
 OL 12 (ice conditions); 46; 56 (oceanography of northern);
 71 (SE & James Bay oceanographic features)

Hudson Strait

- B 92 (Canadian Government 1928 Expedition biology & diary)
 OL 12 (geography; climate; bottom topography; ice; oceanography);
 46; 56 (oceanography); 89 (bottom sediments)

Hughes, Charles J.A.

- B 24 (illumination re Diaptomus minutus vertical distribution)

Hull, J.H.

- OL 39 (Canadian Atl. coast sea temperatures)

Humilaria kennerlyi (a venerid clam)

- B 717 (in B.C. waters)

Hunt, R.P.

- B 584 (horizontal temperature distribution of Nfld. & Labrador marine waters)

Huntsman, A.G. (Note: All following salmon and trout references are to Atlantic fish)

- B 62 (Passamaquoddy power project re Bay of Fundy tides); 113(1-4) (Margaree R. description; salmon fishery history; investigation plans); 119(42) (Margaree R. sucker re salmon & trout); 119(45-48); 129(4;6-8); 211(18); 328(14-16); 329(17); 335(2-6) (various salmon investigations, Margaree R.); 122(1) (reducing bird predators of salmon smolts, NE Margaree R.); 129(1) (salmon in Cape Breton Highlands National Park); 129(5) (trout in L. Ainslie streams); 130(9) (salmon re salinity, Saint John area); 207(8) (salmon mortality re high temperature); 208(16) (Moser R. waters chemistry); 211(17) (salmon kelts migrations, St. John R.); 211(18) (Margaree R. salmon sea life); 212(4;5); 328(10) (planting salmon fingerlings); 214(18); 335(7) (Moser R. salmon & trout management); 328(11) (brook & brown trout, Silver Creek, Ont.); 328(12) (salmon biology & management, Apple R.); 328(13) (heat-stroke mortality of salmon in Maritimes rivers); 329(24) (factors affecting Moser R. salmon movement); 335(2;4) (Margaree R. salmon management); 335(8) (salmon management proposals, LaHave R.); 336(14) (salmon parr & smolt behaviour); 352 (young herring spawning, behaviour & growth); 379(1) (beaver re salmon); 379(2); 381(3); 390(1) (young salmon, Duffin Creek, N.B.); 381(1;2) (assessing young salmon stream populations); 382(10) (salmon smolt migratory behaviour); 390(2) (salmon migration rationale); 390(3) (fishery management re assessing fish populations); 398(8) (Minas Channel salmon fishery); 390(10) (Nipisiguit R. salmon, N.B.); 390(11) (Big Salmon R. salmon, N.B.); 396(6) (Lepreau R. salmon, N.B.); 396(7) (intermingling & use of salmon stocks); 402 (salmon marking & tagging methods); 422 (Belle Isle Strait oceanography); 428; 499; 540 (salmon tagging & marking, Shubenacadie L.); 504 (rheotaxis re herring weir traps); 649 (salmon economic values for commercial fishery, angling, poaching, etc.); 660 (history of Fisheries Research Board & its predecessors)

Huntsman, H. Elizabeth

B 327(1) (salmon & trout fishing, Moser R., N.S.); 327(2) (Moser R. salmon smolts life history)

Huntsman, M.E.

B 73 (squid egg experiments)

Huron, Lake

B 397 (vertical temperature distribution); 557 (ciscoes growth in South Bay, re taxonomy); 723; 769 (lampricides tests in waters of tributary rivers)

Hutchinson, A.H.

B 324 (pulpmill pollution of upper Quatsino Sound, B.C.)

Hyas araneus (see Crabs, spider)

Hybopsis plumbea (see Chub, lake)

Hydraulics (see Hydrodynamics; Model, hydraulic oceanographic)

Hydrodynamics (see also Hydrography; Model, hydraulic oceanographic; Oceanography; Pressure, hydrostatic; Transport of oceanic waters; Currents)

B 105; 167; 169; 171; 173 (Scotian Shelf); 219 (dynamic current survey procedure at sea); 413; 442; 514 (Alberni Harbour, B.C.); 592 (Cabot Strait currents); 621 (calculation of geostrophic currents); 883 (of perforated pipe plankton sampler)

E 56 (circulation from jets in a rectangular water tank)

OL 51 (oceanographic seminars on); 109 (re seawater equation of state); 110; 130 (Hecate Strait region); 183 (atmospheric effects on ocean water mass transport); 184; 185 (electric analogs for solving physical oceanographic problems)

Hydroelectric power project

B 62 (Cooper (Passamaquoddy Bay, N.B.) project re effect on Bay of Fundy tides)

Hydrogen ion concentration (see pH)

Hydrogen sulphide (see Sulphur compounds)

Hydrography (see also Currents; Limnology; Oceanography; Physiography)

B 1; 106; 455; 528; 551 (Bay of Fundy region); 46; 103; 106 (St. Andrews, N.B., region); 48 (St. John R. & Kennebecasis Bay, N.B.); 76; 155; 161; 182; 183; 289 (N.B. oyster beds); 103; 106 (Halifax area); 109; 145; 151; 161; 333 (P.E.I. oyster beds); 114(7-9); 122(6); 123(7); 131(18); 211(18:12) (Margaree Estuary & Harbour, N.S.); 126(2) (drift bottles, Margaree Harbour, N.S.); 131(12) (Moser R. estuary, N.S.); 131(13) (hydrograph for water-level fluctuations measurement); 146; 153; 159:34; 161; 162:78; 164; 184 (N.S. oyster beds); 161; 333 (Northumberland Strait); 166 (Saint John Harbour, N.B.); 207(8); 208(17); 213(6;7;13); 327(7) (Moser R., N.S.); 327(4) (Petitcodiac R., N.B.); 422 (Belle Isle Strait); 430:6 (re Nfld. cod); 412; 459 (Fraser R. estuary, B.C.); 541 (Bay of Islands, Nfld.); 564 (E Canada continental shelf); 594 (Cabot Strait); 709 (Ogac L., Baffin Is., N.W.T.); 810 (re marine decapods, Nfld., Labrador, E Canadian Arctic)

OL 12 (Hudson Strait)

Hydrolagus colliei (see Ratfish)

Hydrology (see Currents; Flow; Hydrography; Limnology; Physiography; Water height; Tides)

HYDROPHONE Project (see Oceanography, Pacific, N open ocean)

Hydrostatic pressure (see Hydrodynamics; Pressure, hydrostatic)

Hypomesus pretiosus (see Smelt, surf)

- I -

I.C.N.A.F. (see International Commission for the Northwest Atlantic Fisheries)

I.G.Y. (see International Geophysical Year)

I.N.P.F.C. (see International North Pacific Fisheries Commission)

Ice

- B 109 (effect on salinity of Bideford R. estuary, P.E.I.); 443 (SO₄/Cl ratio changes on freezing seawater); 613 (movements & discoloration, Foxe Basin, Canadian Arctic); 614 (& iceberg incidence, Gulf of St. Lawrence & Nfld. coast)
- OL 6 (discoloration, Foxe Basin); 10 (potentials & heat budget, Gulf of St. Lawrence); 12 (conditions, Hudson Bay, Hudson Strait & Foxe Basin); 60 (purpose of A.O.G. ice studies in Gulf of St. Lawrence & E Canadian Arctic)

Ice islands

- OL 33; 40 ("Bravo" (T-3) oceanography during drift in Arctic Ocean); 144 (oceanography, Canadian Basin of Arctic Ocean)

ICE PACK Project (see Prince Gustaf Adolf Sea)

Ichthyomyzon fossor (see Lamprey, Michigan brook)
unicuspis (see Lamprey, silver)

Ictalurus nebulosus (see Bullhead, brown)
punctatus (see Catfish, channel)

Ide, F.P.

- B 382(7) (bottom organisms, Petitcodiac R. system, N.B.)

Illex illecebrosus (see Squid, short-finned)

Illumination (see Light; Light, reactions to; Migration, vertical; Diel effects; Photosynthesis; Radiation; Transparency; Vision)

Inconnu (Stenodus leucichthys (mackenziei))

- B 451; 487-492; 556; 620; 634; 680; 738; 741; 744 (Great Slave L.); 519 possibilities for mink feed); 680; 738 (Indian catches for domestic use, Great Slave L.); 741 (tagging, Great Slave L.); 773 (conversion factors for round to dressed weight); 774; 777-780; 782; 783; 827; 831; 832; 839-841; 856-859 (computerized data re fishes, catches, weights, etc. in Great Slave L. commercial fishery)

Indexes

B 852 (subject-author, & list of titles, Great Slave Lake MS Reports No. 1-50); 882(1:1) (Skeena R. system spawning grounds); 900 (F.R.B. Manuscript Reports Series)

Indicator species (see Species, indicator)

Indole

B 26 (indicator of haddock muscle spoilage)

Ingalls, R.A.

B 161; 333 (Northumberland Strait mollusc resources); 291 (N.S. flats clam production); 326 (clam investigations, Sissiboo R., N.S.)

Injury (see also Marking; Tagging)

B 559 (migrating young sockeye salmon, by fence)

Inlet and fiord oceanography (see also Oceanography; also names of important inlets)

B 611 (B.C. coast); 712 (echo-scattering layer re oceanography, Saanich Inlet, B.C.)

OL 13 (Prince Regent Inlet, Canadian Arctic); 30 (Bute Inlet, B.C.); 58 (Saanich Inlet, B.C., physical & chemical series); 199 (Saanich Inlet re echo-scattering layers)

Insecticides

B 357 (DDT against flies in Atl. herring smoking); 496 (DDT, benzene hexachloride, & Parathion effects on N Man. fishes); 771 (review of Canadian research on effects on aquatic life)

Insects (see also Feed; also certain common names, e.g. Mysids; Stoneflies)

B 117(30:74) (Margaree R., N.S.); 208(10:7) (Moser R., N.S.); 210(6) (dragonfly nymphs eating Atl. salmon fingerlings); 357 ("cheese skipper" pupae in smoked Atl. herring); 382(7) (as bottom fauna feed of Atl. salmon); 672 (as whitefish & ciscoes feed, Heming L., Man.); 802 (in L. Superior bottom fauna)

International Commission for the Northwest Atlantic Fisheries (I.C.N.A.F.)

B 572 (oceanography of the Convention Area); 788; 789 (statistical considerations of degree of catch per unit effort of commercial offshore fishing vessels); 790 (species association in offshore commercial catches); 791 (review of Canadian herring fishery & research); 792 (review of Canadian large pelagic fishes fishery & research); 794 (NW Atl. herring research bibliography); 795 (Atl. groundfish discards at sea); 796 (recent trends in cod and haddock landings, E Scotian Shelf); 797 (American plaice biology in Area 47); 798 (mesh sizes & materials to meet regulations); 814; 822 (re 10% exemption of cod & groundfish caught while otter trawling for redfish); 815 (fish eggs & larval collections off W Greenland); 816 (catches by gear types, Nfld. inshore cod fishery); 817 (re Nfld. redfish trawling); 873 (fishes length measurement uniformity proposals)

OL 64; 65 (oceanography in Areas, 1950-1959)

International Geophysical Year, 1958 (I.G.Y.)

- OL 33; 40 (Ice Island "Bravo" (T-3) Arctic Ocean oceanographic data);
 34 ("Deep Water Circulation" Project, N Atl. Ocean); 41 (Canadian contribution to Polar Front oceanographic survey); 42 (re N Atl. sea-level recording)

International North Pacific Fisheries Commission (I.N.P.F.C.) (see also Pacific Marine Fisheries Commission)

- B 624; 641; 658; 687; 703 (sockeye & pink salmon parasitization re Asiatic vs. N American stocks); 642; 656; 659; 665; 681-683; 701; 732; 786; 823; 824 (exploratory salmon fishing in open NE Pac. Ocean); 666-668; 704; 734; 735:74; 758 (chum salmon scale & other characteristics in open NE Pac. Ocean); 702 (ocean distribution of Smith & Rivers Inlets sockeye salmon); 728-732; 734; 735 (Pac. salmon origin, distribution, & exploitation in NE Pac. Ocean, etc.); 757; 892; 893 (Gulf of Alaska sockeye salmon origins); 758 (high seas salmon fishing by Canadian vessels); 767; 768; 890; 891 ("G.B. Reed" experimental trawling, Gulf of Alaska); 812; 867; 869 (Pac. ocean perch exploratory fishing); 889; 892-894 (Gulf of Alaska salmon tagging locations & recovery data)
- OL 66; 87 (NE Pac. & Gulf of Alaska oceanography for); 92 (oceanographic data, N Pac. Ocean)

International North Pacific Fur Seal Commission

- B 629; 675; 700; 719; 736; 754; 761; 825; 850; 875 (Canadian research)

International Pink Salmon Co-ordinating Committee

- B 729 (tagging reviews & research proposals)

Invertebrates, aquatic (general) (see also Benthos; Fauna, aquatic (general);

Fauna, bottom; also names of classifications and species, and following heading)

- B 115(16) (Margaree Harbour, N.S.); 206(5) (islands off mouth of Moser R., N.S.); 370:48 (molluscs, Bideford R., P.E.I.); 416 (sudden mortality of, in Nanaimo Harbour, B.C.); 717; 746 (in deepwater survey of B.C. coast areas); 733 (re pulp mill pollution effects, Prince Rupert area, B.C.); 842; 880; 881 (encountered during giant scallop surveys, Maritimes coast)

Invertebrates, lists of (see also Benthos; Fauna, aquatic (general); Fauna, bottom; Plankton)

- B 58 (in L. Champlain yellow perch stomachs); 81 (diatoms, Passamaquoddy Bay); 87 (copepods, Passamaquoddy Bay); 128 (in haddock stomachs); 225 (Man. freshwater gastropods & pelecypods); 810 (marine decapods, Nfld., Labrador, & E Canadian Arctic)
- OL 145 (Gulf of St. Lawrence benthic composition); 174 (NE Pac. marine phytoplankton & zooplankton)

Iodine compounds

- B 206(1); 209(2) (feeding KI or thyroid extracts to induce Atl. salmon smolt metamorphosis)
- E 47 (content in Laminaria seaweed); 54 (determination in fish muscle)

Iopsetta isolepis (see Sole, butter)Irish moss (Chondrus crispus)

- B 110:5 (re brook trout fingerling feed); 331:100 (distribution, N coast of N.B.); 341(1) (utilization, Bay of Fundy); 358; 474 (physical & chemical

Irish moss (cont'd)

- properties of extracts); 431; 474 (curing & effects on extracts);
 675 (past, present & future of Canadian production)
 E 47 (polysaccharide, sulphur & calcium compounds in extract)

Iron compounds

- B 41 (removal from tap water, as trout toxicant); 312 (in mining effluent,
 Puntledge R., B.C., re toxicity to fish)
 OL 19 (standard analysis method for biologically reactive, in seawater);
 30 (in B.C. coastal waters); 55 (at Pac. Ocean Weather Station "P" re
 water fertility)

Islands, Bay of, Nfld.

- B 541 (hydrography)

Isopods (see also Gribble; Invertebrates; Zooplankton)

- B 803 (in L. Superior bottom fauna); 883 (St. John R., estuary & harbour, N.B.)
 OL 202 (at Pac. Ocean Weather Station "P")

Isotopes, radioactive (see Radioactive wastes)

- J -

Jackfish (see Pike, northern)

Jacklin, P.M.

- B 496 (insecticides effects on northern Man. fishes)

Jackson, V.W.

- B 309 (Strait of Georgia flounders: key & characteristics)

James Bay (see Hudson Bay)

Japan

- B 686 (fisheries survey); 735 (coho & chinook salmon fishery)
 OL 51 (oceanography)

Jasper National Park, Alta.

- B 266 (lakes suitable for planting sport fish)

Jeffers, George J.

- E 8 (Atl. fish handling methods)

Jellyfishes

- B 87 (Aurelia preying on copepods); 115(16:1) (Cyanea, Margaree Harbour,
 N.S.); 280 (contributing to cause of gill-net sinkage, Nass R., B.C.);
 345 (fed to diatoms); 368; 437 (A. flavidus re diatom maxima); 707 (in
 Passamaquoddy Region zooplankton)
 OL 174 (in NE Pac. Ocean)

Jenkinson, D.W.

- B 667 (chum salmon scales characteristics, N Pac. Ocean); 772; 818 (Rivers
 Inlet, B.C., sockeye salmon age, sex & size composition); 848 (sockeye
 salmon size re egg size)

Jensen, H.M.

B 677; 679 (Juan de Fuca Strait coho salmon study)

Jesse, Lake, N.S.

B 190(A;B) (poisoning to remove coarse fishes)

Jewell, E.

B 677; 679 (Juan de Fuca Strait coho salmon study)

Johannes, R.E.

B 638 (high-temperature mortality of giant scallop)

Johnson, B.G.H.

B 723; 769 (lampricides tests in streams tributary to L. Huron & northern L. Superior)

Johnson, H.M.

OL 133 (sea surface temperature recorder)

Johnson, W.E.

B 819 (morphology of Babine & Nilkitkwa Lakes, B.C.); 820 (thermal structure of above two lakes); 821 (pelagic entomostracan zooplankton of above two lakes)

Johnson, W.H.

B 137 (copepods vertical distribution); 195 (6 copepod species in Atl. herring feed)

Johnston, R.L.

OL 98 (Pac. Ocean Weather Station "P" data record)

Johnston, W.W.

E 29 (fish muscle denaturation during storage); 50 (canned lobster discoloration); 53 (fish muscle nitrogenous extractives)

Jones, W.G.

B 182 (temperatures re lobsters, Bay of Chaleur, N.B.)

Jorgenson, J.M.

E 61 (chronological list of F.R.B. Vancouver Laboratory publications, 1957-62)

Juan de Fuca, Strait of, B.C. and Washington (see also Oceanography, Pacific, inshore; Oceanography, Pacific, offshore)

B 529 (surface tidal currents); 677-679 (Canadian & U.S. coho salmon studies); 729 (Canadian & U.S. pink salmon tagging)

OL 8; 22; 23; 37; 47; 48; 62; 99; 206 (bathythermograms & meteorological data, Swiftsure Bank & Umatilla Reef lightships); 23; 48; 52; 67; 68; 104 (temperature & salinity records in & off); 76; 91; 94 (oceanography)

Juice, muscle (see also Drip; Muscle; Proteins)

B 30; 32; 36 (heat coagulation of haddock, hake, cod, etc.)

- K -

Kakisa Lake, N.W.T.

B 520 (minimum adult stocks for adequate spawning); 721 (fishery possibilities)

Kalmakoff, J.

OL 203 (growth rates & cell yields from culture of 14 species of marine phytoplankters)

Kearney, Charles E.

B 99 (mackerel data, Halifax Harbour, N.S.)

Keenan, C.J.

OL 197 (sea current observations re sewage disposal forecasts, Cordova Bay, B.C.)

Keenleyside, Miles H.A.

B 643 (aquarium behaviour of young Atl. salmon)

Keleher, J.J.

B 481 (L. Winnipeg ciscoes meristic characters & morphometry); 509 (L. Winnipeg ciscoes taxonomy re Triaenophorus); 545 (Triaenophorus differential infection of L. Winnipeg ciscoes); 555 (ciscoes re taxonomy, Churchill R., Man.); 557 (ciscoes growth in various areas, re taxonomy); 581; 615 (ciscoes taxonomy difficulties); 609 (L. Winnipeg trap net experiments); 610 (L. Manitoba ciscoes morphometry); 680; 738; 800 (Great Slave L. domestic fishing survey); 715 (Great Slave L. commercial catch regulations review); 722; 764 (Great Slave L. fishing vessels types); 725 (Great Slave L. sport fishing survey); 741 (Great Slave L. tagging studies analysis & review); 773 (Great Slave L. fishes round weight conversion factor); 774; 777-780; 782; 783; 802; 827; 831; 832; 835; 836; 839-841; 856-859 (Great Slave L. commercial fishery fishes size, etc. computerized data); 852 (subject-author index, & titles, of Great Slave L. Reports 1-50)

Kellys Pond, P.E.I.

B 138 (algal cause of brook trout mortality)

Kelps (see Seaweeds)

Kennedy, O.D.

OL 58 (B.C. Coastal Seaways Project oceanographic data record); 211 (Strait of Georgia physical, chemical & biological data record); 213 (Pasiphaea pacifica shrimp distribution & parasitism, Strait of Georgia)

Kennedy, W.A.

B 451; 487-490; 515; 556 (Great Slave L. commercial fishery); 480 (fishery possibilities, Nuelin L., N.W.T. & Man.); 482 (ciscoes identification & Triaenophorus infection, Great Slave L.); 483 (coregonine fishes, Great Bear L., N.W.T.); 484 (gill-net mesh size, L. Manitoba fisheries); 506 (L. Winnipeg whitefish investigation); 508:22 (statistical fishery subdivisions of L. Winnipeg); 516 (Great Slave L. vs. L. Winnipeg re Triaenophorus problem); 519 (Great Slave L. coarse fish for mink feed); 520 (minimum adult stock for adequate spawning in 2 N.W.T. lakes); 587 (Great Slave L. whitefish scale ages & related data); 592 (L. Winnipeg whitefish scale ages & related data); 706(1;2;3) (daily catch records of

Kennedy, W.A. (cont'd)

a L. Erie commercial fishing company, 1904-1956); 721 (fishery possibilities of Tathlina & Kakisa Lakes, N.W.T.); 871 (history of commercial fishing in inland Canada)

Kennedy, V.S.

B 799 (fishes eggs & larvae in Maritimes zooplankton)

Kentville, N.S.

B 189(E) (investigation of proposed rearing ponds near)

Kerr, Robert B.

B 43 (salmon investigations, Miramichi R., N.B.); 54 (Atl. salmon fry mortality during shipment)

Kerswill, C.J.

B 142 (oysters, Cape Breton, N.S.); 187; 471 (quahaug growth, abundance & distribution limiting factors); 805 (daily salmon counts at fences, NW Miramichi R., N.B.)

Ketchen, Keith S.

B 348 (lemon sole growth rate & age determination, B.C.); 405 (Cape Lazo and Nanoose Bay, B.C., trawl fishery); 575 (long-term NE Pac. Ocean temperature trends re fisheries); 663 (standardization of fishing effort statistics for Pac. coast trawl fisheries)

Keys

B 201(B) (landlocked Atl. smelts); 221 (B.C. crabs); 246 (Maritimes fresh-water fishes); 309 (Strait of Georgia flounders, B.C.); 321 (diseases & parasitic infections of salmonoids); 446 (Man. ciscoes); 596 (Maritimes flounders)

Killifish, banded (Fundulus diaphanus)

B 201(E) (feed, Chamcook Lake, N.B.); 246 (Maritimes); 263 (effect of piscicides on)

Kingfishers

B 115(16:13); 116(25:11); 118(38); 119(43:1); 131(14:7,11,15); 207(7); 328(9); 335(9) (as fish predators, Margaree R. system, N.S.); 210(11); 213(17); 329(20) (feed, & predation on fishes, Moser R. system, N.S.)

King's County, N.S.

394(8) (commercial fisheries from Bay of Fundy)

Kinnear, A.C.

OL 197 (sea current observations re sewage disposal forecasts, Cordova Bay, B.C.)

Kinsac (Long) Lake, N.S. (see Shubenacadie River system)Kipper (smoked herring) (see also Herring, Atlantic; Smoking)

E 8 (commercial processing)

Kiyi (Coregonus (Leucichthys) kiyi)

B 10 (description & habits, L. Ontario)

Kleerekoper, Herman

B 647 (ultrasonics effect on sea lamprey; electrical spike potential of lamprey)

Klugh, A. Brooker

B 48 (hydrography of lower St. John R. & Kennebecasis R., N.B.);
341(1) (Bay of Fundy seaweeds utilization); 341(2) (seaweeds ecology,
Miramichi Bay, N.B.); 341(3) (terrestrial biota, Miramichi region)

Kodiak Island, Alaska (see also Alaska, Gulf of)

B 768 (Canadian exploratory trawling off)

Kohler, A.C.

B 795 (notes on Canadian Atl. groundfish discards at sea); 844 (Atl. cod
growth re temperature & feed)

Kokanee (landlocked sockeye salmon, Oncorhynchus nerka)

B 695 (environmental & genetic influence on some characters for distinguishing
stocks of)

Kostelnik, C.L.

B 634 (Great Slave L. commercial fishery)

Kouchibouquac Bay, N.B.

OL 196 (results from moored self-recording current meter, re lobster studies)

Kuitunen-Ekbaum, E.

B 301 (Diphyllobothrium tapeworm biology re lake trout); 302 (Triaenophorus
tapeworm biology re pike); 303 (haddock internal parasites);
304 (Philonema nematode biology); 316 (Acanthocephala parasites in Pac.
fishes)

- L -

Labrador (see also Belle Isle, Strait of; Newfoundland)

B 810 (marine decapod crustaceans); 885 (commercial Atl. salmon summary)

Labrador Current (see also Oceanography, Atlantic, N offshore)

B 386 (vertical temperature structure)

Labrador Shelf (see also Oceanography, Atlantic, NW inshore; Oceanography,
Atlantic, N offshore)

OL 41 (Polar Front oceanography); 64; 65 (oceanography)

Lachance, A.

B 886 (paralytic shellfish poisoning incidence & risks, Que.)

Lactic acid

B 72; 342 (re fish rigor)

Ladysmith, B.C.

B 226 (rearing Pac. oyster)

LaHave River, N.S.

B 335(8) (salmon management proposals)

Lahey, R.J.

OL 140 (CaCO₃ distribution in St. Lawrence R., estuary & gulf sediments);
189 (rapid silicate analyses of marine sediments)

Lake ... (see name of lake)

Lake, tidal (see Ogac Lake)

Lakelse Lake and River, B.C. (see also Skeena River system)

B 559 (river fence effect on young migratory sockeye salmon); 561 (lake plankton counts); 573 (creel census re cutthroat trout population); 690; 699 (salmon investigations & management)

Laminaria (see Seaweeds)

Lampanyctus leucopsarus (see Lanternfish, smallfin)

regalis (see Lanternfish, pinpoint)

Lampetra (Entosphenus) lamottei (see Lamprey, American brook)

tridentata (see Lamprey, Pacific)

Lamprey, American brook (Lampetra (Entosphenus) lamottei)

B 710 (ammocoetes in 8 northern L. Superior rivers); 742 (biology; ammocoete identification; control)

Lamprey, Michigan brook (Ichthyomyzon fossor) (northern brook lamprey)

B 710 (ammocoetes in 8 northern L. Superior rivers); 742 (biology; ammocoete identification; control)

Lamprey, Pacific (Lampetra (Entosphenus) tridentata)

OL 199 (Saanich Inlet, B.C.)

Lamprey, sea (Petromyzon marinus)

B 246 (Maritimes freshwater); 646 (predatory behaviour); 647 (electrical spike potential produced by); 647; 673 (effects of ultrasonic waves on); 654 (L. Superior N shore region river & stream temperatures, re spawning); 670 (spawning behaviour in artificial stream); 691 (pH effect on 2 lampricides); 710 (ammocoete distribution & control in 8 rivers of L. Superior N shore); 723 (tests of 2 lampricides on, in streams tributary to L. Huron and northern L. Superior); 726 (physiological changes effect on blood serum proteins electrophoretic patterns); 742 (biology; ammocoetes identification; control); 745 (Welland Canal re migratory route in Great Lakes)

Lamprey, silver (Ichthyomyzon unicuspis)

B 710 (ammocoetes in 8 northern L. Superior rivers); 742 (biology; ammocoete identification; control)

Lampricides (see Electrofishing; Lamprey, sea; Piscicides)

Lancetfish, scaled (see Barracudina, white)

Landings (see Fishery, commercial; also names of commercial fishes)

Landlocked fish species (see also Kokanee; Salmon, Atlantic landlocked)
 B 44 (American smelt, Utopia L., N.B.)

Lane, R.K.

OL 61 (airborne radiation thermometer feasibility tests); 70; 76; 84 (B.C. Coastal Project oceanographic data records); 82 (N Pac. Surveys oceanographic data record); 83; 91 (B.C. Coastal & Seaways Project oceanographic data records); 94 (B.C. Monitor & Coastal Project oceanographic data record)

Langstroth, G.O.

E 20 (Atl. fishes muscle latent & specific heat capacity); 22 (Atl. fish muscle specific heat capacity); 26 (Atl. fish muscle freezing rate); 37 (haddock muscle heat changes during rigor); 38; 41 (Atl. fishes muscle decay rate); 40 (Atl. fish muscle thermal investigation); 41 (electrical method of determining fish muscle decay rate)

Lanternfish, bigeye (Electra arctica)

OL 199 (Saanich Inlet, B.C.)

Lanternfish, blue (Tarletonbeania crenularis)

OL 175 (taken in NE. Pac. midwater trawling)

Lanternfish, pinpoint (Lampanyctus regalis)

OL 175 (taken in NE Pac. midwater trawling)

Lanternfish, small-eyed (see Anglemouth, veiled)

Lanternfish, smallfin (Lampanyctus leucopsarus)

B 712 (in echo-scattering layer, Saanich Inlet, B.C.)
 OL 175 (NE Pac.); 199 (Saanich Inlet, B.C.)

Lanternfish, theta (Diaphus theta)

OL 175 (taken in NE Pac. midwater trawling); 199 (Saanich Inlet, B.C.)

Laporte, L.J.

B 74 (temperature re Atl. oyster embryo development)

Laroque, Andre

B 373 (Polinices drill, Belliveau Cove, N.S.)

Larvae (see also Insects; Plankton; Zooplankton; also name of adult form of organism)

B 265 (of several unidentified clam species, P.E.I.)

Laurentian Channel (see also St. Lawrence, Gulf of)

B 578; 605 (temperature & salinity distribution); 651 (fishes of)
 OL 5 (deepwater physical oceanography); 64; 65 (oceanography)

Lauzier, Louis M.

B 417; 456; 500 (Gulf of St. Lawrence oceanography); 537 (Atl. coastal oceanography); 541 (hydrographical features, Bay of Islands, Nfld.); 585(3) (Canadian Atl. coast oceanographic review); 593 (Magdalen Shallows bottom temperatures); 614 (ice & iceberg incidence, Gulf of St. Lawrence & Nfld. coast)

Lauzier, Louis M. (cont'd)

- OL 1 (sea surface water temperature forecasting, St. Andrews, N.B.); 3; 9 (Gulf of St. Lawrence winter oceanographic conditions); 5 (Laurentian Channel deepsea oceanography); 11 (Gulf of St. Lawrence ice potentials & heat budget computations); 39 (Canadian Atl. coast sea temperatures); 42 (N Atl. temperatures & salinities re IGY sea-level recording); 60 (AOG ice studies); 64; 65 (FRB oceanographic observations in ICNAF area); 178 (Canadian Atl. drift bottle program); 182 (drifter for sea-bed current observations)

Lawler, G. H.

- B 446 (ciscoes & their Triaenophorus parasitization, Heming L., Man.); 521 (yellow perch age, growth, & Triaenophorus infection, Heming L.); 542 (diel activity of 4 Heming L. fishes); 546; 622 (plankton re Triaenophorus, Heming L.); 566 (trammel net for controlling northern pike populations); 576 (check list of fish parasites, Heming L.); 579 (spawning, & parasitism effect on fecundity, of 6 Heming L. species); 604; 622; 623 (Triaenophorus crassus & T. nodulosus life history); 739 (biology & taxonomy basic data for Heming L. burbot); 740 (Heming L. meteorological data); 804 (Cyclops infection with Triaenophorus, Heming L.)

Lazo, Cape and Bight, B.C.

- B 405 (trawl fishery); 441 (winter oceanography)

Lead compounds

- OL 148 (re mine pollution of Miramichi R. waters, N.B.; also analysis method); 212 (re mine pollution, Mt. Pleasant area, N.B.)

LEAP FROG, Project (see Queen Charlotte Islands region, B.C.)

LeBrasseur, R.J.

- B 657 (NE Pac. Ocean plankton collections); 689 (open NE Pac. Ocean salmon vertical distribution); 759; 766 (high-seas Canadian exploratory Pac. salmon fishing & tagging)
 OL 174 (preliminary checklist of some NE Pac. Ocean plankton); 175 (collections of fish by midwater trawl, NE Pac. Ocean); 176 (N Hecate Strait midwater trawl salmon catches); 201 (biomass atlas of net zooplankton in NE Pac. Ocean); 202 (net zooplankton seasonal & annual variations at Pac. Ocean Weather Station "P")

Lecithaster gibbosus (see Trematoda)

Lee, C.Y.

- OL 168 (determination & differential analysis of seawater dissolved carbohydrate); 182 (drifter for sea-bed current observations)

Leeches (Hirudinea)

- B 803 (in L. Superior fauna)

Legaré, J.E. Henri

- B 707 (Passamaquoddy area zooplankton, N.B.)

Leim, A.H.

- B 241(A;C) (lime treatment of Stephenson's Pond, N.B., for trout restocking); 497(A;B) (pulpmill pollution of Northern N.B. waters); 607 (herring mortal-

- Leim, A.H. (cont'd)
ities, Bay of Chaleur); 612 (Bay of Fundy herring literature review);
617 (Canadian Atl. coast marine faunal zones); 652 (herring larvae
distribution, Bay of Fundy)
- LeMaire, H. Elizabeth
B 691 (pH effect on 2 lampricides)
- Length (see also Size)
B 873 (fishes length measurement uniformity proposals)
- Length — weight relation (see also Size; Weight)
B 107 (lobster); 131(16); 206(4) (Atl. salmon); 245(A) (L. Champlain yellow
perch); 454:25 (Bay of Fundy hake); 594 (L. Winnipeg whitefish)
- Lepeophtheirus salmonis (see Lice, fish)
- Lepidopsetta bilineata (see Sole, rock)
- Lepomis gibbosus (see Pumpkinseed)
- Lepreau River, N.B.
B 396(6) (suitability for salmon)
- Lethal limits of physico-chemical conditions (see also Mortality; Oxygen, dissolved;
Pollution; Salinity, reactions to; Temperature, reactions to;
Toxicity)
B 4 (oxygen, temperature & salinity, for Atl. salmon fry); 63; 64 (oxygen &
temperature, for Gammarus amphipods); 88 (Asterias starfish embryos);
183 (temperature, for lobster larvae); 127(10) (salinity, for young Atl.
salmon); 207(8) (temperature, for Atl. salmon); 248:30; 373:153; 415;
638 (temperature, for giant scallop); 272 (temperature & salinity, for
B.C. shrimps); 290 (in testing toxicity of water by trout); 328(13)
(fishes heat stroke); 379(4) (temperature, for white perch, white sucker &
American eel); 406; 589 (temperature, salinity & oxygen for mature
lobster); 436 (salinity, temperature & desiccation, for limpet); 471:2
(salinity & temperature, for quahaug); 582:4 (temperature, winter flounder)
- Leucichthys species (see Coregonus species)
- Leuroglossus stilbius (see Smoothtongue)
- Leverin, H.A.
B 208(15) (water chemistry, Moser R., N.S.)
- Libin, M.L.
B 493 (life history & laboratory tests for chemical control of Trienophorus)
- Lice, fish
B 115(16:2) (Caligus copepods on Atl. salmon); 210(14) (Lepeophtheirus
copepods on Atl. salmon & trout); 297 (Argulus & its control);
329(21) (severity of L. salmonis on Atl. salmon during drought years)

Life history (see also names of organisms and various aspects of life history)

- B 40 (Polinices heros whelk); 44 (landlocked smelt, Utopia L., N.B.);
 53 (Atl. mackerel); 84 (Atl. cod); 100:22 (marine amphipods); 121; 248;
 350; 373; 420; 526 (giant scallop); 126 (re Atl. salmon sex ratios);
 141 (Atl. oyster early stages); 187 (quahaug); 209(1;2); 212(2); 214(18);
 327(2) (salmon & brook trout, Moser R., N.S.); 210(14) (Lepeophtheirus
 copepod trout-lice); 212(2) (Atl. salmon at sea); 223; 256 (eulachon);
 265:11 (softshell clam, P.E.I.); 271; 298:3 (pilchard); 278 (Pac. dogfish);
 301; 302-304; 316 (various internal parasites of fishes); 309 (Strait of
 Georgia flounders); 334 (lobster); 352 (Atl. herring); 361 (yellowtail
 flounder); 362 (Atl. halibut); 371; 372; 383; 398 (Polinices drills);
 411 (Pac. herring); 434 (Atl. hake); 462:1; 493; 522; 523; 604 (Triaenophorus);
 465 (goldeye); 582:16 (winter flounder)

Light (see also Phosphorescence; Photosynthesis; Radiation; Transparency of waters; also following heading)

- B 360 (photochemical effects of ultraviolet)

Light, reaction to or effects of (see also Diel effects; Migration, vertical; Radiation)

- B 4; 127:13; 213(10); 329(19; 24:7); 336(14:1); 393(1); 563:20 (Atl. salmon);
 12; 13 (haddock muscle); 24 (Diaptomus minutus plankton re vertical distribution);
 55 (re trout fry hatchery operation); 80; 183; 193 (lobster larvae); 89;
 137; 195 (copepods); 132:14; 213(10;11) (brook trout); 162:31;
 184:44 (Atl. oyster larvae settlement & shell growth); 184:44; 187 (quahaug);
 184:44; 239:25 (Atl. bay mussel); 211(16) (re fish distribution, Goldmine Brook, N.S.);
 213(10;11) (diel, re Atl. salmon & trout); 247 (light-guiding Atl. salmon smolts through fishway);
 272 (B.C. shrimps); 338 (re fertilization effect on freshwater plankton growth); 352;
 755:28 (Atl. herring larvae & adults); 372:4 (Polinices oyster drill); 379(4);
 563:27 (sensitivity of white perch, American eel & white sucker); 382(11) (behaviour of white sucker re depths);
 393(1) (American eel); 411:7 (juvenile Pac. herring); 437 (diatoms, Passamaquoddy Bay, N.B.);
 498:102 (plankton, Shubenacadie L., N.S.); 563:27 (re yellow perch, creek shiner, catfish, alewife & trout movements in pond);
 582:8; 118 (winter flounder); 646 (re sea lamprey predation); 670 (spawning sea lamprey)

Lighthouses; Lightships (see also Oceanography, Atlantic, NW inshore; Oceanography, Pacific, NE inshore)

- B 501; 549 (participation in daily B.C. seawater observations program); 527 (wind & surface currents, off N.S.); 537 (oceanography at Atl. coastal)
 OL 8; 22; 23; 37; 48; 62; 67; 68; 99; 206 (oceanographic & meteorological data from Swiftsure Bank & Umatilla Reef lightships off Strait of Juan de Fuca);
 23; 48; 67; 68; 104; 131; 160; 161; 177; 195; 204; 215; 227 (temperature & salinity data from B.C. coastal lighthouses); 39 (temperatures at Canadian Atl. coastal); 208 (surface water data, Entrance Is. lighthouse, B.C.)

Limacina helicina (a pteropod) (see also Zooplankton)

- OL 202 (at Pac. Ocean Weather Station "P")

Limanda ferruginea (see Flounder, yellowtail)

Limnology (see also Hydrography; Physiography)

- B 48 (St. John R., N.B.); 57 (Chiputneticook Lakes, St. Croix R., N.B.); 64 (Gammarus waters, Ont.); 115(17;18); 116(22-24;27-29); 117(31); 118(34;35;40); 123(12); 127(12) (Margaree R. system, including L. Ainslie, N.S.); 200(A); 202 (Chamcook Lakes, N.B.); 207(6); 208(10) (Moser R. system, N.S.); 241(B); 346 (Stephenson's Pond, N.B.); 243(A;B) (Mada-waska & Restigouche County streams, N.B.); 244(A;B) (St. Croix R., N.B.); 250 (waters polluted by pulp mills, N.B.); 263 (Cassidy L., N.B. re use of pesticides); 318 (re lakes productivity); 320 (Clear L., Man.); 392(16:40) (Petitcodiac R., N.B.); 396 (Lepreau R., N.B.); 397 (Great Lakes vertical temperature distribution); 427:51 (Shubenacadie L., N.S.); 494; 495 (Nesslin L., Man.); 522; 523 (L. Nipigon & Thunder Bay lakes, Ont., re Triaenophorus); 569; 819-821 (Nilkitkwa L., Babine R. system, B.C.); 571; 590; 599 (L. Winnipeg temperatures, etc.); 654 (rivers & streams temperatures, L. Superior N central shore region); 676 (Qualicum R., B.C.); 693; 698 (Sam Orr Pond, N.B., re transplanted European oysters); 721 (Tathlina & Kakisa Lakes, N.W.T.); 819-821 (Babine L., B.C.)
 OL 148; 180; 192; 210 (NW Miramichi R., N.B., re Zn, Pb & Cu pollution); 181 (St. John R., N.B.)

Limnoria (see Gribble)Limpet

- B 436 (Acmaea testudinalis habit & viability, St. Andrews, N.B.)

Lingcod (Ophiodon elongatus)

- B 405; 425:18; 675; 872 (B.C. fishery)
 OL 86 (B.C. fishery re radioactive wastes disposal)

Linklater, W.H.

- B 391(12) (fishing methods for Atl. herring, lobster, salmon, in Minas Channel, N.B.)

Liopsetta putnami (see Flounder, smooth)Lipids (see also Fats and oils)

- OL 55 (in waters at Pac. Ocean Weather Station "P")

Lisk, R.D.

- B 662 (temperature & dissolved oxygen re oxygen uptake of lobster in air & water)

Lists (see Bibliographies; Fishes, lists of; Invertebrates, lists of; Plankton, lists of; Publications, lists of F.R.B.; Reviews)Littorina littorea (see Periwinkle)Liver (see also Liver oils)

- B 55; 102; 110; 284 (in hatchery trout feeding); 425 (B.C. dogfish landings); 653:46 (weight, Atl. walrus)

Liver oils (see also Fats and oils; Vitamins)

- B 425:16 (B.C. dogfish); 430:42 (Nfld. cod, etc.)
 E 18; 25; 48 (extraction methods & yields, Atl. cod); 36 (methods for determining chemical characteristics of cod-liver oil)

Lobster (biology) (Homarus americanus) (see also Lobster (technology))

- B 1; 6 (investigations, St. Mary Bay, N.S.); 29; 334 (moulting); 49 (young, Richmond Bay, P.E.I.); 50 (distribution of small, Egmont Bay, P.E.I.); 65 (mating experiments); 66 (care of eggs in hatcheries); 67 (care of larvae in hatcheries); 77 (size by sex; egg stages; tagging); 80 (laboratory larvae rearing); 97:40 (biological study of Maritimes fishery statistics); 107 (Cape Tormentine, N.B.); 115(16:2) (Margaree Harbour, N.S.); 182 (re oceanography, Bay of Chaleur); 183 (environmental effects of larvae); 193; 334 (Gulf of St. Lawrence fall season, & larvae); 330 (trap specifications re catches); 334 (tagging method; larvae); 342 (abdominal muscle physiology); 391(12); 394(8) (commercial fishing methods, Minas Channel, N.S.); 406 (factors limiting survival); 420:30 (Nfld. investigations); 589 (temperature, oxygen & salinity re survival & distribution); 608 (trap improvements); 618 (tagging experiments, P.E.I.); 675 (past, present & future of Canadian Atl., & possibility of B.C., fishery); 775 (efforts to introduce into B.C. waters); 854; 895; 896 (investigations offshore N.S.)
 OL 228 (oceanography of Fatty Basin, Vancouver Is., re suitability of transplanting to B.C. coast)

Lobster (technology)

- B 18 (bacteria re blackening of canned); 101; 133; 194 (digestibility); 135 (muscle nitrogenous constituents)
 E 23 (muscle shrinkage & shell weight loss, on boiling); 28; 50 (discoloration on canning); 52 (shipping of live)

Loch Lomond, N.B.

- B 202(A) (flooding prior to stocking)

Logan, J.F.

- B 12; 13 (haddock muscle proteins); 71 (NH_3 , NO_2 & NO_3 determination in seawater)

Logie, Robert Reed

- B 130(9) (salmon re salinity, Saint John region, N.B.); 661 (Atl. oyster epidemic disease)

Loligo (see Squids)Loligo pealii (see Squid, long-finned)

Long (Kinsac) Lake, N.S. (see Shubenacadie River system)

Longard, J.R.

- B 585 (Canadian Atl. coast oceanography review)

Longlining (see also Gear)

- B 430:61; 444 (Nfld. cod)

Lophius americanus (see Monkfish)

Lord, E.I.

- B 807; 842; 880; 881 (giant scallop surveys); 845 (Polinices biology)

Loring, D.H.

- OL 107; 127 (sediment layers studies, Canadian Atl. coast, re echo sounding);

Loring, D.H. (cont'd)

- OL 140 (CaCO₃ distribution in sediments of St. Lawrence R., estuary & gulf);
189 (rapid silicate analyses of marine sediments)

Lota lota (see Burbot)

Loucks, R.H.

- OL 171 (scale-length estimate of seasonal thermocline internal waves near Pac.
Ocean Weather Station "P")

Louse (see Lice, fish)

Lowe, C.W.

- B 270 (algae of Spider L., Vancouver Is., B.C.); 282 (Spider L. phytoplankton)

Lucas, C.C.

- B 280 (cause of gill-net fouling & sinkage, B.C.); 324 (pulpmill pollution,
upper Quatsino Sound, B.C.)

Lucas, Verna Z.

- B 278 (Pac. dogfish life history)

Luck, J. Murray

- B 23 (halophile bacteria NaCl tolerance)

Lucop, John

- B 882(1-5) (catalog of Skeena R. system salmon spawning grounds & escapement
tabulations)

Lumpenus lumpretaeformis (see Blenny, snake)

Lumpfish (Cyclopterus lumpus)

- B 42:17 (stomach contents)

Lungs (see also Respiration)

- B 653:46 (weight, Atl. walrus)

Lurcher Lightship, off N.S. (see Lighthouses)

Lycodes vachoni (see Eelpouts (Atlantic))

vahlII (see Eelpout, Vahl's)

- M -

MacAskie, I.B.

- B 629; 700; 719; 736; 761; 825; 850; 875 (Canadian pelagic fur seal researches)

MacClement, W.T.

- B 65 (lobster mating experiments)

MacDougall, A.H.

- B 123(12) (meteorology, hydrology & fishes of Trout Brook, N.S.)

MacFayden, D.A.

E 24 (drip, & juice available for drip, in frozen Atl. fish); 36 (Atl. cod liver oil analysis methods)

MacGregor, D.G.

B 407 (review of ocean wave studies); 432 (Grand Manan Channel current measurements, N.B.); 528 (Bay of Fundy oceanography); 552 (Canso Strait oceanography); 594 (Cabot Strait oceanography); 621 (calculation of geostrophic currents)

MacInnes, C.D.

B 650 (Gulf of St. Lawrence scallop explorations)

MacIntyre, William G.

OL 200 (solubility product of CaCO_3 in seawater re temperature)

Mackay, B.S.

B 530 (tidal currents in Hecate Strait, B.C.)

MacKay, D.A.

B 1; 6 (lobster investigations, St. Mary Bay, N.S.); 49 (young lobsters investigation, Richmond Bay, P.E.I.); 80 (lobster rearing investigations, St. Andrews, N.B.); 107 (lobster investigation, Cape Tormentine, N.B.)

MacKay, Donald C.G.

B 217 (larval & post-larval Dungeness crab growth); 221 (Canadian Pac. Brachyura); 222 (Dungeness crab tagging); 283 (review of rheotropism in freshwater fishes); 314 (Dungeness crab moulting & growth)

Mackerel, Atlantic (biology) (Scomber scombrus) (see also next heading)

B 51 (Magdalen Is., Gulf of St. Lawrence); 53 (life history); 85; 99; 421 (fishery, Halifax & Fundy areas); 97:43 (biological study of Maritimes fishery statistics); 112 (age determination); 675 (past, present & future of Canadian fishery); 799 (eggs & larvae in zooplankton)

Mackerel, Atlantic (technology)

B 101 (digestibility); 421:18 (utilizations)
E 8 (commercial pickling); 12 (structural changes during freezing & storage); 26 (muscle heat conductivity & freezing rate); 29 (protein denaturation during cold storage); 40 (muscle latent & specific heats; moisture & fat content; density); 42; 49 (muscle trypsin hydrolysis); 53 (non-protein nitrogenous extractives)

Mackerel, Pacific (Scomber japonicus)

B 410:6 (tagging review)

MacLean, M.E.

OL 96 (track charts of A.O.G. cruises); 97 (Cabot Strait Section temperature, salinity & density distributions)

Macklin, E.

B 615 (ciscoes identification from various Canadian lakes)

MacLellan, A.Y.

B 119(41); 123(11) (meteorological conditions, Margaree Is., N.S.)

Maclellan, Delphine C.

B 883 (bottom fauna of St. John R., estuary & harbour, N.B.)

MacLeod, Neil

B 44 (L. Utopia, N.B., smelt); 45 (St. Croix R. & Magaguadavic R., N.B., smelt)

Macoma (see Clams (Atlantic); Clams (Pacific))

MacPhail, J.S.

B 414; 711; 724; 747; 784 (Atl. clam & clam harvesting investigations);
763; 793 (survey of Eel R. Cove softshell clam population, N.B.)

Macrozoarces americanus (see Pout, ocean)

Mactra (see Clams (Atlantic))

Madawaska County, N.B.

B 243(A) (biological survey of some streams)

Magaguadavic River, N.B.

B 45 (smelt larvae)

OL 212 (geochemical survey re Cu, Pb & Zn mining pollution)

Magdalen Islands; Magdalen Shallows (see also St. Lawrence, Gulf of)

B 51 (mackerel); 352 (herring); 593 (bottom temperatures of shallows);
880 (giant scallop survey)

Maggots

B 357 ("cheese skippers" (Piophilidae) pupae in smoked Atl. herring)

Mahen, Kenneth W.

E 18 (vitamin A content of various Atl. fish-liver oils); 19 (Atl. cod-liver oil extraction)

Maine, Gulf of (see also Fundy, Bay of; Oceanography, Atlantic, NW inshore)

OL 127 (bottom sediments re acoustical reflection)

Malacology (see also Shell; also Molluscs and various kinds of molluscs)

B 225 (freshwater, Man.)

Malagash, N.S.

B 146; 239; 472 (oyster culture conditions)

Mallotus villosus (see Capelin)

Malpeque Bay, P.E.I.

B 83; 370:58 (oyster growth); 144; 155; 287 (oyster disease); 147; 655 (oyster parasites); 148(C) (teredo larvae settling); 149; 158 (oyster rearing); 158:9 (notes on unidentified bivalves); 265; 337; 684; 685 (forecasting oyster setting; clam investigations); 655 (boring sponges investigations re oysters)

Malpeque disease (of oysters) (see Disease; Malpeque Bay; Oyster, Atlantic)

Mammals (see Fauna, terrestrial; also names of species)

Management (see also Fishery, commercial; Fishery, sport; also names of international commissions)

- B 74 (oyster beds, Caraquet Bay, N.B.); 131(14) (by predacious bird control); 153 (oyster beds, Cape Breton, N.S.); 157 (oyster beds, Charlottetown region, P.E.I.); 188; 189; 727 (Maritimes trout ponds); 214(18); 335(7) (salmon & trout, Moser R., N.S.); 224 (rainbow trout, Paul L., B.C.); 266 (sport fishing lakes, Jasper Park, Alta.); 318 (productivity of inland waters); 320 (suggestions for Clear L., Man.); 328(12) (salmon, Apple R., N.S.); 328(14) (Margaree R. Fishery Advisory Committee Report, N.S.); 335(2;4) (Margaree R. estuary salmon netting restrictions); 335(8) (LaHave R., N.S.); 351 (ponding, P.E.I.); 378:35 (softshell clam); 383:61 (Polinices clam drill suppression); 390(3) (Atl. salmon catch per unit of effort re results); 390(10) (Atl. salmon, Nipisiguit R., N.B.); 390(11) (Big Salmon R., N.B.); 396(6) (suitability of Lepreau R., N.B., for salmon); 400-402; 426-428; 498; 499; 539; 540; 563 (Atl. salmon, trout, & some other Maritimes fishes); 405 (B.C. trawl fishery); 461:41; 485:11 (beluga, Churchill region, Man.); 466; 469; 470 (goldeye); 480 (Nueltin L., Man.); 515 (overfishing, Great Slave L.); 591 (harp seal); 594 (L. Winnipeg whitefish); 637; 664; 690; 699; 718; 744; 785 (Skeena R. Salmon Management Committee Annual Reports, B.C.); 639 (history of Pac. coast N America fisheries research); 715 (Great Slave L. commercial catch regulations); 725 (Great Slave L. sport fishery regulations); 814 (exemption clause operation for Canadian mainland otter trawlers)
- OL 217 (paralytic shellfish poison warnings, Bay of Fundy)

Mandibles

- B 810:135 (structure of decapod, Labrador, Nfld., E Canadian Arctic)

Manganese compounds

- OL 55 (at Pac. Ocean Weather Station "P" re water fertility)

Manitoba (see also Heming L.; Manitoba, L.; Hudson Bay; Winnipeg, Lake)

- B 225 (freshwater gastropods & pelecypods); 465-467 (goldeye); 496 (effect of 3 insecticides on freshwater fishes of Churchill region, Man.); 675 (survey of past, present & future trends of fisheries); 871:15 (commercial freshwater fisheries history & gear)

Manitoba, Lake

- B 484 (gillnet mesh sizes in commercial fisheries); 557 (ciscoes growth, re taxonomy); 610 (ciscoes morphometry); 871:17 (commercial fisheries gear & history)

Mansfield, A.W.

- B 653 (Atl. walrus biology, E Canadian Arctic); 846 (gray seal biology & economics)

Manzer, Dorothy M. Furk

- B 429 (B.C. pilchard catch analysis, 1926-1946); 583 (Fraser R. eulachon fishery)

Manzer, J.I.

- B 642; 656; 659; 682; 683; 689; 702; 759; 766; 824 (exploratory Canadian salmon fishery & tagging in open NE Pac. Ocean); 689 (salmons vertical distribution in open NE Pac. Ocean); 702 (ocean distribution of Rivers & Smith Inlets sockeye salmon); 786; 823 (pink salmon distribution & abundance, B.C. offshore & Gulf of Alaska)

OL 66 (classification of daily B.C. coastal water temperatures & salinities)

Margaree Island, N.S.

- B 119(41); 123(11) (meteorological observations)

Margaree River system and estuary, N.S. (see also Ainslie, Lake)

B 113-119; 122; 123; 126; 127 (a series of reports, vol. 1-11, wholly or partly about Atl. salmon & trout of this river system, plus information on meteorology, hydrology, predator birds, other animals, etc. of the river & estuary. See the List of Titles for the sub-titles of these 11 volumes of reports for the nature of the subject matter covered.

B 129-132; 206-214; 327-329; 335; 336; 379-382; 390-394; 396 (a series of reports, vol. 12-39, on Atl. salmon & trout investigations, partly concerning this river system, plus information on other Maritimes river systems and adjacent marine waters. The reports dealing principally with the Margaree R. system in this series are:

- 130(11) (smolt marking); 206(7); 328(9); 335(9) (birds);
 208(16); 210(4); 328(16) (salmon movements through estuary)
 212(3) (stream selection for planting fingerlings); 213(8)
 (tagging marked salmon); 328(14) (report of Margaree River
 Fishery Advisory Committee); 328(15) (angling complaints);
 328(16); 329(17) (salmon migration); 329(17); 335(5)
 (period of salmon runs); 329(18) (salmon parr scarcity);
 335(2;4) (effects of stopping salmon netting); 335(3)
 (increasing salmon stock); 335(5;6) (improving angling);
 335(6) (stream improvement); 396(7) (mingling of salmon stocks)

B 400-402; 426-248; 498; 499; 539; 540; 563 (a series of reports, vol. 40-50, on Atl. salmon management, the information in some of which deals partly with this river system, or is pertinent to it)

Margolis, L.

- B 624; 641; 658; 687; 703 (sockeye & pink salmon parasitization re distinguishing between N American & Asiatic stocks); 631; 826 (bibliography of fish parasites & diseases in Canada)

Marine borers (see Gribble; Shipworm)

Maritimes (general) (see also names of Provinces, specific localities and bodies of water; also Fishery, commercial)

- B 22; 253 (trout hatcheries survey); 131(17) (notes on Atl. salmon);
 246 (keys to freshwater fishes); 675 (survey of past, present & future trends of fisheries)

Marking and returns (see also Migration; Tagging)

- B 3; 8 (sockeye salmon, Cultus L., B.C.); 130(11) (salmon smolts, Margaree R., N.S.); 210(4) (salmon, Margaree R.); 210(10); 212(1) (brook trout, Moser R., N.S.); 212(1) (salmon, Moser R.); 213(8) (tagging of marked salmon, Margaree area); 215 (regeneration of clipped Pac. salmon fins);

Marking and returns (cont'd)

- B 231 (brown trout, Vancouver Is.); 390(4); 401; 427:5; 428; 540; 563 (salmon, Shubenacadie R., N.S.); 402 (Atl. salmon: methods); 405:16 (lemon sole); 408 (Polinices drill shells); 410 (for studying fishes movements); 411:12 (juvenile herring, Departure Bay, B.C.); 461; 485 (beluga by tattooing); 618 (lobster, P.E.I.); 563:12 (Atl. walrus); 897 (hatchery chinook salmon)

Marlin-spike (Nezumia bairdi)

- B 651 (Laurentian Channel)

Martin, W.H.

- B 280 (cause of gill-net fouling & sinkage, B.C.)

Martin, W.R.

- B 377 (Danish seining observations in Scandinavia); 616 (Atl. cod geographic & annual variation); 630 (Atl. cod sizes)

Mass transport of marine waters (see Transport of oceanic waters)Mathematical treatment of data (see also Fofonoff, N.P., Paloheimo, J.E.; Tables)

- B 230 (tagging ratio for spawning sockeye salmon population); 254 (sampling for creel census); 255 (sampling for plankton enumeration); 329(19) (Atl. salmon distribution re temperature & light); 442 (hydraulic model of a harbour); 592:42 (length vs. sampling of lake whitefish); 621 (calculation of geostrophic currents); 628 (fish population dynamics (including a correction sheet)); 636 (cod & haddock tag records re mortalities); 714 (haddock mortality estimation); 811 (predator-prey relationships); 887 (hydrodynamics of perforated pipe plankton sampler); 898 (notes on fitting Gompertz growth equation)
- E 43 (temperature-time relation for processing canned fish); 57 (vitamin A metabolism)
- OL 21; 132 (interpretation of oceanographic measurements thermodynamics); 25; 27; 72; 73; 163; 183; 218 (computer programming of oceanographic data); 88 (aerial estimation of seawater suspended matter); 109 (marine hydrodynamics); 110; 170 (re Hecate Strait region hydraulic model); 155 (vertical diffusion in sea from a radioactive point source); 170 (theoretical analysis of fixed wave suppressors in a hydraulic model); 183-185 (Gulf of St. Lawrence wind-stress data re mass water transport)

Mating (see Reproduction)Matter, particulate (see also Productivity, primary)

- OL 81 (organic, Departure Bay, B.C.); 88 (aerial estimation of, in seawater); 208 (Nanoose Bay, B.C.); 211 (Strait of Georgia); 214 (application of Coulter counter for marine research)

Maturity; Maturation (see also Gonads)

- B 68 (winter flounder); 77; 107 (lobster); 85:10 (Atl. mackerel); 95:8 (swordfish); 98:33 (Atl. salmon); 111:60; 424:7 (Atl. cod); 121:62 (Bay of Fundy scallops); 125:1; 163(D) (starfish, P.E.I.); 148(B) (shipworms); 150:2; 289:30 (Atl. oyster); 158(B:3) (Malpeque Bay oyster, P.E.I.); 256 (eulachon); 362:45 (Atl. halibut); 427:37,45 (striped bass; alewife); 465:12; 467 (goldeye); 483 (re size of ciscoes, Great Bear L., N.W.T.); 588; 591 (harp seal); 629:7; 761; 875 (northern

Maturity; Maturation (cont'd)

fur seal); 681 (salmons in open NE Pac. Ocean); 695 (size of Pac. salmons, re stocks); 752 (finback whale ovulation counts re age); 834 (shortfinned squid); 863 (Atl. argentine & silver hake)

May, A.W.

B 873 (fishes length measurement uniformity proposals)

Mayflies

B 117(30:74) (Margaree R., N.S.); 131(14:26) (collection from Forest Glen Brook, N.S.); 208(10:8) (Moser R., N.S.); 803:11 (in L. Superior bottom fauna)

McAllister, C.D.

OL 55; 136; 137 (data record, oceanic fertility & productivity at Pac. Ocean Weather Station "P"); 59; 98; 106; 139 (data records at Ocean Station "P"); 126 (photosynthesis & chlorophyll a measurements at Pac. Ocean Station "P"); 137 (primary production at Pac. Ocean Station "P")

McBurney, A.B.

B 546 (plankton re Triacnophorus, Heming L., Man.)

McCallum, C.M.

B 53 (mackerel life history)

McCracken, F.D.

B 362 (Atl. halibut growth & ecology); 582 (seasonal movements of winter flounder); 743; 874 (marine chart requirements for Canadian Atl. fishing fleet); 781 (codworm incidence in Atl. cod fillets); 798 (ICNAF mesh sizes & materials regulations); 814 (operations of exemption clause for Canadian mainland otter trawlers); 873 (fishes length measurements uniformity proposals)

McDonald, J.G.

B718; 744; 762; 785; 865 (Skeena Salmon Management Committee Annual Reports)

McHugh, J.L.

B 223; 256 (B.C. eulachon investigations)

McIver, A.R.

B 807 (giant scallop survey, Gulf of St. Lawrence)

McKay, D.D.

E 15 (fish muscle structural changes during freezing); 39 (fish preservation by freezing)

McKenzie, R.A.

B 31 (set hooks experiments in intertidal zone); 60 (herring fishery in Halifax area); 78 (bluefin tuna fishery, Halifax area); 85 (mackerel fishery, Halifax area); 95 (swordfish fishery, Halifax area); 111 (inshore cod fishery, Halifax area); 237 (box-net mesh re American smelt fishing); 252 (Canadian Atl. cod investigations summary); 364(A) (offshore Atl. cod tagging results); 364(B) (Gulf of St. Lawrence cod tagging results); 369(1-4) (smelt tagging, Miramichi area, N.B.); 369(2;3) (smelt movements, Miramichi Bay); 435 (sea temperature re

McKenzie, R.A. (cont'd)

Atl. cod fishing); 596 (Canadian Atl. flounder fishery); 755 (Canadian Atl. herring literature review); 794 (NW Atl. herring bibliography); 854; 895 (offshore lobster investigations); 863 (offshore exploratory fishing for argentine & silver hake, N.S.); 864 (offshore exploratory fishing for herring, N.S.); 895 (offshore red crab investigations)

McLaren, I.A.

B 709 (Ogac Fiord hydrography & zooplankton, Baffin Is.); 716 (weather re seal hunting from boats, E Canadian Arctic)

McLeese, D.W.

B 406 (factors limiting lobster survival); 589 (temperature, salinity & O₂ effects on lobster survival & distribution)

McLellan, H.J.

B 384 (underwater camera); 409 (Gulf of St. Lawrence vertical water structure fluctuations); 432; 433; 502 (Grand Manan Channel oceanography); 443 (freezing effect on SO₄/Cl ratio of seawater); 475; 538; 577 (Scotian Shelf oceanography); 585(3) (Canadian Atl. coast oceanography review); 619 (slope water E of Georges Bank, N.S.); 632 (slope water off Grand Bank)

McLeod, D.C.

B 460 (B.C. inshore coast oceanography)

McMahon, V.H.

B 561 (plankton counts, Lakelse L., B.C.)

McMillan, L.

B 123(12) (Trout Brook meteorology, hydrology & fishes, N.S.)

Meal, fish (see Fishmeal)

Medcof, J.C.

B 116(26-29) (physiography, meteorology & hydrography of Scotsville, N.S., re Margaree R. salmon); 117(30) (Trout Brook trout, N.S.); 143; 160; 331; 378 (oyster spatting, feed, growth, etc., P.E.I.); 159; 162; 378; 414; 829 (oyster investigations, N.S.); 184; 239; 331:79; 370; 378; 414 (oyster investigations, N.B.); 292 (Atl. oyster larvae studies); 331:100 (Irish moss distribution, N.B.); 370 (Atl. oyster & oyster drill investigations); 376 (case histories of Atl. shellfish toxicity to animals & man); 383; 447; 845 (Atl. clam drill natural history); 399 (softshell clam meat yields); 408; 447 (Atl. clam drill control); 414 (Atl. clams investigations); 440; 503 (self-cleansing of softshell clam); 449 (Maritimes scallop investigations); 644; 724 (mechanized gear for Atl. shellfish harvesting & culture); 650 (foreword to scallop investigations); 655 (boring sponges investigations, P.E.I.); 693; 696-698 (trial introduction of European oyster to Canadian Atl. coast); 386 (paralytic shellfish poisoning incidence & risks, Que.)

Meeker, B.E.

B 722 (Great Slave L. fishing vessel types to 1958); 725 (Great Slave L. sport fishery survey)

Meikle, J.H.

OL 70; 76 (B.C. Coastal Project oceanographic data records); 94 (B.C. Monitor & Coastal Project oceanographic data record); 98; 139 (data records, Pac. Ocean Weather Station "P"); 111 (B.C. Monitor Project oceanographic data record)

Melanogrammus aeglefinus (see Haddock)

Melanostigma gelatinosum (see Eelpouts (Atlantic))

Melville, Margaret M.

B 40 (Polinices heros life history)

Mennie, J.H.

E 46 (heat capacity of gels)

Mercer, M.C.

B 834 (shortfin squid biology, Nfld.)

Merganser, American

B 115(16:12); 116(25:3); 117(30:77); 118(38); 119(43:19); 131(13); 207(7); 328(9) (habits; predation on Atl. salmon & trout; Margaree R., N.S.); 131(13) (winter feed of, Margaree R. system); 131(14:7,13,25a) (feed & control, Margaree R.); 210(11); 213(17); 329(20) (predation & feed, Moser R., N.S.); 454 (control, Miramichi R., N.B.); 694 (control in general)

Meristic characteristics (see also Morphology; Taxonomy)

B 361:74 (yellowtail flounder fin rays); 481 (L. Winnipeg ciscoes); 482 (Great Slave L. ciscoes); 615 (ciscoes from various Canadian localities); 739 (burbot, Heming L., Man.)

Merluccius bilinearis (see Hake, silver)

productus (see Hake, Pacific)

Mesh, fishing gear (see Gear; Net selectivity; Nets)

Mesodesma (see Clam, wedge)

Mesodinium rubrum (a ciliate)

B 232 (causing red colour in oysters & clams)

Metabolism (see also Digestibility; Digestion; Feed)

E 57 (mathematical theory of vitamin A)

Metals (see name of element; also Pollution; Toxicity)

Metamorphosis (see Growth; also name of adult form of organism; also Life History)

B 206(1) (Atl. salmon smolts, & feeding to induce); 411 (Pac. herring)

Metcalf, D.C.

B 332 (oyster culture, Shippigan area, N.B.)

Meteorology (see Weather; Wind)

Metridia pacifica (a copepod)

OL 202 (at Pac. Ocean Weather Station "P")

M'Gonigle, R.H.

B 22 (Maritimes trout hatcheries survey); 57 (unexplained mortality of certain fishes in a N.B. lake); 58 (L. Champlain yellow perch stomach contents); 86 (Atl. salmon fry hatchery mortality); 91; 240 (temperature & salinity re Balamus & Limnoria); 138 (algal cause of mortality in a P.E.I. brook trout pond); 139 (Winkler analysis for dissolved O₂); 242 (biological survey of some N.B. streams); 244; 250 (pulpmill pollution of N.B. streams re salmon); 245(A;B) (characteristics & feed of yellow perch, L. Champlain); 290 (toxicity of pollutants)

Michigan, Lake (see also Great Lakes)

B 557 (ciscoes growth in Green Bay, re taxonomy)

Microgadus tomcod (see Tomcod, Atlantic)Micropterus dolomieu (see Bass, smallmouth)MicrosporidiaB 870:20 (Glugea in capelin)Microstomus pacificus (see Sole, Dover)Midges (chironomids)

B 210(7) (abundance limiting factors, Goldmine Brook, N.S.)

Migration (see also Marking; Tagging; also names of species)

B 2; 3; 8; 559 (sockeye salmon); 53; 85 (Atl. mackerel); 59; 805 (Atl. salmon, Miramichi R., N.B.); 60; 448 (Atl. herring); 95 (swordfish); 111:45 (cod, Halifax area); 130(11); 382(8;10) (Atl. salmon smolt speed of); 132; 210(10) (Atl. brook trout); 208(16); 328(16); 329(17) (salmon movement through Margaree R. estuary, N.S.); 210(5;9;13); 329(24) (salmon, Moser R., N.S.); 211(17) (salmon kelts, St. John R., N.B.); 211(18); 335(5) (salmon at sea, off Margaree R., N.S.); 213(12); 439:14 (eels, Moser & Petitcodiac R., N.S. & N.B.); 252 (Maritimes cod); 271; 279 (B.C. pilchard); 285 (bibliography of F.R.B. work on B.C. salmon); 308; 637 (pink salmon); 325 (B.C. herring); 327(5) (shad past dam, Petitcodiac R., N.B.); 328(12) (salmon, Apple R., N.S.); 336(14:28) (diel habits, Atl. salmon parr & smolt); 364(A;B); 424; 435 (Atl. cod); 369 (American smelt, Miramichi Bay, N.B.); 390(2); 396(7) (general rationale, Atl. salmon); 390(9); 498:79 (alewife); 410 (various B.C. fish species); 435 (temperature effect on Atl. cod); 449:11 (giant scallop); 559 (young sockeye salmon, Lakelse L. fence, B.C.); 582 (winter flounder); 583 (eulachon, Fraser R., B.C.); 637; 690; 744 (Skeena R. system salmon, B.C.); 653:117 (Atl. walrus); 677 (coho salmon, Juan de Fuca Strait); 702 (sockeye salmon, oceanic from Smith & Rivers Inlets); 728-732 (Pac. salmon, B.C. coast, Alaska, Gulf of Alaska, NE Pac. Ocean); 745 (Welland Canal re lamprey route from L. Ontario to L. Erie); 876 (behaviour of spawning run sockeye salmon in S Thompson & lower Fraser R.); 695 (Pac. salmon homing instinct)

Miller, Margaret

B 158; 203 (prediction of Atl. oyster spawning & spatting)

Milne, D.J.

B 677-679 (Juan de Fuca Strait coho salmon studies); 776 (sizes & ages of chinook & coho salmon)

Minas Channel and Basin, N.S.

B 390(8) (origin of salmon; salmon fishery); 391(12) (commercial fishery methods: salmon, herring, lobster); 393(2) (tagging salmon at weir); 394(8) (commercial shad fishery)

Mineral constituents (see also Analysis, chemical (methods); Composition, chemical; Mineralogy; Oceanography, general; Pollution; Toxicity)

E 28; 50 (re discoloration of canned lobster)

Mineralogy (see also Geology)

OL 6 (of discolored ice, Foxe Basin, N.W.T.); 45 (Foxe Basin sediments); 189 (analysis methods for silicate bases of sediments)

Mink

B 115(16:14) (Margaree Harbour, N.S.); 519 (Great Slave L. coarse fish as feed for); 675; 872 (potential of B.C. scrapfish landings as feed for)

Minnow, fathead (Pimephales promelas)

B 246 (Maritimes)

Miramichi River and Bay, N.B.

B 43; 59 (Atl. salmon investigations); 86 (cause of hatchery salmon fry mortality); 237 (box-net mesh size effect on American smelt fishing); 341(2) (seaweed ecology); 341(3) (terrestrial biota); 369 (American smelt tagging & migration); 370 (oysters); 453 (merganser control); 574 (estuary physiography & oceanography); 805 (daily salmon counts at NW river fences)

Mites (Halacaridae)

B 93 (of Canso, N.S.)

Moberg, E.G.

B 220 (chemical oceanographic data reporting)

Model, hydraulic oceanographic

B 413; 442; 514 (Alberni Harbour, B.C.)
OL 110; 130; 158; 159; 170; 172 (Hecate Strait region, B.C.)

Modiolus demissus (see Mussel, ribbed)Modiolus sp.

B 717 (a B.C. deepwater mussel)

Moisture content (see Water content)Molluscs (see also Bivalve molluscs; Fauna, bottom; Fauna, aquatic (general); also names of subdivisions and species)

B 117(30:71) (terrestrial & freshwater, Margaree R., N.S.); 161; 333 (Atl. shore mollusc resources, Northumberland Strait); 206(5) (of islands off mouth of Moser R., N.S.); 225 (Man. freshwater gastropoda & pelecypoda);

Molluscs (cont'd)

- B 370:48 (distribution of species, Bideford R., P.E.I.); 707:28 (in Passamaquoddy region plankton); 717; 746 (encountered in B.C. deepwater clam surveys); 733 (pulpmill pollution effects on various, Prince Rupert, B.C.)
 OL 174 (larvae in NE Pac. Ocean waters)

Monitor oceanographic stations (see also Oceanography, Atlantic; Oceanography, Pacific)

- OL 91; 94; 111; 113; 129; 142 (B.C. inshore & offshore); 165 (western N Atlantic)

Monkfish (Lophius americanus) (goosefish)

- B 32 (muscle juice heat coagulation); 651 (Laurentian Channel)

Mooers, A.L.

- B 389 (physicochemical oceanography bibliography)

Mopping

- B 104 (to control starfishes preying on Atl. oysters)

Morin, N.

- B 886 (paralytic shellfish poisoning incidence & risks, Que.)

Morphology; Morphometry (see also Geology; Hydrography; Limnology; Oceanography; Physiography)

- B 44 (landlocked smelt, L. Utopia, N.B.); 236 (B.C. pilchard); 309 (Strait of Georgia flounders); 361:62 (yellowtail flounder); 370:57 (Atl. oyster); 373:93; 420 (giant scallop); 398:28 (Polinices clam drill); 414:79 (Atl. clams); 446:10 (ciscoes, Heming L., Man.); 481; 511 (ciscoes, L. Winnipeg); 483:6 (Coregonidae, Great Bear L., N.W.T.); 510 (ciscoes, L. Manitoba); 640 (Cyclopidae, re Triaenophorus infection); 720 (young Pac. salmon, rainbow trout & cutthroat trout)
 E 3 (of fish spoilage bacteria)

Morrison, E.I.

- B 370 (Atl. oyster & oyster drill investigations)

Mortality (see also Disease; Lethal limits; Survival)

- B 54 (Atl. salmon fry during shipment); 57 (unexplained, of various fishes in Chiputneticook Lakes, N.B.); 86 (salmon fry in Miramichi R., N.B.); 121:62; 124; 415:20; 423:9; 449:7; 638 (Atl. scallop); 138 (salmon & brook trout in a P.E.I. pond); 145; 155; 159; 162:27; 204; 472(A); 661 (Atl. oyster); 207(8) (salmon re temperature, Moser R., N.S.); 229; 669 (young pink salmon); 245 (Atl. salmon from pulpmill pollution); 253 (planted Atl. salmon, trout, etc.); 305 (chinook salmon in fish trap, by plankton bloom); 306 (sockeye salmon in English Bay, B.C., by plankton bloom); 326 (digging effect on softshell clam); 328(13) (heat stroke of Maritimes rivers salmon); 378:64 (clams, Gulf of St. Lawrence); 416 (unexplained, of shore invertebrates, Nanaimo, B.C.); 478 (sockeye salmon, Cultus L., B.C.); 515:12; 525 (rate, Great Slave L. fishery); 520 (re decline of fish in Tathlina L., N.W.T.); 539:45 (eels during shipping); 594:21 (L. Winnipeg whitefish); 607 (from fungus in Atl. herring organs, Bay of Chaleur); 636 (analysis of tag records re cod & haddock mortalities); 693; 696; 697 (European oyster transplanted to Canadian Atl. waters); 713 (re Pac. oyster disease, Demman Is., B.C.); 784 (in rake harvesting softshell clams); 897 (from marking chinook salmon)

Mortimer, Joan E.

- B 696-698 (trial introduction of European oyster to Canadian Atl. coast);
698 (hydrographic & biotic study of Sam Orr Pond, N.B.)

Morton, J.M.

- B 47 (formaldehyde or chlorine water preservative for haddock)

Moser River, N.S. (see also Goldmine Brook)

- B 131(12); 207(6) (salmon & brook trout re estuarial hydrography); 206(2) (sea trout scales); 206(4); 208(12) (salmon development); 206(5) (flora & fauna of vicinity); 207(6); 213(6;13); 214(19); 327(6;7); 336(10) (meteorology, water control & levels); 207(8) (salmon mortality at high temperature); 208(11); 210(11); 329(20) (fish-predatory birds); 208(14;15) (water chemistry); 208(17); 213(6;13) (local water temperature differences); 209(1) (salmon & trout life history; catches); 209(3) (Pond L. dam); 210(10) (sea trout observations); 210(13) (1940 salmon run); 211(15) (artificial salmon spawning beds); 212(1) (handling effects on salmon & trout); 212(2); 327(2) (salmon life history; catches); 213(6;13) (hydrology); 213(11) (trout & salmon angling re physical factors); 213(12;16;17) (eels); 213(15) (salmon smolt run); 214(18); 335(7) (trout and salmon management); 327(1) (salmon & trout fishery: commercial & angling); 329(21) (salmon lice damage during droughts); 329(22) (kelt salmon reconditioning); 329(24) (factors affecting salmon movements); 396(7;8) (salmon stocks mingling); 649 (salmon economic values)

Mosher, K.H.

- B 702 (ocean distribution of Rivers & Smith Inlet sockeye salmon)

Mottley, C. McC.

- B 224 (rainbow trout stocking & management, Paul L., B.C.); 254 (sampling method for creel census); 266 (Jasper National Park sport fishery); 273 (trout fry planting, Quamichan L., B.C.)

Moulting

- B 29; 65 (lobster); 314 (Dungeness crab); 653:76 (Atl. walrus)

Mounce, Irene

- B 120 (eel-grass disease)

Movements (see Distribution; Marking; Migration; Tagging)

Moxostoma spp. (see Sucker, redhorse)

Mozley, Alan

- B 225 (Man. freshwater gastropods & pelecypods)

Mt. Pleasant, N.B. (see Pleasant, Mt.)

Mud-blister worm (see Worm, mud-blister)

Mudrick, Murray

- B 392(2) (weir tending, Minas Channel, N.S.); 394(8) (marine fishing, King's Co., N.S.)

Mueller, K.

- B 678 (Juan de Fuca Strait coho salmon catch & sampling)

Mullan, M.W.

B 440; 503; 562 (self-cleansing of softshell clam)

Murray, A.R.

B 885 (Nfld. & Labrador commercial Atl. salmon summary)

Murray, R.C.

B 618 (lobster marking & tagging, P.E.I.)

Muscle (see also Drip; Juice, muscle; Paralytic shellfish poison; Protein; Rigor)

B 12-15 (proteins of haddock); 16 (decomposition in clam); 21; 25-27; 52 (bacteria in haddock); 28; 33; 36 (opacity on heating; tensile strength); 34; 36; 38 (rigor phenomena in fishes); 135 (nitrogenous constituents in skate & lobster); 342 (physiology of some Atl. marine fishes & invertebrates); 806 (utilization of giant scallop)

E 1; 2 (tensile strength, re smoking); 3 (spoilage by microorganisms); 7; 42; 49 (trypsin hydrolysis); 12; 15 (freezing, storage & thawing effects); 13 (brining effect on fibre size); 16; 20 (specific heat of fresh haddock); 20; 40 (specific & latent heat of various fishes); 20; 50 (freezing point of various); 21 (cold storage temperature effect on drip); 22 (specific heat conductivity of haddock); 23 (shrinkage of crustacean & fish); 26 (freezing rate & heat conductivity); 29 (denaturation during cold storage); 32 (weight changes on brining Atl. cod); 40 (density of various Atl. fishes); 51 (bound & free water in); 53; 55 (non-protein nitrogenous extractives); 54 (analysis method for iodine content)

Mussel, a deepwater marine

B 717 (Modiolus in B.C.)

Mussel, bay (Atlantic) (Mytilus edulis)

B 124 (larvae in plankton); 160:39 (dinoflagellate parasitism of larvae); 161; 333 (re Atl. oyster beds); 184:49; 239:25 (light effect on); 376 (case histories of toxicity to man & animals); 414:81 (on Atl. clam flats); 655 (boring sponges effect on); 675 (fishery potential)

OL 217 (re paralytic shellfish poisoning, Bay of Fundy)

Mussel, bay (Pacific) (Mytilus edulis)

B 860 (B.C. toxicity records)

Mussel, horse (Volvella modiolus)

B 807-809 (in Gulf of St. Lawrence scallop explorations)

Mussel, ribbed (Modiolus demissus)

B 342 (retractor mussel physiology)

Mussel, sea (Mytilus californianus)

B 860 (B.C. toxicity records)

Mussels (Atlantic)

B 883:16 (toxic, Que.)

Mussels, freshwater

B 803:17 (in L. Superior bottom fauna)

Mya arenaria (see Clam, mud (Pacific); Clam, softshell (Atlantic))

Myoxocephalus octodecemspinosus (see Sculpin, longhorn)
scorpius (see Sculpin, shorthorn)

Mysids

B 627 (feeding Phocanema-infected to Atl. cod); 671 (biology & vertical distribution as fish feed, Bras d'Or L., N.S.); 803 (in L. Superior bottom fauna); 883 (in St. John R. estuary & harbour, N.B.)

Mytilus californianus (see Mussel, sea)

Mytilus edulis (see Mussel, Bay (Atlantic); Mussel, bay (Pacific))

Myxine glutinosa (see Hagfish, northern)

Myxophyceae (see also Algae)

OL 203 (growth rates & cell yields from axenic mass culture of 2 species)

- N -

Nadeau, A.

B 886 (paralytic shellfish poisoning incidence & risks, Que.)

Nanaimo Harbour (see also Departure Bay, B.C.)

B 416 (unexplained mortality of shore invertebrates); 547 (oceanography re sewage problem)

Nanoose Bay, B.C.

B 405 (trawl fishery)

OL 208 (physical, chemical & biological oceanographic conditions)

Nass River, B.C.

B 257; 280 (causes of gill-net sinkage); 675 (past, present & future of salmon fishery)

Nassarius obsoleta (see Snail, shore)

Naticidae (see also Drills, clam and oyster; Snail, moon)

B 447:12 (egg collars of some unidentified Atl.)

Neal, G. Morley

B 218 (plankton abundance fluctuations, Florence L., B.C.)

Neanthes virens (sandworm) (see Baitworms)

Neave, Elizabeth A.

B 583 (Fraser R. eulachon fishery)

Neave, Ferris

B 226 (Pacific oyster, Ladysmith, B.C.); 425 (B.C. fishery wealth); 642; 659; 665; 682; 683; 701; 759; 766 (Canadian exploratory fishing & tagging of salmon in open NE Pac. Ocean); 701 (vertical distribution of salmon in open NE Pac. Ocean); 732 (salmon tagging, Gulf of Alaska); 786; 823 (pink salmon distribution & abundance, B.C. offshore & Gulf of Alaska); 830 (pink salmon transplants review); 868 (B.C. chum salmon investigations review); 889 (salmon tagging by vessel "Fort Ross")

Needler, A.W.H.

B 76; 289 (oyster investigations, Shediac Bay, N.B.); 97 (biological study of Maritimes fishery statistics); 104 (starfish predation on Atl. oyster); 109; 151 (winter hydrography & pH, Bideford R., P.E.I.); 148(A) (Teredo larvae settlement); 149(A) (rearing small Atl. oysters); 149(B) (protecting Atl. oyster spat from starfish); 150 (Atl. oyster spat settlement, Bideford R., P.E.I.); 152 (protecting wood against shipworms); 153(A;B) (Cape Breton oysters; culture policy); 154 (Northumberland Strait oysters); 155 (oyster disease & mortality, P.E.I.); 156 (Caraquet Bay oyster industry prospects, N.B.); 157 (deepwater exploration for oyster abundance & distribution, P.E.I.); 161; 333 (shore molluscs resources, Northumberland Strait); 205 (protecting oyster spat from starfish); 287 (oyster disease, Malpeque Bay, P.E.I.); 375 (improving Atl. oyster bottoms); 586 (Atl. estuarine fisheries in general)

Needler, Alfreda Berkeley (see also Berkeley, A.A.)

B 82 (A-H) (Atl. oyster sex reversal); 148(A;C;D) (Teredo larvae settlement); 148 (B) (Teredo gonads condition); 251 (Atl. oyster sex reversal); 347 (oyster growth rate, Bideford R., P.E.I.)

Neguac Bay, N.B.

B 370(9) (oysters)

Nematodes (see also Codworm; Parasites; Philonema)

B 303 (various, in haddock); 461:40; 485:26 (in beluga); 624; 641; 687; 703 (re Asiatic vs. N American pink & sockeye salmon stocks differentiation); 870:18 (Contracaecum clavatum in capelin; life history)

Nereis (a polychaete)

B 905 (effect of eel-grass algicide on)

Nervous system (see also Anatomy; Histology)

B 134 (of Atl. skates re stomach motility & secretion); 186 (spinal cord destruction effect on Atl. skate blood); 242 (re Atl. skates claspers); 447 (Polinices radulae)

Nesslin Lake, Sask.

B 494 (nature; fishes; Triaenophorus infection of whitefish); 495 (net plankton)

Net selectivity

B 363 (otter trawl savings gear); 467 (gillnet mesh selectivity re goldeye maturity); 484 (gillnet mesh sizes, L. Manitoba fisheries); 626 (re L. Winnipeg fishery); 798 (trawl mesh sizes & materials to meet ICNAF specifications)

Nets (see also Exploration; Fishing methods; Gear; Vessels, fishing)

B 257; 280 (gill: causes of sinkage, B.C.); 319; 322 (plankton: efficiency); 505 (Atl. herring experimental drift-nets); 507 (in L. Winnipeg commercial fisheries); 518 (in Great Slave L. commercial fisheries); 558; 609; 626 (L. Winnipeg trap & gill net experiments); 566 (trammel: for northern pike control); 568 (for herring in Europe); 659 (salmon catches in open NE Pac. Ocean experimental fishing); 706(1;2;3) (changing types of, in a L. Erie commercial fishery, 1904-1956)

New Brunswick (see also Fundy, Bay of; Maritimes; Oceanography, Atlantic, NW inshore; Passamaquoddy Bay; St. Lawrence, Gulf of; also other features and localities, e.g. Miramichi River and Bay; St. John River)

B 243 (biological survey of some streams); 244; 250; 497(A;B) (pulpmill pollution of streams & seashore waters)

Newcombe, Curtis L.

B 46 (Passamaquoddy Bay animal communities; sand porosity); 288 (Bay of Fundy softshell clam fishery)

Newfoundland (see also Belle Isle, Strait of; Bonavista; Cabot Strait; Labrador; Maritimes; Oceanography, Atlantic NW inshore; also other features and localities)

B 430 (commercial fishes); 588; 591 (harp seal fishery); 648; 880 (scallop exploratory fishing); 675 (survey of past, present & future trends of fisheries); 801 (fishing & increased trawl mesh size effect on fisheries); 810 (& Labrador marine decapod crustaceans); 816; 879 (inshore cod catches by types of gear); 817; 822 (re ICNAF regulations re redfish trawling); 834 (shortfin squid biology); 861 (salmon fishing, St. George's Bay); 870 (capelin life history); 885 (commercial salmon summary)

OL 10 (Trinity Bay oceanography)

Nezumia bairdi (see Marlin-spike)

Nicol, J.A. Colin

B 208(10) (ecology of a Moser R. tributary, N.S.); 208(13) (Moser R. stoneflies); 208(17) (Moser R. local temperature differences); 209(3) (hydrology of a Moser R. dammed stream); 210(9) (river ascent of Atl. salmon after an experimental freshet)

Nilkitkwa Lake (Babine River system), B.C.

B 569; 819 (morphometry); 637; 664; 690; 785 (salmons investigations); 820 (thermal structure); 821 (pelagic entomostracan zooplankton)

Nipigon, Lake, Ont.

B 523 (whitefish life history & Triacnophorus infection)

Nipisquit River, N.B.

B 390(10) (salmon management possibilities)

Nitrate (Note: The numerous data for routine determinations of nitrate content of seawaters are not indexed unless having special significance)

B 71 (combined NO₂ and NO₃ determination for seawater); 403 (analysis method for seawater)

OL 19 (standard analysis method for seawater); 30; 211 (in B.C. coastal waters); 55; 135; 209 (at Pac. Ocean Weather Station "P" re water fertility); 135 (in B.C. offshore waters re fertility); 179; 209 (in NE Pac. Ocean); 181 (in St. John R., N.B.); 208 (Nanoose Bay, B.C., re fertility)

Nitrite (Note: The numerous data for routine determinations of nitrite content of seawaters are not indexed unless having special significance)

B 71 (combined NO₃ and NO₂ determination for seawater); 403 (analysis method for seawater)

OL 18 (standard analysis method for seawater); 20; 179 (in NE Pac. Ocean); 30; 211 (in B.C. coastal waters); 55; 187 (at Pac. Ocean Weather Station "P" re water fertility); 181 (in St. John R., N.B.)

Nitrogenous constituents and products (see also Ammonia; Analysis, chemical (methods); Composition, chemical; Denaturation; Drip; Muscle; Proteins; Quality of fishery products; Trimethylamine; Urea; etc.)
 E 53 (fish muscle extractives); 53; 55 (non-protein, re fish flavour)
 OL 211 (particulate nitrogen in Strait of Georgia waters)

Noise (see Sound, reaction to)

Nomenclature (see also Taxonomy)

B 197:1 (scientific & common, of giant scallop); 201(B) (W Atl. smelt & its landlocked varieties); 236; 298 (pilchard); 264 (Maritimes freshwater fishes); 383 (Polinices clam drill); 581; 615 (ciscoes); 635 (classification comparisons for fishes)

North River, N.B. (see Petitcodiac River system)

Northumberland Strait (N.B.-N.S.-P.E.I.) (see also those Provinces; also Oceanography, Atlantic, NW inshore; St. Lawrence, Gulf of)

B 154 (oysters); 161 (bivalve resources); 333 (hydrography & mollusc resources); 395 (scallop surveys); 828 (ocean quahaug resources)

Northwest Territories (N.W.T.) (see also Arctic, Canadian; Oceanography, Arctic; also names of bodies of water, e.g. Baffin Bay; Foxe Basin; Great Bear Lake; Great Slave Lake; Hudson Bay; Hudson Strait; Kakisa Lake; Nueltin Lake; Ogac Lake; Tathlina Lake; Willow Lake; etc.)

B 675 (survey of past, present & future trends of fisheries)

Notemigonus crysoleucas (see Shiner, golden)

Notropis cornutus (see Shiner, creek)
hudsonius (see Shiner, spotted)

Nova Scotia (see also Canso, Strait of; Breton, Cape; Fundy, Bay of; Margaree River system; Maritimes; Oceanography, Atlantic; Rawdon River; St. Lawrence, Gulf of; also other features and localities)

B 291 (clam flats survey); 854 (offshore lobster exploratory fishing); 863 (offshore argentine & silver hake exploratory fishing); 864 (offshore herring exploratory fishing)

Nucleic acids

OL 208; 211 (ribonucleic acid in marine zooplankton)

Nueltin Lake, N.W.T.-Man.

B 480 (commercial fishery possibilities)

Nutrition; Nutritive value (see Composition, chemical; Digestibility; Feed; Feedstuff; Food; Hatchery; Productivity, primary; Vitamin; Quality of fishery products; etc.)

Nuttall, J.B.

B 413; 442 (hydraulic model of Alberni Harbour, B.C.)

- 0 -

Oakland, G.B.

B 486 (Trianaophorus infestation rates, L. Winnipeg)Ocean (see name of ocean; also Oceanography headings that follow, particularly Oceanography, general)

Ocean Weather Station "P" (see Bathythermograms; Oceanography, Pacific, N open ocean)

Oceanography, Arctic Canadian (see also Bathythermograms; Ice; Ice islands; also Arctic, Canadian; also names of islands, localities and bodies of water, e.g. Baffin Bay; Boothia, Gulf of; Foxe Basin, etc.)

B 603 (Canadian Archipelago reconnaissance); 613 (Foxe Basin); 748 (marine benthos & ethology interrelations with)

OL 6 (Foxe Basin ice discoloration); 12; 60 (ice conditions); 13 (Prince Regent Inlet & Gulf of Boothia region); 33; 40 (Ice Island "Bravo" (T-3) data during drift); 45 (Foxe Basin sediments); 46 (N Hudson Bay, Foxe Channel, Hudson Strait); 53 (track charts of A.O.G. cruises); 71 (SE Hudson Bay & James Bay); 89 (sediments of eastern); 90 (Canadian research vessels); 108; 198 (Prince Gustaf Adolf Sea re Project "ICE PACK" underwater sound studies); 144 (Canadian Basin of Arctic Ocean)

Oceanography, Atlantic, N offshore (see also Atlantic Oceanographic Group; Bathythermograms; Hydrography; also (to some extent) next Oceanography heading) NOTE: Concerning the following division of oceanographic topics between the Biological Series (B) and the Oceanographic and Limnological Series (OL), see item B of the Introduction

B 94; 136; 168; 170; 172; 174; 174; 535; 538 (Scotian Shelf hydrography); 105; 167; 169; 171; 173; 388; 475 (Scotian Shelf hydrodynamics); 165 (western N Atl. oceanography status); 353; 354; 355; 356 (depths, salinities & temperatures off N.S.); 385; 386 (vertical temperature distribution); 387 (into Hudson Bay); 389 (bibliography); 527 (at Sambro lightship off N.S.); 535; 538; 577 (Scotian Shelf temperature distribution); 564 (re continental shelf, Labrador to Cape Cod); 572; 584 (ICNAF Convention Area waters); 584 (temperatures & salinities); 585(1;3) (review); 614 (ice & iceberg incidence off Nfld. S coast); 619 (slope water E of Georges Bank); 632 (slope water of Grand Bank); 705 (of two Scotland lochs, re pulp mill pollution); 743 (marine chart requirements for Canadian fishing fleet); 863:32 (offshore N.S.)

OL 5; 64 (Laurentian Channel); 15; 65; 178 (drift bottle release & recovery locations); 34 (I.G.Y. Project "Deep Water Circulation"); 35; 41; 64 (Scotian Shelf); 38 (re sonar ranging); 41; 64 (Grand Bank; Labrador Shelf); 53; 96 (track charts of A.O.G. cruises); 56 (physical oceanography field data, "Calanus" Expedition, 1949 & 1955); 64; 65 (ICNAF areas); 65 (list of MS Reports by A.O.G. re ICNAF areas to 1960); 90 (Canadian research vessels); 95; 207 (Halifax to Scotian Shelf temperatures, salinities & densities, 1950-1960); 107; 127 (Continental Shelf bottom sediments re acoustical reflection); 112; 114-124; 156; 162; 165 (transport computations); 167 (airborne radiation thermometer trials for surface temperatures)

Oceanography, Atlantic, NW inshore (see also Atlantic Oceanographic Group; Bathythermograms; Fundy, Bay of; Hudson Bay; Hudson Strait; Oceanography, Arctic Canadian; St. Lawrence, Gulf of; Hydrography; also (to some extent) preceding Oceanography heading) NOTE: Concerning the following division of oceanographic topics between the Biological Series (B) and the Oceanographic and Limnological Series (OL), see item B of the Introduction

B 1; 6; 62; 70; 106; 175; 176; 455; 528; 551; 633 (Bay of Fundy); 46; 103; 106; 175; 176; 582 (Passamaquoddy Bay); 48 (St. John R. & Kennebecasis Bay); 69 (Bay of Fundy vertical heat transfer); 70; 79; 108; 177-181; 537 (surface temperatures analyses); 76; 184; 239; 289 (Shediac Bar, N.B., re oyster beds); 96 (sea re air temperatures, St. Andrews, N.B.); 103; 106; 111; 175; 176 (Halifax area); 182 (Chaleur Bay, N.B., re lobster larvae); 211(18:4); 417; 449; 456; 500; 505; 578; 606 (Gulf of St. Lawrence); 332; 472 (N.B., re oyster beds); 333 (Northumberland Strait); 389 (bibliography); 409 (Gulf of St. Lawrence short-term vertical structure fluctuations); 422 (Strait of Belle Isle); 430:6 (Nfld. coast); 432; 433; 502 (Grand Manan Channel, N.B.); 444 (Bonavista, Nfld.); 497 (Bay of Chaleur re pulp mill pollution); 541 (Bay of Islands, Nfld.); 552 (Canso Strait); 574 (Miramichi R. estuary, N.B.); 578; 605 (Laurentian Channel); 585(1;3) (review); 593 (Magdalen Shallows bottom temperatures); 594 (Cabot Strait); 614 (ice & iceberg incidence, Gulf of St. Lawrence); 625 (re Bay of Fundy sardine fishery); 743 (marine chart requirements for Canadian fishing fleet)

OL 1; 2; 64 (St. Andrews, N.B.); 2; 64 (Passamaquoddy area); 3; 9; 11; 64; 65; 183; 185; 190 (Gulf of St. Lawrence region); 7 (Strait of Belle Isle); 10 (Trinity Bay, Nfld.); 12 (Hudson Strait); 39 (temperatures); 42 (temperatures & salinities re sea-level recording); 53; 96 (track charts of A.O.G. cruises); 97 (Cabot Strait Section, 1951-1961); 56 (physical oceanography field data, "Calanus" Expeditions, 1949-1955); 64; 65 (ICNAF areas); 65 (list of MS Reports by A.O.G. to 1960); 90 (Canadian research vessels); 107; 127; 140; 145 (Gulf of St. Lawrence sediments); 178 (drift bottle release & recovery data)

Oceanography, general (see also Atlantic Oceanographic Group; Hydrography; Pacific Oceanographic Group) NOTE: Concerning the following division of oceanographic topics between the Biological Series (B) and the Oceanographic Series (OL), see item B of the Introduction

B 71 (NH₃ and combined NO₂ plus NO₃ determination methods); 131(13) (hydrograph for water-level fluctuations); 139 (Winkler method for dissolved O₂ determination); 211 (drift bottles with drags); 219; 621 (dynamic current survey procedure); 220 (chemical composition data reporting system); 293 (PO₄ determination method); 294 (abstracts of oceanographic methods); 389 (bibliography); 403 (manual of chemical and physical methods); 406 (review of wave studies); 413; 442 (hydraulic model of a harbour); 443 (freezing effect on SO₄/Cl ratio); 477 (seawater sampling bottle); 548 (seawater structure characteristics); 621 (calculation of geostrophic currents)

OL 18; 19 (standard methods for seawater analyses); 21 (interpretation of data re thermodynamics); 24; 25; 26; 27; 38; 61 (sound velocity in seawater); 25; 27; 72; 73 (computer programming of data); 51 (seminars, principally on physical & hydrodynamical oceanography); 61; 102; 167 (airborne radiation thermometer for sea surface layers); 76; 182; 196; 197 (current-measuring devices); 88 (aerial estimation of suspended matter); 90 (Canadian

Oceanography, general (cont'd)

oceanographic research ships: photos & descriptions); 103; 105 (OCEAN system of bathythermograms assessment); 108; 144; 146 (re Pac. Naval Laboratory projects); 109 (energy transformations theory); 132 (surface layers transient temperature structure prediction); 133 (electrical sea-surface temperature recorder); 163 (FORTRAN computer programming for atmospheric pressure effect on oceanic water mass transport); 168 (analyses methods for dissolved carbohydrates); 170 (theoretical analysis of fixed wave suppressors in an oceanographic model); 173 (in situ photosynthesis in a submerged plastic bag); 184 (electric analogs in physical oceanography); 200 (CaCO₃ solubility product in seawater: temperature effect)

Oceanography, Pacific, N open ocean (see also Bathythermograms; Bering Sea; Alaska, Gulf of; Pacific Oceanographic Group; also (to some extent) following two Oceanography headings)

NOTE: Concerning the following division of oceanographic topics between the Biological Series (B) and the Oceanographic and Limnological Series (OL), see item B of the Introduction

B 642; 682 (bathythermograms); 659; 682; 824 (re exploratory salmon fishing)
 OL 4; 16; 174; 201 (plankton data records); 4; 16; 20; 28; 29; 43; 49; 50; 54; 63; 69; 82; 87; 91; 101; 111; 134; 138; 169; 179; 205 (meteorological, physical & chemical data records); 14; 20; 31; 44; 55; 59; 81; 91; 94; 98; 106; 111; 113; 125; 126; 129; 134-137; 139; 154; 157; 171; 187; 193; 202 (Ocean Weather Station "P" data records, & data taken from & to Swiftsure lightship to Station "P"); 20; 55; 81; 126; 135-137; 174; 179; 193; 201; 209 (primary production of waters data); 51 (seminars on currents, physical & hydrodynamical oceanography); 61; 102 (airborne radiation thermometer trials for sea surface temperatures); 66; 143; 169 (re salmons exploratory fishing & tagging); 77-80; 85; 93; 128; 149-153; 164; 166; 216; 218-225; 229 (transport computations); 90 (Canadian research vessels: photos & descriptions); 92; 103; 186; 205 (Subarctic region); 103; 105 (OCEAN system of bathythermograms assessment); 108 (off San Diego, Calif., re Project HYDROPHONE underwater sound studies); 134 (causes of warm & cold years for surface layers); 141 (drift-bottle data); 179 (primary productivity & associated chemical & physical data review, 1958-1964); 187 (physical & chemical data at Ocean Weather Station "P", 1956-1963 review); 201 (net zooplankton atlas, 1956-1964); 202 (net zooplankton seasonal & annual variations at Ocean Weather Station "P", 1956-1964); 205 (surface layers temperature structure)

Oceanography, Pacific, NE inshore (see also Bathythermograms; Georgia, Strait of; Inlet and fiord oceanography; Hecate Strait; Juan de Fuca, Strait of; Pacific Oceanographic Group; Queen Charlotte Islands region; also certain localities and bodies of water; also (to some extent) following Oceanography heading) NOTE: Concerning the following division of oceanographic topics between the Biological Series (B) and the Oceanographic and Limnological Series (OL), see item B of the Introduction

B 274 (W coast Vancouver Is.); 294 (abstracts of); 324 (Quatsino Sound); 389 (bibliography); 405:10; 441 (Cape Lazo); 412 (re Vancouver sewage pollution effects); 413; 442; 514 (Alberni Harbour hydraulic model); 438; 460 (temperatures, salinities & densities); 441 (winter, Lazo Bight & Baynes Sound); 459 (Fraser R. estuary); 501; 549 (review of program & plans, daily coastal seawater observations); 513 (Strait of Georgia internal waves); 529 (Juan de Fuca Strait surface tidal currents); 530 (Hecate

Oceanography, Pacific, NE inshore (cont'd)

- Strait tidal currents); 547 (re Nanaimo sewage problem); 549:5 (re B.C. fisheries); 575 (long-term temperature trends re commercial fisheries); 585(1;2) (review); 610 (B.C. inlets & fiords); 712 (Saanich Inlet re echo-scattering layer); 733 (re pulpmill pollution, Prince Rupert area)
- OL 17; 36; 47; 52; 58; 83 (coastal seaways physical & chemical data); 23; 48; 67; 68; 104; 131; 160; 161; 177; 195; 204; 215 (B.C. coastal lighthouses temperature & salinity records); 30; 211 (chemical data & light attenuating properties); 32; 81 (Departure Bay surface waters); 61; 102 (airborne radiation thermometer trials for sea surface temperatures); 81; 135; 193; 211 (re primary productivity); 90 (Canadian research vessels photos & description); 91; 94; 111; 113; 129; 142 (monitor stations); 100 (Strait of Georgia, re possible radioactive wastes pollution); 110; 130; 158; 159; 170; 172 (Hecate Strait region oceanographic model); 142 (Queen Charlotte Is. region & adjacent waters); 146 (between Vancouver Is. & mainland, re underwater sound studies); 147 (drift bottle data; Strait of Georgia & W coast Vancouver Is.); 177 (coastal lighthouses temperature & salinity data classification, 1915-1962); 199 (echo-scattering layers); 208 (chemical, physical & biological, Nanoose Bay); 211 (chemical, physical & biological, Strait of Georgia); 228 (Fatty Basin, Vancouver Is., re lobster transplantation)

Oceanography, Pacific, NE offshore (see also Bathythermograms; Alaska, Gulf of; Pacific Oceanographic Group; also (to some extent) preceding two Oceanography headings) NOTE: Concerning the following division of oceanographic topics between the Biological Series (B) and the Oceanographic and Limnological Series (OL), see item B of the Introduction

- B 268 (W coast Vancouver Is.); 294 (abstracts of); 389 (bibliography); 457; 458; 476; 550 (temperatures, salinities, densities, dynamic heights); 585 (1;2) (review)
- OL 8; 22; 23; 37; 48; 62; 76; 99; 206 (Strait of Juan de Fuca & at lightships off mouth); 17; 36 (plankton, Cape Flattery to off SE Alaska); 17; 36; 47; 50; 52; 54; 58; 69; 83; 87; 92; 101; 111; 113; 129; 133 (physical & chemical data records, Cape Flattery to off SE Alaska); 30 (chemical data & light attenuating properties); 49; 91; 101; 111; 113; 129 (off Queen Charlotte Is. & Cape Flattery); 61; 102 (airborne radiation thermometer trials for sea surface temperatures); 66 (W coast Vancouver Is. re fur seal exploratory fishing); 70; 76; 84; 91; 94; 111; 113; 129; 146 (W coast Vancouver Is.); 90 (Canadian research vessels: photos & description); 108 (Dixon Entrance & off W coast Queen Charlotte Is. re Project LEAP FROG underwater sound studies); 135 (re primary productivity)

Octopus (Octopus hongkongensis)

- B 425:27 (B.C. production)

Odell, Emma C.

- B 89 (illumination re copepods vertical distribution)

Odobenus rosmarus (rosmarus) (see Walrus, Atlantic)

Odometers

- B 888 (for distance travelled by scallop drags)

Odonata (see Dragonflies)

Odostomia (see Snails)

Odour

B 646 (role in sea lamprey predation behaviour)

Ugac Lake, Baffin Island, N.W.T.

B 709 (hydrography & zooplankton)

Oils, whole (see Fats and oils; Vitamin)

Oils, liver (see Fats and oils; Liver; Vitamin)

Oithona similis (a copepod) (see also Copepods; Zooplankton)

OL 202 (at Pac. Ocean Weather Station "P")

Oliver, D.

OL 188 (airborne radiation thermometer)

Onaman Lake, Ont. (see Thunder Bay District, Ont.)

Oncorhynchus gorbusha (see Salmon, pink)

keta (see Salmon, chum)

kisutch (see Salmon, coho)

nerka (see Salmon, sockeye)

tshawytscha (see Salmon, chinook)

above five species, in general (see Salmon (Pacific))

Ontario (see also Hudson Bay; Great Lakes; Ontario, Lake; also names of localities and bodies of water)

B 340 (Gammarus distribution); 675 (survey of past, present & future trends of fisheries); 871:3,24 (commercial fisheries history & gear)

Ontario, Lake (see also Quinte, Bay of)

B 10 (description & habits of various ciscoes); 397 (vertical temperature distribution)

Opacity

B 28 (heat effect on fishes muscle)

Ophiodon elongatus (see Lingcod)

Osmerus mordax (see Smelt, American)

Osmotic pressure (see Pressure, osmotic)

Osprey

B 131(14:17) (feed, Margaree R. system, N.S.); 130(11); 329(20) (feed, Moser R. system, N.S.)

Osteology (see Ribs; Vertebrae)

Ostracods

OL 174; 202 (NE Pac. Ocean); 211 (Strait of Georgia)

Ostrea edulis (see Oyster, European)

lurida (see Oyster, Olympic)

Otoliths (for age determination)

B 256; 583 (eulachon); 298 (pilchard); 348 (B.C. lemon sole); 361:12,45 (yellowtail flounder); 362:61 (Atl. halibut); 434 (Atl. hake); 439:23 (American eel); 870:8 (capelin)

Otter, sea (see Sea otter)

Otter trawl (see Trawl, otter)

Outram, D.N.

B 753; 849 (salmon catches in B.C. coastal herring purse-seining)

Ova (see Eggs)

Ovary; Ovulation (see also Eggs; Gonads; Reproduction)

B 434 (Atl. hake); 588:61 (histology of harp seal); 700; 754 (histology of northern fur seal); 752 (ovulation counts of fin whales)

Overfishing (see also Exploitation; Management)

Ovulation (see Eggs; Gonads; Ovary; Reproduction)

Ox

E 55 (secretagogue action of extracts from)

Oxygen, dissolved (see also Lethal limits; Limnology; Oceanography; Respiration)

NOTE: The numerous data for routine determinations of dissolved oxygen content of natural waters are not indexed unless having special significance.

B 4; 86 (Atl. salmon fry tolerance to lack of); 63; 64 (*Gammarus* amphipods requirements); 125:20 (starfish consumption of); 139; 403 (Winkler analysis method for); 305; 306 (excess due to phytoplankton cause of Pac. salmon mortality); 412; 459 (Fraser R. estuary, re sewage disposal); 588 (tolerance of mature lobsters); 638 (re high temperature tolerance of giant scallop); 662 (re lobster respiration in water & air)

OL 18 (standard analysis method for seawater); 186 (structures, subarctic Pac. Ocean); 187 (structures, at Pac. Ocean Weather Station "P", 1952-1963)

Oyster, Atlantic (*Crassostrea virginica*)

B 74; 141; 143 (embryo development re temperature); 75; 347 (growth rate); 76; 184; 239; 289; 370:12 (Shediac Bay, N.S.); 82; 82A-82F; 251 (sex reversal); 83; 141 (growth re salinity); 104; 125; 163; 205 (starfish predation on, & prevention); 141; 150; 159:13; 160:4; 162:11; 203; 249; 292; 332; 472(B) (larval); 141 (spermatozoa & ova re temperature & salinity); 142 (Cape Breton fishery); 143; 228 (feed); 144; 145; 155; 204; 287; 661 (Malpeque disease); 146; 239; 472 (culture conditions, Malagash, N.S.); 147; 159:32; 160:39; 162:42; 370:31,40,43; 378:42 (parasites & endozoan parasites); 149 (rearing small, P.E.I.); 150; 158; 203; 370 (spawning & spatting, P.E.I.); 151; 249; 292; 347 (re hydrography, Bideford R., P.E.I.); 153; 159; 162; 164; 184 (Cape Breton, N.S.); 154; 161; 333 (Northumberland Strait, N.S. coast); 157 (exploration in Charlottetown region, P.E.I.); 162:10 (artificial spawning induction); 228 (diatoms as feed, in B.C.); 233 (transplantation to B.C.); 265; 337(1); 684; 685 (forecasting setting, P.E.I.); 331 (condition factor, growth, shell characteristics, P.E.I.); 331:51 (storage); 332 (culture, Shippigan area, N.B.); 370 (several investigations: shell, condition,

- Oyster, Atlantic (cont'd)
 parasites, etc.); 375 (improving soft muddy bottoms, using sand);
 378:44 (diatom feed cause of green-gilled); 655 (boring sponges effect on);
 675 (past, present & future of fishery); 853 (effects of eel-grass
 algacides on)
- Oyster, European (*Ostrea edulis*)
 B 693; 696-698 (trial introduction to Canadian Atl. coast); 829 (study of
 a N.S. pond re suitability for)
- Oyster, Olympic (*Ostrea lurida*)
 B 228 (diatoms as feed)
- Oyster, Pacific (*Crassostrea gigas*)
 B 216 (culture possibilities, W. coast Vancouver Is., & experimental plantings);
 226 (reproduction, Ladysmith, B.C.); 228 (diatoms as feed); 232 (flesh &
 style coloured red by ciliate feed); 276 (routine glycogen assay method);
 425:27 (B.C. production); 675 (past, present & future of B.C. fishery);
 713 (disease & mortality, Denman Is., B.C.); 765 (pulpmill pollution effect
 on, Crofton, B.C.); 860 (B.C. toxicity records)
- Oyster, rock (*Pododesmus macroschisma*)
 717 (in B.C. waters)
- Oyster drill (see Drills, clam and oyster)
- Oysters, Pacific
 425:27 (B.C. production)
- P -
- Pacific Marine Fisheries Commission (see also International North Pacific
 Fisheries Commission)
 B 663 (standardization of fishing effort statistics for Pac. coast trawl
 fisheries); 872 (report of B.C. trawl fishery & investigational aspects)
- Pacific Ocean (see Exploration; Fishery, commercial; International North
 Pacific Fisheries Commission; International North Pacific Fur Seal
 Commission; Oceanography, Pacific; Pacific Oceanographic Group;
 Plankton; Production, primary; Tagging; Marking; Zooplankton; etc.)
- Pacific Oceanographic Group (P.O.G.) (Note: The following references under this
 author heading are those for which the only authorship given is the name
 of this Group; for other reports by this Group see item C of the Intro-
 duction, also author names, Oceanography, Pacific, and other headings
 pertaining to Pacific oceanography)
 B 438; 457; 458 (B.C. coastal & offshore oceanography); 459 (Fraser R.
 estuary hydrography); 501 (daily seawater observations from B.C. coast
 lighthouses: programs & plans); 585 (list of publications to 1954)
 OL 4; 14; 16; 28; 29; 31; 36; 43; 44; 47; 49; 50; 52; 54; 87 (NE Pac. oceanography);
 8; 16; 17; 22; 23; 36; 37; 47; 48; 52 (B.C. coast lighthouse, coastal & offshore
 oceanography); 143; 169 (bathythermograms from Gulf of Alaska salmon tagging)
- Packaging
 E 21; 39 (effect of wrapping re desiccation of refrigerated fish)

Paloheimo, J.E.

B 628 (fish population dynamics mathematics); 636 (analysis of tag records re N.S. cod & haddock mortalities); 714 (mortality estimation of Georges Bank haddock); 788; 789 (degree of effort in catch per unit of effort, Atl. offshore fishery); 790 (species association in commercial catches by Atl. offshore fishery); 811 (mathematical treatment of predator-prey relationships)

Pandalopsis dispar (see Shrimp, sidestripe)

Pandalus borealis (see Shrimp, pink)

danae (see Shrimp, coonstripe)

hypsinotus (see Shrimp, humpback)

montagui (see Shrimp, striped pink)

platyceros (see Prawn)

Panope generosa (see Clam, geoduck)

Panton, Jean R.

B 35; 72 (rigor phenomena in fishes)

E 42; 49 (tryptic hydrolysis of fresh & frozen fish muscle)

Paphia staminea (see Clam, littleneck (native))

Paralepis rissoi krøyeri (see Barracudina, white)

Paralithoides camtschatica (see Crab, king)

Paralytic shellfish poison

B367(2) (Gonyaulax in Atl. plankton); 376 (case histories of toxic effects on man & domestic animals); 806:5 (in Bay of Fundy scallops); 809:12 (assays for, in Gulf of St. Lawrence giant scallop organs); 860 (B.C. records, 1942-1965); 886 (incidence & risks, Que.)

OL 217 (cause, seasonal outbursts, & management, Bay of Fundy)

Parasites (see also Codworm; Drills, clam and oyster; Triaenophorus; also other common or scientific names of parasitic organisms and their hosts)

B 3:8; 304; 316 (of sockeye salmon); 73; 419:13 (of squid); 80 (of lobster larvae); 115(16:2); 210(14); 329(21) (Atl. salmon lice); 132:35 (of Atl. brook trout); 147; 160:45; 162:42; 163 (of Atl. oyster); 160:39 (of Atl. mussel larvae); 259 (copepods on B.C. fishes & marine mammals); 261 (Costia necatrix protozoan, of young Pac. salmon); 297 (fish lice & their control); 301 (Diphyllbothrium re lake trout); 303 (internal, of haddock); 304 (Acanthocephala in Pac. salmon); 321 (of salmonoid fishes); 350:26 (unidentified platyhelminth in scallop stomach); 373:149 (of scallop eggs & larvae); 430:3 (Atl. codworm); 461:40; 485:26 (of beluga); 576 (& hosts, Heming L., Man.); 624; 641; 658; 687; 703 (re distinguishing between N American & Asiatic pink & sockeye salmon stocks); 631; 826 (bibliography of, in Canadian fishes); 696 (apt to be introduced in transplanting European oysters to Canadian Atl. waters); 834 (of short-finned squid); 860:18 (of capelin); 877 (of pink salmon in early sea life)

OL 213 (of Pasiphaea pacifica pelagic shrimp, Strait of Georgia)

Parathemisto pacifica (see also Amphipods; Zooplankton)

OL 202 (at Pac. Ocean Weather Station "P")

Pare, Louis

B 18 (bacteria in canned lobster)

Parophrys vetulus (see Sole, English)

Parr (see name of adult form of the trout or salmon)

Parrish, Basil B.

B 668 (Passamaquoddy Bay herring problems appraisal)

Parsons, T.R.

OL 55 (data record, oceanic fertility & productivity at Pac. Ocean Weather Station "P"); 81; 135 (data & discussion re primary productivity research); 193 (factors governing primary production, Strait of Georgia, Queen Charlotte Sound & NE Pac. Ocean); 208 (physical, chemical & biological oceanography, Nanoose Bay, B.C.); 214 (new applications of Coulter counter to marine research)

Particulate matter (see Matter, particulate)

Pasiphaea pacifica (see Shrimp, glass)

Passamaquoddy Bay and vicinity, N.B. (see also Fundy, Bay of; St. Andrews region)

B 31 (commercial fishery bait & hooks); 46 (marine animal communities; sand porosity); 62 (proposed power project, re Bay of Fundy tides); 71 (nitrogen compounds in seawater); 87; 137 (copepods); 96 (sea re air temperatures); 103 (hydrography); 248 (scallops); 345 (autumn maximum diatom growth); 504 (rheotaxis of herring re weirs); 562 (self-cleansing of softshell clam); 582 (winter flounder seasonal movements); 668 (herring problems assessment); 707 (zooplankton)

OL 2; 64; 65 (oceanographic features); 57 (temperatures & salinities)

Paste

E 43 (canned scallop)

Pathology (see also Disease; Histology)

B 144 (Atl. oyster Malpeque disease); 321 (salmonoid fishes diseases); 607 (Atl. herring organs fungus disease)

Paul Lake, B.C.

B 224 (stocking & management of rainbow trout); 254 (testing creel census sampling method)

Pease, A.K.

OL 208 (physical, chemical & biological conditions, Nanoose Bay, B.C.)

Pecten islandicus (see Scallop, Iceland)

Pecten spp. (scallops)

B 717; 746 (in B.C. deepwater clam surveys)

Peer, D.L.

OL 145 (Gulf of St. Lawrence benthic communities composition)

Pelecypoda (see also Fauna, aquatic; Fauna, bottom)

B 225 (Man. freshwater); 803:17 (L. Superior); 883 (St. John R. estuary, N.B.)

Pelts (see Seal, northern fur)

Pendrell Sound, B.C.

OL 81; 211 (chlorophylls, carotenoids & mineral nutrients re primary production & oysters)

Pentland, Ernest S.

B 63; 64; 340 (distribution, temperature & O₂ tolerances, of Gammarus amphipods); 100 (marine amphipods life history & reactions)

Pepsin (see enzymes)

Perca flavescens (see Perch, yellow)

Perch, Pacific ocean (Sebastes alutus)

B 767; 768 (in Gulf of Alaska experimental trawling); 812; 867; 869; 890; 891 (catch rate, sizes, sex, etc., in NE Pac. coast experimental fishing); 872 (B.C. trawl fishery)

Perch, shiner (Cymatogaster aggregata)

B 323 (digestive tract histology)

Perch, white (Roccus americanus)

B 57 (sudden mortality in a N.B. lake); 61 (morphometry; growth rate); 117(30:51) (Margaree R., N.S.); 263 (piscicides effect on); 379(4) (lethal temperature; light sensitivity)

Perch, yellow (Perca flavescens)

B 58; 245(B) (extensive study of stomach contents, Lake Champlain); 245(A) (characteristics, Lake Champlain); 263 (piscicides effect on); 445; 450; 543; 544; 554 (availability, size & dressed weights, L. Winnipeg fishery); 484; 507:41 (L. Manitoba fishery); 507:42; 609 (L. Winnipeg catches); 521 (growth & age re Triaenophorus infection, Heming L., Man.); 563:27 (movements re light, in pond); 579 (parasitism re spawning & fecundity, Heming L., Man.)

Percina uranidea (see Darter, stargazing)

Periwinkle (Littorina littorea)

B 675 (Atl. fishery potential); 853 (eel-grass algicides effect on)

Perry, R.B.

OL 89 (Canadian eastern Arctic archipelago marine sediments)

Pesticides (see also Insecticides; Piscicides)

B 479; 493 (tests for chemical control of Triaenophorus)

Petitcodiac River system, N.B. (see also Pollet River)

B 212(3; 4:11; 5); 327(8); 328(10); 336(12;13); 380(6); 381(5) (planting salmon); 327(3;5) (smolt trap operation); 327(4) (water temperatures & heights); 327(5) (traps re shad migration); 335(1); 396(7) (salmon marking & tagged); 336(11) (fish species distribution); 382(8) (bottom organisms); 382(9); 391(15) (artificial cover for salmon); 392(16) (drift-net fishery); 439 (eel investigations)

Petpeswick, N.S.

B 378; 414(5) (clams)

Petromyzon marinus (see Lamprey, sea)

pH (Note: Data resulting from routine pH determinations on natural waters are not indexed unless of particular significance)

- B 36 (of fish muscle re rigor); 151 (of oyster beds, Bideford R., P.E.I.);
 210(5:12) (affecting salmon, Goldmine Brook, N.S.); 284 (changes in beef
 liver stored for hatchery feed); 340 (re Gammarus amphipods); 403 (deter-
 mination method for seawater); 691 (effect on 2 lampricides)
 E 32 (effect on cod muscle shrinkage); 50 (role in canned lobster discoloration)
 OL 18 (standard method of determination for seawater)

Philonema (nematodes)

- B 304 (biology & life history re sockeye salmon); 624; 641 (re distinguishing
 Asiatic vs. N American pink & sockeye salmon stocks); 627 (infection of cow
 intestine)

Phoca groenlandica (see Seal, harp)hispada (see Seal, ringed)vitulina concolor (see Seal, harbour (Atlantic))Phocanema decipiens (see Codworm)Pholis gunnellus (see Gunnel, rock)

Phosphorescence

- B 234 (organisms causing seawater)

Phosphorus compounds; Phosphates (Note: The numerous data for routine determinations of seawater phosphate are not indexed unless having special significance) (See also Productivity, primary)

- B 293; 403 (seawater PO₄ analysis method)
 OL 18; 19 (standard analytical methods for all types in seawater); 20; 179
 (PO₄ in NE Pac. Ocean); 30; 211 (in B.C. coastal waters); 32 (Departure
 Bay surface waters combined phosphorus); 40 (Arctic Ocean PO₄); 55; 187;
 209 (at Pac. Ocean Weather Station "P" re water fertility); 208 (in water
 of Nanoose Bay, B.C., re fertility)

Photochemistry (see also Photosynthesis)

- B 360 (ultraviolet)

Photography

- B 384 (underwater camera); 485; 588; 591 (aerial, for census of marine
 mammals); 512 (camera vs. television, for underwater); 895 (underwater,
 of hermit crab)
 OL 88 (aerial, for estimation of seawater suspended matter); 172 (overhead,
 of Hecate Strait hydraulic model); 197 (aerial, of floating paper strips
 for marine current observations)

Photosynthesis (see also Carotenoids; Chlorophylls; Phytoplankton; Productivity)

- OL 55; 126; 135-137; 209 (at Pac. Ocean Weather Station "P"); 173 (in situ
 studies of marine, in submerged plastic bag); 211 (rate, Strait of Georgia)

Phototropism (see Light, reaction to)

Phyllobothrium spp. (see Cestoda)

Physiography (see also Geology; Hydrography; Oceanography)

B 46 (St. Andrews region, N.B.); 76 (Shediac Bay oyster beds, N.B.); 111 (Halifax area, N.S.); 113(2;5); 115(19); 116(21;26); 118(33;39); 112(6) Margaree R. system, N.S.); 155 (Caraquet Bay, N.B.); 392(16) (Petitcodiac R. estuary, N.B.); 564 (E Canada Continental Shelf); 572 (ICNAF Convention Area submarine); 574 (Miramichi R. estuary, N.B.); 611 (B.C. inlets); 613 (Foxe Basin, Canadian Arctic); 810 (Nfld., Labrador & E Canadian Arctic waters re decapods); 819 (Babine & Nilkitkwa L., B.C.)

Physiology (see also aspects of, e.g. Digestion; Hermaphroditism; Metamorphosis; Respiration; Sex reversal; also Blood; Muscle; Nervous system; Scales; also reaction to stimuli, e.g. Currents; Light; Salinity; Sound; Temperature; also names of organisms)

B 452 (chemical, of fishes)

Phytoplankton (see also Algae; Diatoms; Plankton; Plankton, lists of)

B 270; 282 (Spider L., B.C.); 305; 306 (excessive blooms causing Pac. salmon mortality); 338 (growth of freshwater encouraged by fertilizers); 343 (summer, Halifax area); 709:69 (biology, Ogac L., Baffin Is., N.W.T.)
OL 4; 16; 174 (N & NE Pac. Ocean); 14; 55 (at Pac. Ocean Weather Station "P"); 17 (in B.C. offshore coastal surveys); 32 (blooms re oceanography, Departure Bay, B.C.); 55; 203 (culture); 81 (Departure Bay); 135-137 (re NE Pac. Ocean primary productivity); 173 (marine photosynthesis in large submerged plastic bag); 208 (major species, Nanoose Bay, B.C.); 211 (major species, Strait of Georgia)

Pickard, G.L.

B 460 (B.C. inshore coast oceanography)

Pickereel (see Pike, blue; Walleye; also next heading)

Pickereel, chain (Esox niger)

B 246 (Maritimes); 263 (piscicides effect on)

Pickling (see also Curing)

E 6 (protein changes during); 8 (commercial processing of Atl. fish)

Pigment; Pigmentation (see also Carotenoids; Chlorophylls; Colour; Discoloration)

B 132:30 (of brook trout re habitat); 329(23) (changes in Atl. salmon); 461:32 (beluga); 588:17 (harp seal); 695 (Pac. salmon skin, re stocks)

Pike, blue (Stizostedion vitreum glaucum) (blue pickerel)

B 706(1;2;3) (daily catches of a L. Erie fishing company, 1904-1956)

Pike, Gordon C.

B 629; 700; 719; 736; 761; 825; 850; 875 (Canadian pelagic seal researches); 752 (fin whale ovulation counts re age & stock assessment, B.C.)

Pike, northern (Esox lucius)

B 302 (hatching of Triaenophorus crassus eggs in); 320 (biology, Clear L., Man.); 445; 450; 543; 554; 570 (availability, size & dressed weight, L.

Pike, northern (cont'd)

Winnipeg); 451; 488; 519; 556; 595:32; 620; 634; 680; 725; 738; 741; 773; 774; 777-780; 782; 783; 800; 802; 827; 831; 832; 835; 836; 839-841; 856-859 (Great Slave lake fishery); 462; 479; 566 (control as host of whitefish T. crassus); 462:9; 579 (fecundity, feed, sex ratio, in Heming L., Man.); 484 (L. Manitoba fishery); 493 (re Triacnophorus chemical control); 494 (Nesslin L., Sask.); 496 (effect of 3 insecticides on); 507:41 (L. Winnipeg catches); 519 (Great Slave L.: possibilities for mink feed); 523:44; 604 (feed & role in Triacnophorus life cycle); 524; 721 (in 3 N.W.T. lakes); 542 (diel activity, Heming L., Man.); 566 (trammel net for control); 579 (parasitization re spawning & fecundity, Heming L., Man.); 680; 738 (Indian catches for domestic use, Great Slave L.); 725 (Great Slave L. sport fishery survey); 741 (tagging, Great Slave L.); 773 (conversion factor for round to dressed weight, Great Slave L.); 774; 783; 777-779; 827; 831; 832; 835; 839-841; 856-859 (computerized data re Great Slave L. commercial fishery catch weights, etc.)

Pikeperch (see Walleye)

Pilchard (Sardinops sagax)

B 236 (anatomy, taxonomy, nomenclature); 271; 279 (life history; B.C. fishery problems); 298 (age from otoliths; age-groups); 410:2 (tagging review); 425:12; 429 (B.C. fishery); 675 (past, present & future of B.C. fishery)

Pimephales promelas (see Minnow, fathead)

Pinhey, Kathleen F.

B 90 (temperature re flounders respiration)

Pinhorn, A.T.

B 816; 879 (Nfld. inshore catch by types of gear)

Pink Salmon Co-ordinating Committee (see also Salmon, pink)

B 729 (Report No. 1); 750; 751 (Canadian catches N of convention area)

Pinnotheres ostreum (see Crab, oyster)Piophilha casei (see Maggots)

Piper's Lagoon, B.C.

B 275 (plankton for rearing salmon)

Pirart, Marcel

OL 61; 102; 188 (airborne radiation thermometer feasibility tests)

Piscicides (see also Electricity; Pollution; Ultrasonic waves)

B 190(B;C) (CuSO₄ for lakes); 191 (derris root, CuSO₄); 241 (lime for clearing pond prior to trout restocking); 263 (rotenone & "Fish-Tox" for undesired fish, Cassidy L., N.B.); 691; 723; 769 (lampricides); 771 (review of pollution toxicities)

Pisidium spp. (see Clams, fingernail)

Pituitary

B 493:26,34 (histology of, in northern pike)

Placopecten magellanicus (see Scallop, giant)

Plaice, American (Hippoglossoides platessoides)

- B 363 (selection by otter trawl savings gear); 430:22 (Nfld. investigations); 596; 675 (Canadian Atl. fishery, etc.); 651 (Laurentian Channel, & their feed); 795 (trawling discards at sea); 797 (biology in ICNAF Area 4T); 799 (eggs & larvae in W Gulf of St. Lawrence & N.S. Banks zooplankton); 801 (increased trawl mesh size effect on Nfld. fishery); 815 (eggs & larvae off W Greenland)

Plankton (see also Diatoms; Phytoplankton; Plankton, lists of; Zooplankton)

- B 24 (Diaptomus minutus reaction to light); 117(30:62) (Margaree R., N.S.); 124 (as sea scallop feed); 143; 159:25; 160:47; 162:38; 190(A;B) (re Atl. oyster feed); 200(A;B); 201; 202 (Chamcook Lakes, N.B.); 218 (abundance fluctuations, Florence L., B.C.); 227 (affecting Vancouver Is. clam growth); 232; 235 (feed colouring B.C. clams & oysters); 255 (statistical treatment of sampling for enumerating); 274 (W coast Vancouver Is.); 319 (efficiency of net for); 322 (apparatus standardization); 338 (growth encouraged by fertilizers); 367(2) (Gonyaulax toxicity); 396(3); 427:51 (Shubenacadie L., N.S.); 414:67 (re softshell clam growth); 473:9 (Digby, N.S.); 495 (Nesslin L., Sask., particularly for Cyclops re Triaenophorus); 498; 539:102 (Rawdon & Fletcher R., N.S.); 546 (re Triaenophorus, Heming L., Man.); 645 (production re biomass of its predators, Barkley Sound, B.C.); 657 (collections from open NE Pac. Ocean); 887 (perforated pipe sampler for)
OL 4; 14; 16; 17; 55 (re NE Pac. oceanography); 65 (list of A.O.G. surveys)

Plankton, lists of (see also Plankton)

- B 57 (Chiputneticook Lakes, St. Croix R., N.B.); 218 (Florence L., B.C.); 274 (W coast Vancouver Is.); 282 (Spider L., B.C.); 343 (Halifax area phytoplankton); 505 (Gulf of St. Lawrence); 523:31 (Thunder Bay District lakes, Ont.); 657; 659; 682 (open NE Pac. Ocean); 707 (Passamaquoddy region zooplankton)
OL 4; 16; 174; 201; 202 (NE Pac. Ocean); 208 (phytoplankton, Nanoose Bay, B.C.); 211 (Strait of Georgia)

Planting (see Culture; Hatchery; Salmon; Stocking; Trout)

Plants, terrestrial (for marine, see Algae; Seaweeds)

- B 206(5) (flora of islands off mouth of Moser R., N.S.); 208(10:2, Appendix 1) (Goldmine Brook, Moser R., N.S.)

Plasma (see Blood)

Platichthys stellatus (see Flounder, starry)

Platyhelminths (see Flatworm)

Pleasant, Mt., N.B.

- OL 212 (stream surveys re Cu, Pb & Zn mining pollution)

Pleasant Point, N.S.

- B 829 (oyster pond study)

Plecoptera (see Stoneflies)

Plerocercoid (see Diphyllbothrium)

Pododesmus macroschisma (see Oyster, rock)

Poisons (see Algacides; Insecticides; Paralytic shellfish poison; Pesticides; Piscicides; Pollution; Toxicity)

Polinices (see Drills, clam and oyster; Snail, moon)

Pollachius virens (see Pollock)

Pollard, R.A.

B 514 (alterations to Alberni Harbour hydraulic model)

Pollett River, N.B. (see also Petitcodiac River)

B 327(3); 365; 379(3); 380(5); 381(2;9;4) (salmon traps operation); 327(4) (water temperatures & heights); 327(8); 336(13); 380(6); 381(6); 391(13;14) (experimental salmon fingerlings planting); 366 (salmon scale readings); 379(1) (beaver re salmon dams); 382(8) (dispersal of young planted salmon); 382(11) (common sucker)

Pollock (Atlantic) (Pollachius virens) (pollack)

B 97:45 (biological study of Maritimes fishery statistics); 651 (Laurentian Channel); 675 (past, present & future of Canadian fishery); 795 (trawling discards at sea); 799 (eggs & larvae in zooplankton)
E 1 (muscle tensile strength); 25 (liver oil vitamin A)

Pollock, Alaska (see Pollock, walleye)

Pollock, walleye (Theragra chalcogramma) (Pacific whiting; Alaska pollock)

B 712 (in echo-scattering layer, Saanich Inlet, B.C.); 767; 768 (in Gulf of Alaska experimental trawling); 890; 891 (in northern B.C. & Alaska experimental trawling)
OL 199 (Saanich Inlet, B.C.)

Pollution (see also Algacides; Insecticides; Pesticides; Piscicides; Toxicity)

B 41 (tap water by metals, re fish tanks); 131:18 (from pulp mill operations, Moser R., N.S.); 184:28 (oyster beds, Buctouche, N.B.); 244; 250; 497(A;B) (N.B. rivers & coast, from pulp mills); 257 (mining silt causing gill-net sinkage, B.C.); 258 (contributing to furunculosis in fish, Elk R., B.C.); 280 (silt & jellyfish causing gill-net sinkage, Nass R., B.C.); 290 (toxicity of mining & pulp mill, toward trout); 312 (mining, Puntledge R., B.C.); 324 (pulp mill, upper Quatsino Sound, B.C.); 331:52 (Atl. oysters cleansing themselves of sewage); 412; 459 (oceanography re sewage, Vancouver); 440; 503 (Atl. clams cleansing themselves of); 472(E) (re-laying oysters from silted beds); 547 (oceanographic phases of sewage problem, Nanaimo, B.C.); 705 (pulp mill, of 2 Scottish lochs); 733 (pulp mill, re oceanography of Prince Rupert area, B.C.); 765 (pulp mill, re Pac. oysters, Crofton, B.C.); 771 (review of Canadian research on toxicity of, to aquatic life); 862 (Atl. oysters accumulating Zn compounds)
OL 86; 100; 155 (re sea disposal of radioactive wastes re B.C. fisheries); 148; 180; 192; 210 (NW Miramichi R., N.B., by Cu, Zn & Pb mine effluents); 197 (re sewage disposal, Cordova Bay, B.C.); 212 (Mt. Pleasant region streams, N.B., by Cu, Zn & Pb mine effluent)

Polychaeta (see also Annelids)

B 883 (St. John R. estuary & harbour, N.B.)
OL 211 (Strait of Georgia)

Polydora (see Worm, mudblister)

Pomolobus (see Alosa)

Pomquet River, N.S.

B 129(8) (report on salmon, trout & other fishes)

Ponds (see also Kellys Pond; Sam Orr Pond)

B 189(C;E) (Grand Manan, N.B.; Kentville, N.S.); 351 (to improve P.E.I. trout angling); 727 (establishing & managing, for Maritimes trouts)

Populations (see also Abundance; Census; Stocks)

B 230 (tagging ratio for spawning Pac. salmon determination); 252 (Atl. cod); 271 (B.C. pilchard); 381(1) (assessing young Atl. salmon in streams); 533 (tagging B.C. salmon for estimating spawning); 565 (spawning lake trout & whitefish, Great Slave L.); 591:29 (harp seal); 628 (mathematics of dynamics of fish); 755:11 (studies, Canadian Atl. herring); 763; 793 (softshell clam, Eel River Cove, N.B.)

Porrocaecum (see Codworm)

Porter, J.B.

B 130(10:31) (young salmon distribution, Salmon R., N.B.); 131(17) (notes on Atl. salmon catches, etc., particularly in N.S.)

Potential, fishery (see also Abundance; Catch per unit effort; Exploration; Fishery; etc.)

B 675 (of Canadian fishes, shellfishes, marine mammals, seaweeds)

Pout, ocean (Macrozoarces americanus) (muttonfish)

E 1 (muscle tensile strength re smoking)

Power project

B 62 (Cooper (Passamaquoddy) re Bay of Fundy tides)

Powles, Howard W.

B 884 (biology of 2 spider crab species, Gulf of St. Lawrence)

Powles, P.M.

B 743; 874 (marine chart requirements for Canadian Atl. fishing fleet); 797 (American plaice biology in ICNAF Area 4T); 799 (fish eggs & larvae in Maritimes zooplankton)

Prakash, A.

OL 217 (Bay of Fundy paralytic shellfish poison toxicity)

Prawn (Pandalus platyceros)

B 272 (biology; B.C. fishery)

Prawns (Atlantic) (Pandalus spp.)

B 675 (fishery potential)

Prawns (Pacific) (Pandalus spp.)

B 675 (past, present & future of B.C. fishery)

Predation; Predators (see also Birds; Feed; Parasites)

- B 3:8; 478 (fishes & birds on sockeye salmon); 11 (perch & cisco on lake whitefish); 40; 187:70; 333; 371; 372; 383; 398; 408; 414:70; 447; 471:10 (Polinices drill on Atl. shellfishes); 56 (of trout fry); 58 (yellow perch feed, L. Champlain); 87 (copepods on diatoms; jellyfish on copepods); 104; 125; 159:30; 160; 161; 163; 164 (starfish on Atl. oyster); 118(38); 119(43); 131(14;15); 132:34; 329(18); 335(9) (birds on fishes, Margaree R., N.S.); 119(44) (fish on Atl. salmon fry, Margaree R.); 131(14) (birds control, Margaree R.); 190(C;D) (brook trout fish predators control); 195 (Atl. herring); 207(9:4); 208(11); 210(6;11;12); 213(16;17); 214(18:34) (of salmon, Moser R. system, N.S.); 213(17) (birds, Moser R.); 281 (northern sea lion, B.C.); 339 (dragonfly on sockeye salmon); 370:31 (mudblister worm on Atl. oyster); 383:45 (on Polinices clam drill); 414:61 (on Atl. clams); 415 (on giant scallop); 419:12 (longfinned squid); 424:12 (Atl. cod on capelin); 439:13 (American eel); 465:13 (on goldeye); 471:10 (on quahaug); 646 (sea lamprey predatory behaviour); 694 (merganser control in general); 811 (mathematical treatment of relation of predator to prey)

Prediction (see Forecasting)

Preservative treatments (see also Drying; Quality of fishery products; Salting; Smoking; Refrigeration; Curing; Pickling; Canning)

- B 20 (toxicity of formaldehyde re fillet curing); 47 (Na hypochlorite & formaldehyde for haddock); 152 (tar, creosote, copper oleate, for wood, against shipworms); 370:29 (effect of formaldehyde on Atl. oysters); 452:26(a) (for fish products); 159:31; 160:58; 162:44 (for wood)
E (see above separate headings for preserving fishery products)

Pressure, atmospheric (Note: The many data records taken in connection with oceanographic observations are not indexed here unless of special significance. See Oceanography)

- OL 72; 163; 183 (computer programming for effect on oceanic mass transport); 77-80; 85; 93; 128; 149-153; 164; 166; 216; 218-225; 229 (effect on NE Pac. oceanic waters mass transport); 112; 114-124; 156; 162; 165 (effect on N Atl. oceanic water mass transport)

Pressure, hydrostatic (see also Hydronamics)

- B 755:26 (literature review of reaction of Canadian Atl. herring to)

Pressure, osmotic

- B 186 (adrenaline effect on skate blood)

Price, John Lionel

- B 640 (Cyclopidae speciation & infection of cyclopids by Trianaenophorus)

Prince Edward Island (see also Maritimes; Northumberland Strait; Oceanography, Atlantic, NW inshore; St. Lawrence, Gulf of; also names of localities)

- B 143; 157; 203; 331 (oyster studies); 144; 145; 147; 155; 204 (Malpeque oyster disease); 189(B) (streams investigation); 351 (ponding to improve brook trout angling); 395 (scallops)

Prince Gustaf Adolf Sea (Canadian Arctic)

- OL 108; 198 (oceanography re Project ICE PACK underwater sound studies)

Prince Regent Inlet (Canadian Arctic)
OL 13 (oceanography)

Prince Rupert, B.C.
B 733 (oceanography re pulp mill pollution)

Fritchard, Andrew L.
B 10 (L. Ontario ciscoes); 235 (Queen Charlotte Is. razor clams discoloration);
308 (pink salmon investigations); 531; 532; 534; 536 (sockeye tagging ratios
re escapement & migration, Babine R., B.C.)

Productivity (see also Abundance; Fishery, commercial; Fishery, sport; Fecundity;
Productivity, primary; Stocks)
B 318 (of waters, particularly inland); 473(A;B) (scallop beds, Digby, N.S.);
675 (Canadian fisheries); 871 (Canadian freshwater fisheries)

Productivity, primary (see also Oceanography)
OL 20; 55; 179; 209 (dissolved nutrients, NE Pac. Ocean); 32 (combined phosphorus
in Departure Bay waters, B.C.); 81 (constituents, Pendrell Sound & Departure
Bay, B.C.); 81; 135-137; 209 (at Pac. Ocean Weather Station "P"); 168
(re dissolved carbohydrate in marine waters); 173 (in situ marine photo-
synthesis in a submerged plastic bag); 174 (checklist of NE Pac. Ocean
phytoplankton); 193 (factors in NE Pac. Ocean & B.C. inshore waters);
208 (Nanoose Bay, B.C.); 211 (Strait of Georgia)

Prosopium cylindraceum (see Whitefish, round)

Prospecting (see Exploration)

Proteins (see also Acids, amino; Composition, chemical; Denaturation; Juice,
muscle; Muscle; Proteolysis; Quality of fishery products)
B 12-15; 38; 52; 72 (haddock, etc. muscle); 19; 72 (decomposition in frozen
haddock); 342 (base-combining capacity of muscle, marine fishes & inverte-
brates); 452:8 (of fishes flesh); 726 (electrophoretic patterns of sea
lamprey blood)
E 6 (changes in pickling & smoking); 7; 42; 49 (trypsin hydrolysis); 9; 33
(spoilage products); 29 (denaturation during cold storage); 32 (solubility
effect on muscle shrinkage)
OL 55 (in water at Pac. Ocean Weather Station "P")

Protein factor
E 53; 55 (in muscle analysis)

Proteolysis (see also Enzymes; Protein)
E 3 (salt effect on); 6 (during smoking & pickling); 7; 42; 49 (trypsin
hydrolysis of muscle); 9 (course & products)

Protothaca (see also Clam, littleneck)
B 717; 746 (in B.C. deepwater clam surveys)

Protozoa
B 147 (in Atl. oyster); 261 (Costia as probable cause of Pac. salmon hatchery
disease); 373 (parasites of Atl. scallop eggs & larvae); 624; 641 (re
parasitization of Asian vs. N American pink & sockeye salmon stocks)

Prowfish (*Zaprora silenus*)

OL 175 (in NE Pac. midwater trawling)

Proximate analysis (see Composition, chemical; Fats and oils; Proteins; Water content; also names of organisms and types of products)

Psammobia californica (see Clam, sunset)

Pseudomonas bacteria

B 27; 39 (in haddock slime or feces)

Pseudopleuronectes americanus (see Flounder, winter)

Pteropods

OL 201 (NE Pac. Ocean); 211 (Strait of Georgia)

Ptychocheilus oregonense (see Squawfish)

Publications, lists of Fisheries Research Board (see also Bibliographies; Reviews)

B 285 (B.C. salmon migration); 294 (Nanaimo Station oceanography & chemistry); 585 (Canadian oceanography, including some other than FRB); 794 (NW Atl. Canadian herring research); 852 (Manuscript Reports of Great Slave Lake investigations); 900 (Manuscript Reports Series, including index)
E 58 (Vancouver Station, 1929-1956); 61 (Vancouver Station, 1957-1962)
OL 65 (A.O.G. Manuscript Reports Series on oceanography, 1950-1959)

Pulpmills (see Pollution)

Pumping rate (see Respiration)

Pumpkinseed (*Lepomis gibbosus*)

B 246 (Maritimes); 263 (piscicides effect on)

Fungitius pungitius (see Stickleback, ninespine)

Puntledge River, B.C.

B 312 (mining effluent pollution of)

Purves, J.K.

B 393(4) (salmon tagging above Grand L., N.S.); 393(5) (smolt trap operation, Lower Rawdon R., N.S.); 394(6) (depth effect on Atl. salmon movement); 394(7) (shelter effect on Atl. salmon movement)

Pyloric caeca

B 695 (re distinguishing stocks of Pac. salmon & steelhead trout)

- Q -

Quahaug (*Venus mercenaria*)

B 160:60 (spat observations); 161; 333 (on Atl. oyster beds); 184:49 (effect of light on); 187; 471 (limiting growth, abundance, & distribution factors); 644 (recent & new harvesting gear); 655 (boring sponges effect on); 675 (past, present & future of fishery); 685 (larvae description)

Quahaug, ocean (Arctica islandica)

B 650:13; 807-809 (re giant scallop, Gulf of St. Lawrence); 823 (resources in SE Northumberland Strait)

Qualicum River, B.C.

B 676 (biological potential)

Quality of fishery products (see also Paralytic shellfish poison; Codworm; Fillets)

B 16 (clam muscle autolysis & bacterial spoilage); 18 (canned lobster)
 19 (frozen haddock); 331 (storage effect on Atl. oyster flavour); 370:29 (shellfish flesh spoilage); 452:34 (fish flesh spoilage); 479 (effect of Trienophorus on lake whitefish products); 806 (giant scallop meats & roe);
 E 3 (microorganisms responsible for spoilage); 9 (natural course of spoilage, & products); 11 (ammonia & trimethylamine formation); 33 (temperature effect on haddock muscle); 38 (spoilage rate measurement by heat liberated); 41 (electrical determination of spoilage rate); 45 (bacteriology of frozen flesh)

Quamichan Lake, B.C.

B 273 (trout plantings)

Quatsino Sound, B.C.

B 324 (pulpmill pollution)

Quayle, D.B.

B 216 (clam & oyster culture possibilities, W coast Vancouver Is.); 313 (Queen Charlotte Is. crab fishery); 416 (shore invertebrates mortality, Nanaimo, B.C.); 425 (B.C. fishery wealth); 713 (Pac. oyster disease & mortality, Denman Is., B.C.); 717; 746 (deepwater clam & scallop survey, B.C.); 765 (pulpmill pollution effect on Pac. oysters, Crofton, B.C.); 837 (marine borers introduced into B.C.); 860 (B.C. shellfish toxicity records); 887 (perforated pipe plankton sampler hydrodynamics & trials)

Quebec (see also Hudson Bay; Maritimes; Oceanography, Atlantic, NW inshore; St. Lawrence, Gulf of; also names of localities)

B 675 (survey of past & present, & future trends of, fisheries); 833 (fresh-water survey, Fort Chimo region, Ungava); 886 (incidence & risks of shellfish poisoning)

Queen Charlotte Islands region, B.C. (see also Oceanography, Pacific, NE inshore; Oceanography, Pacific, NE offshore; Hecate Strait)

B 235 (razor clam discoloration); 313 (crab fishery); 890; 891 (salmon tagging)

OL 108 (oceanography off W.coast, re Project LEAP FROG underwater sound studies); 142 (Monitor Oceanographic Project); 193 (Queen Charlotte Sound primary production factors)

Queen Elizabeth Islands, Canadian Arctic (see Archipelago, Canadian; Arctic, Canadian; Oceanography, Arctic)Quillback (Carpiodes cyprinus)

B 609 (evaluation in L. Winnipeg trap net experiments)

Quinte, Bay of, Lake Ontario

B 11 (whitefish investigations)

- R -

Radiation (see also Heat transfer; Light; Thermometer, airborne radiation)

B 359 (instrument for measuring quantity & quality of ultraviolet, etc.);
360 (photochemical effects of ultraviolet)

OL 55; 126; 193; 209 (solar, at Pac. Ocean Weather Station "P"); 134 (solar, effect on warm & cold years for Pac. Ocean surface temperatures); 135-137; 179; 193 (re NE Pac. primary productivity); 193 (re B.C. coastal waters primary productivity)

Radioactive wastes

OL 86 (sea disposal of, re B.C. fisheries; also table of physical & biological half-life of isotopes); 100 (possible pollution problems, Strait of Georgia); 155 (vertical differences in sea diffusion from a point source)

Radiolaria (see also Plankton; Invertebrates, lists of; Zooplankton)

B 174 (in NE Pac. Ocean)

Radulae (see Teeth)

Rainfall (see Freshets; Weather)

Raja erinacea (see Skate, little)

laevis (see Skate, barndoor)

ocellata (see Skate, winter)

radiata (see Skate, thorny)

senta (see Skate, smooth)

Rake, clam (ordinary or hydraulic)

B 414; 711; 724; 747; 784 (for harvesting clams)

Ratfish (Hydrolagus colliei)

B 323 (digestive tract histology)

Rawdon River, N.S. (see also Shubenacadie River)

B 382(7) (bottom organisms); 390(5); 393(5); 396(4); 400; 426; 498:64 (smolt trap operation); 390(6); 392(17) (planted sebago salmon & their behaviour); 390(7) (distribution of fish species); 396(5) (planting young salmon); 401 (sport fishes); 426; 498:68 (trapping eels); 427:65; 498:92; 539:102 (plankton); 498 (salmon investigations; plankton); 539:88 (young salmon growth)

Rawson, D.S.

B 320 (Clear L., Man., limnology, fishes, ecology)

Raymond, Robert

B 380(5) (ascent of salmon, white bass & suckers, Petitcodiac R., N.B.)

Reactions of organisms (see headings for stimulating causes, e.g. Currents;

Electricity; Electrofishing; Light; Odour; Salinity; Sound; Temperature)

Read, F.C.

B 806 (giant scallops fuller utilization)

"Red tide" (see also Paralytic shellfish poisoning)

B 232; 235 (Departure Bay, B.C.)

Redds (see also Spawning)

B 208(12); 211(15) (Moser R. salmon, N.S.); 229 (formation by pink salmon)

Redfish (Sebastes marinus)

B 430:20 (Nfld. waters); 444 (longlining, Bonavista, Nfld.); 651 (Laurentian Channel, & their feed); 675 (past, present & future of Canadian fishery); 799 (eggs & larvae in zooplankton); 801 (increased trawl-mesh size effect on Nfld. fishery); 814 (operation of 10% exemption of cod & flatfish caught while otter trawling for); 815 (larvae off W. Greenland); 817; 822 (re ICNAF regulations in Nfld. trawling for); 838 (activity patterns re photo-periods)

Refrigeration; Freezing; Cold storage (see also Thawing)

B 19 (haddock bacteriology); 72 (haddock retaining rigor)
 E 12; 15; 35 (structural changes in muscle during freezing & storage); 19 (temperature effect on glazing); 20; 40; 46; 51 (freezing point of Atl. fishes muscle); 21 (effect on drying); 21; 24; 36 (effect on drip); 26; 39; 40 (freezing rate); 29 (effect on denaturation); 31 (effect on Pac. salmon oil); 34; 39 (freezing by direct & indirect immersion); 39 (fish preservation by); 42; 49 (freezing effect on tryptic hydrolysis); 44 (scallops); 45 (frozen fillets bacteriology); 46 (gelatin gels freezing point)

Regeneration

B 185; 238 (Atl. salmon scales); 215 (clipped Pac. salmon fins)

Reinhardtius hippoglossoides (see Halibut, Greenland)Reproduction (see also Baculum; Life history; Ovary; Spawning; Testes)

B 65 (lobster); 74; 184 (Atl. oyster re temperature, etc.); 121 (giant scallop); 226 (Pac. oyster); 229 (pink salmon); 242 (Atl. skates claspers & clasper gland function); 252 (Atl. cod); 256 (eulachon); 398:36; 447; 845 (Polinices clam drill); 461:30; 485:18 (beluga, Hudson Bay); 465 (goldeye); 520 (minimum fish stock needed for, in nature); 525 (longnose sucker, Great Slave L.); 588; 591 (harp seal); 629; 700; 719; 736; 754; 761; 825; 850; 875 (northern fur seal); 653:79 (Atl. walrus); 752 (B.C. fin whale ovulation re age); 803:10 (L. Superior crayfishes)

Research, marine fisheries

B 639 (history of Pac. coast of N America)

Respiration (see also Survival; Oxygen, dissolved)

B 90 (flounders re temperature); 367(1); 440; 503; 562 (softshell clam pumping rate); 370:55 (effect of anaerobic, on Atl. oyster shell); 653:46 (lung weight, Atl. walrus); 662 (lobster); 670 (spawning sea lamprey)

Restigouche, N.B.

B 243(B) (streams biological survey)

Reviews (see also Bibliographies)

B 252 (Maritimes cod investigations); 253 (salmonid fishes stocking success); 283 (freshwater fishes rheotropism effect); 407 (ocean wave studies); 410 (marking fishes for studying movements); 585 (Canadian oceanography); 588 (harp seal biology); 612 (Bay of Fundy herring); 715 (Great Slave L. commercial catch regulations); 741 (Canada & some U.S.A. freshwater tagging);

Reviews (cont'd)

748 (interrelations between E Canadian Arctic marine benthos, oceanography & ethology); 755 (Canadian Atl. herring literature); 771 (Canadian research on toxicity of pollution to marine life); 868 (B.C. chum salmon investigations)

- OL 15 (Canadian Atl. coast drift-bottle data); 39 (Canadian Atl. coast sea temperatures); 53 (A.O.G. oceanographic cruises track charts); 68; 177 (classification of daily seawater temperatures & salinities, B.C. coast); 86 (possible effects of radioactive wastes disposal on B.C. fishes & fisheries, also review of B.C. commercial fishes distribution & characteristics); 95; 207 (Halifax to Scotian Shelf Section oceanography, 1950-1965); 177 (monthly mean sea surface temperatures & salinities at B.C. & some U.S.A. lighthouses, 1915-1962); 179 (NE Pac. Ocean productivity, chemical & physical data, 1958-1964); 187 (Pac. Ocean Weather Station "P" oceanographic data, 1956-1963); 201 (NE Pac. Ocean net zooplankton, 1956-1964); 202 (Pac. Ocean Weather Station "P" seasonal & annual variations of net zooplankton, 1956-1964)

Rheotropism; Rheotaxis (see also Currents, reaction to; Migration)

- B 283 (literature review); 352:21 (Atl. herring larvae); 504 (Atl. herring re weirs)

Rhinichthys atratulus (see Dace, blacknose)
cataractae (see Dace, longnose)Rhodymenia palmata (see Dulce)

Ribonucleic acid

- OL 208; 211 (in marine zooplankton)

Ribs

- B 878 (of Atl. cod vs. haddock for identifying fillets)

Rice, Christine E.

- B 16 (clam muscle autolysis & bacterial decomposition)
E 33 (temperature effect on haddock muscle decomposition rate)

Rice, D.I.

- B 390(4) (marked salmon angled in Grand L. area, N.S.); 390(5;7) (operation of smolt trap, Lower Rawdon R., N.S.); 390(6) (sebago salmon stream reaction); 390(9) (alewife migration, Grand L. area, N.S.); 392(17) (planting sebago salmon in Lower Rawdon R.)

Rice, Frederick A.H.

- B 358; 474 (Irish moss physical & chemical properties); 431 (Irish moss curing)

Richards, A.G.A.

- E 58 (chronological list of F.R.B. Vancouver Laboratory publications, 1929-1956)

Richardson, A.E. Clark

- B 141 (temperature & salinity re Atl. oyster fertilization & larvae)

Richardson, L.R.

- B 130(10) (Atl. salmon distribution in Salmon R. watershed, N.B.);
147 (Atl. oyster endozoan fauna & disease)

Richmond Bay, P.E.I.

B 49 (young lobsters investigation)

Richter, E.J.

B 393(3) (current effect on Atl. salmon movement)

Ricker, William E.

B 255 (statistics of plankton enumeration sampling processes); 478 (predator control re sockeye salmon production, Cultus L., B.C.); 583 (Fraser R. eulachon fishery); 675 (survey of past, present & future trends in Canadian fisheries); 695 (environmental & genetic influence on some distinguishing characters of Pac. salmons & steelhead trout); 770 (Canadian stoneflies distribution)

Riddell, William A.

B 277 (chloride determination in presence of phosphate)
284 (pH changes during storage of beef liver hatchery feed)

Riding Mountain National Park, Man. (see Clear Lake, Man.)

Rigby, Margaret S.

B 660 (history of F.R.B. & its predecessors)

Rigor

B 32; 34-36; 38; 72; 342 (re protein changes in fish); 36; 342 (re fish muscle pH); 72 (freezing haddock in); 342 (re muscle protein changes in several invertebrates)

Ritchie, A.D.

B 342 (muscle tissue physiology of some marine fishes & invertebrates)

Rivers Inlet, B.C.

B 702 (ocean distribution of sockeye salmon run); 772; 818 (age, size & sex composition of sockeye salmon)

Roberts, K.G.

B 609 (L. Winnipeg trap-net experiments); 634 (Great Slave L. commercial fishery); 722 (Great Slave L. fishing vessels to 1958)

Robertson, A.D.

B 75 (Atl. oyster growth)

Robertson, D.G.

OL 59; 98; 125; 154; 187 (Pac. Ocean Weather Station "P" data records)

Robertson Creek, B.C.

B 749 (adult migratory Pac. salmons behaviour when faced with control devices in fishways)

Robinson, Margaret K.

OL 205 (NE Pac. sea surface layer characteristics)

Roccus americanus (see Perch, white)

chrysops (see Bass, white)

saxitilis (see Bass, striped)

- Rockfish, redstripe (Sebastodes proriger)
OL 199 (Saanich Inlet, B.C.)
- Rockfish, sharpchin (Sebastodes zacentrus)
B 768 (in experimental trawling off Kodiak Is., Alaska)
- Rockfish, splitnose (Sebastodes diploproa)
B 712 (in echo-scattering layer, Saanich Inlet, B.C.)
- Rockfish, yellowtail (Sebastodes flavidus)
B 712 (in echo-scattering layer, Saanich Inlet, B.C.)
OL 199 (Saanich Inlet, B.C.)
- Rockfishes (Pacific) (Sebastodes spp.)
B 405 (in trawling off Cape Lazo & Nanoose Bay, B.C.); 675 (past, present & future of B.C. fishery); 767; 890; 891 (in B.C. & E Gulf of Alaska experimental trawling)
OL 86 (B.C. fishery re possible effects of radioactive wastes disposal)
- Rockling, fourbeard (Enchelyopus cimbrius)
B 651 (Laurentian Channel); 799 (eggs & larvae in zooplankton)
- Rocky Lake, Man.
B 557 (ciscoes growth re taxonomy)
- Roe (products) (for biology, see Eggs)
B 706 (sturgeon); 806 (scallop)
- Rogers, Harold M.
B 122(6) (physiography & hydrography, Margaree R. estuary, N.S.); 127(12) (hydrology, Margaree R. system); 130(11) (marking Margaree R. salmon smolts); 131(12) (salmon, Moser R., N.S.); 131(18) (hydrograph for measuring water-level changes); 207(6) (Moser R. meteorology, hydrology, estuary salinity)
- Ross, C.K.
OL 112; 114-120; 128 (N Atl. & N Pac. water mass transport computations)
- Ross, R.F.
E 23 (Atl. crustacean & fish flesh shrinkage during processing conditions)
- Rowell, Terry W.
B 808; 809; 842; 880; 881 (giant scallop surveys); 888 (comparison of two odometer types for scallop drags)
- "Rusting"
E 31 (of oil during cold storage of Pac. salmon)
- S -
- Saanich Inlet, B.C. (see also Inlet and fiord oceanography)
B 712 (midwater trawling through the echo-scattering layer)
OL 58 (physical & chemical oceanographic series); 199 (echo-scattering layer)
- Sable Island, N.S.
B 553 (herring explorations off)

Sablefish (*Anoplopoma fimbria*) (blackcod)

- B 425:19; 872 (B.C. fishery); 675 (past, present & future of B.C. fishery);
767; 768; 890; 891 (in B.C. & Gulf of Alaska experimental trawling)
OL 86 (B.C. fishery re possible effects of radioactive wastes disposal)

Sagitta elegans (see also Chaetognaths; Zooplankton; Plankton, lists of)

- OL 202 (at Pac. Ocean Weather Station "P")

Saint ... (see following heading, also St. ...)

Saint John, N.B. (see also St. John River, N.B.)

- B 130(9) (salmon re offshore salinity); 166 (harbour hydrography)

Salinity, reaction to

- B 4; 127(10); 130(9); 329(24:12); 336(14:11); 382(10:10); 390(8); 899 (Atl. salmon fry); 53 (Atl. mackerel eggs); 73 (hatching squid eggs); 75; 83; 141; 153(B) (oyster larvae & growth rate); 87 (copepods: feed & predators); 88 (starfish embryos); 91; 240 (barnacle & gribble); 100 (marine amphipods); 125:13 (starfish); 141 (Atl. oyster spermatozoa, ova & larvae); 183:13 (lobster fry); 187:22,48,53; 471:2 (quahaug); 248; 373:136; 638 (giant scallop); 272 (B.C. shrimps); 344 (hatching trouts & whitefish eggs); 361:58 (yellowtail flounder); 406; 588 (lobster: lethal limits); 436:4 (a N.B. limpet)

Salinity of waters (see also Hydrography; Oceanography) (Note: The numerous data for salinity of sea waters routine observations are not indexed unless having special significance)

- B 94; 136; 168; 170; 172; 174; 475 (Scotian Shelf); 109 (varying with ice in Bideford R. estuary, P.E.I.); 114(9) (Margaree Harbour, N.S.); 175; 176; 572; 584 (Canadian Atl. coast); 207(6) (Moser R. estuary, N.S.); 403 (analysis method for seawater); 438; 460 (B.C. coast); 443 (freezing effect on Cl/SO₄ ratio of seawater); 457; 458; 476 (B.C. offshore); 459 (Fraser R. estuary); 500; 578; 606 (Gulf of St. Lawrence); 528; 551 (Bay of Fundy); 552 (Strait of Canso); 578; 605 (distribution, Laurentian Channel); 584 (ICNAF Convention Area waters); 594 (Cabot Strait Section); 642; 682 (open NE Pac. Ocean)
- OL 18; 19 (standard analysis methods); 23; 48; 67; 68; 104; 131; 160; 161; 177; 195; 204; 215; 227 (B.C. coastal lighthouses & lightships data); 42 (re IGY sea-level recording, off Halifax & St. John's, Nfld.); 57 (Passamaquoddy Bay & Bay of Fundy); 74 (annual variations, Grand Banks); 92; 186 (structures in subarctic Pac. Ocean); 95; 207 (Halifax to Scotian Shelf Section); 97 (Cabot Strait Section); 177 (B.C. lighthouse data classification, 1915-62); 187 (structures at Pac. Ocean Weather Station "P", 1956-1963)

Salmo clarki (see Trout, cutthroat)

gairdneri (see Trout, steelhead; Trout, Kamloops; Trout, rainbow)

salar (see Salmon, Atlantic)

salar (sebago) (see Salmon, Atlantic landlocked)

trutta (see Trout, brown)

Salmon, Atlantic (biology) (see also Salmon, Atlantic landlocked; Salmon, Atlantic (technology)) NOTE: Because of the great many Manuscript Reports dealing with various aspects of Atlantic salmon biology in New Brunswick and Nova Scotia, the references pertaining to investigations in those two provinces are grouped under the names of the principal rivers, lakes or localities concerned, followed by references to investigations of too general a geographic nature to be assigned to any particular area in the Atlantic coast provinces. For the above, only the Report numbers are given; their subject matters can be readily ascertained by referring either to the Index headings for the rivers, lakes and localities, or to the List of Titles. Also, see the Index headings for the many subjects pertaining to salmon biology, research, commercial and sport fishing, etc.

New Brunswick:

Big Salmon River - B 130(10); 390(11)
 Chamcook Lakes - B 200(A); 202
 Duffin Creek - B 379(2); 381(3); 390(1)
 Lepreau River - B 396(6)
 Loch Lomond - B 202(A)
 Miramichi River - B 4; 7; 43; 59; 86; 453; 805
 OL 148; 180; 192; 210
 Mt. Pleasant, Charlotte County - OL 212
 North River - B 335(1); 336(12); 381(5)
 Petitcodiac River - B 212(3; 4; 11; 5); 323(3; 8); 327(5); 328(10); 335(1);
 336(11; 12); 379(1); 380(5); 381(2); 382(8; 9); 391(15); 392(16);
 394(6; 7); 396(7)
 Pollet River - B 327(3; 4; 8); 336(13); 365; 366; 379(1; 3); 380(6);
 381(2; 9; 4; 6); 382(8); 391(13; 14)
 St. Croix River - B 244(A; B)
 St. John River and estuary - B 98; 129(1; 2); 130(9); 211(17)
 General - 189(C; D); 212(4); 250; 336(14)

Nova Scotia:

Ainslie, Lake (see also Trout Brook) - B 116(26-29)
 Apple River - B 328(12); 396(7; 7)
 Cape Breton Highlands National Park - B 129(3)
 Cheticamp - B 210(4)
 Fletcher River - B 400; 3; 426
 Forest Glen Brook - B 131(14)
 Goldmine Brook - B 207(9); 208(10; 13; 14); 210(5-8); 211(16); 213(14); 329(19)
 Grand Etang - B 119(48); 131(15); 210(4)
 Grand Lake (see also Shubenacadie River system) - B 390(4); 393(5); 401;
 426-428; 539; 540; 563
 Hall's Harbour (see also Minas Channel) - B 391(12); 393(2; 3)
 LaHave River - 335(8)
 Margaree River, estuary and harbour (see also Ainslie, Lake; Trout brook) -
 B 113-119; 122; 123; 126; 127; 129(4; 5); 130(11); 131(13-15); 207(7);
 208(16); 210(4); 211(18); 213(8); 328(9; 14-16); 329(17; 18); 335(2-6; 9)
 Mersey River - B 247
 Minas Channel (see also Hall's Harbour) - B 390(8); 394(8)
 Moser River - B 131(12); 206(4); 207(6; 8); 208(11; 12; 14; 15; 17); 209(1-3);
 210(5; 9; 11-14); 211(15); 212(1; 2); 213(6; 11; 13; 15-17); 214(18; 19);
 327(1; 2; 6); 329(20-22; 24); 335(7); 336(10); 396(7; 8); 649

Salmon, Atlantic (biology) (cont'd)

Nova Scotia (cont'd)

Nipisquit River - B 390(10)

Pomquet River - B 129(8)

Rawdon River - B 390(5-7); 392(17); 393(5); 396(4;5); 400; 401; 426; 498:64; 539:88

Shubenacadie River system (see also Ainslie, Lake; Grand Lake; Rawdon River) - B 393(4;5); 396(3); 498Trout Brook (see also Ainslie, Lake) - B 117(31); 118(32); 123(12); 126(1); 129(4); 132

General - B 131(17); 189(A;E); 212(4); 336(14); 497(A;B)

Atlantic coast provinces in general:

B 54; 97:47; 129(6;7); 131(16;17); 185; 200(C); 202; 206(1); 209(2);

213(9-11); 238; 321; 328(13); 329(23); 381(1); 382(10); 390(2;3;6);

393(1;3); 396(1;2;7); 402; 410:9; 428; 499; 540; 643; 649; 675; 847; 899

The few specific references to investigations in other provinces are given below, followed by a few topical references to unusual aspects of Atlantic salmon, selected from the foregoing lists:

British Columbia - B 295; 296 (inspection for furunculosis re Atl. salmon eggs for transplantation in B.C.)

Prince Edward Island - B 138 (mortality causes, Kelly's Pond hatchery; 189(B) (streams investigations)

Newfoundland and Labrador - B 430:31; 885 (commercial fishing); 861 (St. George's Bay)

Selected topics - B 54; 213(9) (fry mortality during shipments); 115(16:2); 210(14); 329(21) (lice); 122(3) (stomach content analyses); 129(4); 649 (poaching of); 131(12); 244; 250; 497(A;B) (re pulp mill pollution of waters); 194 (digestibility); 210(6) (cannibalism); 247 (attracted through fishways by lights); 328 (death through heat stroke); 329(23) (scale looseness & colour changes); 379(1) (re beavers & dams); 382(9); 391(15); 394(7) (natural or artificial cover for, in streams); 393(1;3); 396(2); 643 (behaviour in tanks or aquaria); 874 (Greenland fishery re populations of Canadian); OL 148; 180; 192; 210; 212 (re mine effluent pollution of waters)

Salmon, Atlantic (technology)

B 194 (digestibility)

E 8 (commercial handling methods); 12 (structural changes during freezing and storage); 17 (vitamin A in oil); 26 (muscle heat conductivity & freezing rate); 40 (muscle latent & specific heats; density; moisture & fat content); 55 (non-protein nitrogenous extractives); 55 (secretagogue action of muscle extracts)

Salmon, Atlantic landlocked (Salmo salar) (sebago salmon)

B 200(D) (distribution & feed, Chamcook Lakes, N.B.); 390(4); 401 (marked, Grand L., N.S.); 390(6) (stream reaction); 392(17) (planting in Rawdon R., N.S.)

Salmon (Pacific, in general) (Oncorhynchus spp.) (see also following headings for the five species; also Trout, steelhead)

- B 215 (clipped fin regeneration); 260 (commercial fishery off Barkley Sound, B.C.); 285 (bibliography of F.R.B. investigations on migration); 316 (acanthocephalan parasites in); 322 (diseases & infections from parasites); 410:11 (tagging & marking review); 425:3 (history & statistics of B.C. catches & products); 533 (tagging for spawning populations estimations); 637; 664; 690; 699; 718; 744; 762; 785 (Skeena R. Salmon Management Committee annual reports); 642; 656; 659; 665; 681; 683; 689; 759; 766; 824 (Canadian exploratory fishing, feed, & tagging, in open NE Pac. Ocean); 645 (biomass of young, feeding on plankton, Barkley Sound, B.C.); 689 (vertical distribution, open NE Pac. Ocean); 695 (environmental & genetic influence on some characters for distinguishing stocks of); 708 (1946-1960 enumeration & sampling data, Babine R. counting weir, B.C.); 720 (behaviour of young, Somass R., B.C.); 730 (tagging in N B.C.); 749 (adult migratory behaviour when faced with fishway control devices); 753; 849 (catches in coastal B.C. commercial herring purse seining); 756 (captivity effects on); 866 (longlining surveys, Gulf of Alaska); 882(1-5) (lists & descriptions of spawning grounds, & escapement tabulations, Skeena R. system, B.C.); 889 (tagging data from B.C. research vessel "Fort Ross"); 892-894 (Gulf of Alaska tagging & recoveries data)
- E 31 (oil chemistry of cold stored)
- OL 66 (bathythermograms re exploratory fishing in Gulf of Alaska & NE Pac. Ocean); 143; 169 (bathythermograms re tagging in Gulf of Alaska & NE Pac. Ocean); 176 (taken in experimental midwater trawling, N Hecate Strait)

Salmon, chinook (Oncorhynchus tshawytscha) (see also Salmon (Pacific, in general))

- B 260 (fishery off Barkley Sound, B.C.); 300 (egg expulsion methods & losses); 305 (mortality from plankton bloom in fish trap); 311 (troll fishery competition); 338 (fry habits, Harrison L., B.C.); 664; 675; 690 (Skeena R. investigations, B.C.); 675 (past, present & future of B.C. fishery); 735 (continental stocks, ocean distribution, commercial exploitation, age composition, etc.); 776 (sizes & ages in B.C. fishery); 897 (U.S.A. Columbia R. hatchery evaluation program)
- E 31 (oil chemistry of cold stored)

Salmon, chum (Oncorhynchus keta) (see also Salmon (Pacific, in general))

- B 637; 664; 675; 690 (Skeena R. investigations, B.C.); 666; 667; 688; 704; 734 (scale characteristics variations, N Pac. Ocean); 675 (past, present & future of B.C. fishery); 676 (spawning potential, Qualicum R., B.C.); 681; 766 (immature & mature, open NE Pac. Ocean); 689; 701 (vertical distribution, open NE Pac. Ocean); 730; 732 (tagging in N B.C. & Gulf of Alaska); 868 (B.C. investigations review)
- E 31 (oil chemistry of cold stored)

Salmon, coho (Oncorhynchus kisutch) (see also Salmon (Pacific, in general))

- B 300 (egg expulsion methods & losses); 339 (fry habits, Harrison L., B.C.); 478:10 (predator of sockeye salmon fry); 664; 675; 690 (Skeena R. investigations, B.C.); 675 (past, present & future of B.C. fishery); 677-679 (Juan de Fuca Strait Canadian & American study); 689; 701 (vertical distribution, open NE Pac. Ocean); 735 (continental stocks, ocean distribution, commercial exploitation, age composition, etc.); 766 (age composition, Gulf of Alaska); 776 (sizes & ages in B.C. fishery)
- E 31 (oil chemistry of cold stored)

Salmon, pink (Oncorhynchus gorbuscha) (see also Salmon (Pacific, in general))

- B 229 (spawning, incubation, alevinage); 308 (investigations); 339 (fry habits, Harrison L., B.C.); 624; 641 (parasitism re distinguishing between N American & Asiatic stocks); 637; 664; 675; 690; 718; 865 (Skeena R. system investigations, B.C.); 669 (freshwater existence mortality); 675 (past, present & future of B.C. fishery); 681 (immature & mature, open NE Pac. Ocean); 689; 701 (vertical distribution, open NE Pac. Ocean); 728-730; 732 (Canadian & American exploitation of northward migrating; also tagging); 729 (Pink Salmon Co-ordinating Committee Report No. 1); 750; 751 (commercial catches, Howe Sound to N tip of Vancouver Is.); 786; 823 (distribution & abundance, NE Pac.); 830 (transplantations review); 877 (parasites in early sea life of Bella Coola R., B.C.)
- E 31 (oil chemistry of cold stored)

Salmon, sebago (see Salmon, Atlantic landlocked)

Salmon, sockeye (Oncorhynchus nerka) (see also Kokanee; Salmon (Pacific, in general))

- B 2; 9 (investigations, Eagle R., B.C.); 3; 8 (investigations, Cultus L., B.C.); 230 (tagging ratio for spawning population estimation); 260 (Barkley Sound fishery, B.C.); 261 (protozoan disease in Cultus L. hatchery, B.C.); 304 (Philonema nematode parasite); 306 (mortality from plankton bloom); 307 (variation in developing egg size); 317 (halibut meal as hatchery feed); 339 (fry & scale growth rate, Harrison L., B.C.); 478 (predator control re production, Cultus L., B.C.); 531; 532; 534; 536 (tagging ratio re escapement & migration, Babine L. & R., B.C.); 559 (Lakelse R. effect on young migrating); 624; 641; 658; 687; 703 (parasitism re distinguishing between Asiatic & N American stocks); 637; 664; 675; 690; 718; 865 (Skeena R. system investigations, B.C.); 675 (past, present & future of B.C. fishery); 681 (immature & mature, open NE Pac. Ocean); 689; 701 (vertical distribution, open NE Pac. Ocean); 702 (ocean distribution of Rivers & Smith Inlets runs, B.C.); 728-730; 732 (Canadian & American commercial exploitation of northward migrating; also tagging); 737 (feasibility of converting a B.C. inlet into a freshwater basin for); 757; 766 (scale studies re origin of Gulf of Alaska stocks); 772; 818 (age, sex & size composition, Rivers Inlet, B.C.); 848 (female vs. egg size); 876 (spawning migratory behaviour in S Thompson & lower Fraser R., B.C.)

Salmon, steelhead (see Trout, steelhead)

Salmon lice (see Lice, fish)

Salmon River, N.B. (see also Big Salmon River, N.B.)

- B130(10) (young salmon distribution)

Salmonoid fishes (see also individual species)

- B 322 (diseases & infections from parasites); 410:11 (tagging & marking review)

Salt (sodium chloride)

- B 23 (effect on bacteria growth)

Salting (see also Curing; Drying; Pickling; Smoking)

- B 23 (Atl. cod: halophilic bacteria NaCl tolerance)
E 13; 23; 32 (brine effect on muscle fibre size)

Salts in general (see also Salt; Salting)

- E 1; 2 (effect on muscle tensile strength); 3 (effect on spoilage microorganisms growth); 1;2;4 (effect on smoking procedures)

Salvelinus alpinus (see Char, arctic)
fontinalis (see Trout, brook)
malma (see Dolly Varden)
namaycush (see Trout, lake)

Sam Orr Pond, N.B.

B 693; 696-698 (transplantation of European oyster into); 693; 698 (hydro-graphic & biotic study re above)

Sambro Lightship, off N.S. (see Lighthouses)

Sampling

B 254 (efficient method for creel census); 255 (statistical treatment for plankton enumeration); 477 (seawater sampling bottle); 785:33 (apparatus for testing Pac. salmon spawning beds suitability); 855 (hydrostatically operated benthic grab); 887 (perforated pipe, for plankton)

Sand (see also Sediments)

B 46 (physical characteristics, Passamaquoddy Bay, N.B.)

Sand dollar (Echinarachnius parma)

B 650:12; 807-809 (re Gulf of St. Lawrence scallop beds)
 OL 145 (abundance, Gulf of St. Lawrence)

Sand lance, American (Ammodytes americanus)

B 799 (eggs & larve in zooplankton)

Sand lance, Pacific (Ammodytes hexapterus)

B 712 (in echo-scattering layer, Saanich Inlet, B.C.)

Sandeman, E.J.

B 822 (ICNAF-regulated fish species taken in experimental redfish catches)

Sanders, F.H.

OL 197 (current observations re sewage disposal forecasts, Cordova Bay, B.C.)

Sandworm (Neanthes virens) (see Baitworms)

Sanitation (see also Disease)

B 55 (in trout hatcheries)

Sanderson, S.J.

B 26 (haddock muscle bacterial decomposition rates)

Sardine (see Herring, Atlantic)

Sardinops sagax (see Pilchard)

Saskatchewan (see also individual localities)

B 469; 470 (goldeye investigations); 494 (whitefish re Trienophorus, Nesslin L.); 495 (net plankton, Nesslin L.); 675 (survey of past & present, & future trends, of fisheries)

Sato, R.

B 666 (chum salmon scale variations, N Pac. Ocean)

Sauger (Stizostedion canadense)

B 445; 450 (availability, sizes & dressed weights, L. Winnipeg fishery); 484; 609 (catches, L. Manitoba); 507:30,41; 508; 543; 544; 554; 598 (L. Winnipeg commercial fishery); 508:6; 510:7; 570; 571 (size & availability, L. Winnipeg)

Saunders, Pauline E.

B 764 (Great Slave L. fishing vessel types)

Saunders, Richard L.

B 805 (daily salmon counts at fences, NW Miramichi R., N.B.); 847 (Canadian Atl. salmon populations re W Greenland fishery); 899 (salinity effects on Atl. salmon fry)

Saury, Atlantic (Scomberesox saurus)

B 675 (Canadian fishery potential)

Savage, James

B 118(39;40) (physiography & climatology, Frizzleton region of Margaree R., N.S.)

Sawyer, William Reginald

B 359 (instrument for measuring quality & quantity of ultraviolet, etc. radiation); 360 (some ultraviolet radiation photochemical effects)

Saxidomus giganteus (see Clam, butter)Scales, fish (see also following heading)

B 185; 238 (regeneration in Atl. salmon); 315 (development from integuments, in trouts); 329(23) (guanine; loosening; colour changes; in Atl. salmon); 559 (damage by fences, young sockeye salmon)

Scales, fish (for age determination or stocks origin) (see also preceding heading)

B 43; 59; 129(1); 238; 498 (re Atl. salmon age & spawn-marks); 51; 53:17; 112 (Atl. mackerel); 61 (white perch); 68 (winter flounder); 84 (Atl. cod); 98:42; 185; 238; 861 (Atl. salmon: characteristics & abnormalities); 122(4); 127(9) (Atl. salmon spring smolts, Margaree R., N.S.); 185; 238 (regeneration in Atl. salmon); 206(1) (re Atl. salmon smolt metamorphosis); 206(2); 210(10) (Atl. brook trout); 206(4); 209(1;2) (salmon, Moser R., N.S.); 238 (factors affecting growth, Atl. salmon); 256; 583 (eulachon); 315 (development from integument, in trouts); 329(23) (loosening & colour changes in Atl. salmon); 339 (sockeye salmon); 366 (salmon, Pollett R., N.B.); 401:44; 498:22 (salmon, Grand L., N.S.); 555; 557 (ciscoes); 587; 592 (lake whitefish); 666; 667; 688; 704; 734; 735:74; 758 (chum salmon: characteristics variations, N Pac. Ocean & B.C. coast); 695 (re distinguishing stocks of Pac. salmon & steelhead trout); 735:74 (chinook salmon, NE Pac.); 757 (for distinguishing Gulf of Alaska sockeye salmon stocks); 786 (pink salmon, re tracing migration of central B.C. coast stocks)

Scallop, Atlantic sea (see Scallop, giant)Scallop, giant (biology) (Placopecten magellanicus) (Atl. sea scallop)

B 121; 140; 248; 373; 374; 526 (life history, etc., Bay of Fundy); 124; 350 (larvae in plankton); 197; 373; 473(B); 526 (Bay of Fundy fishery); 198; 350 (feed); 248; 350; 373; 420 (growth rate re temperature & salinity); 342 (adductor muscle physiology); 350 (gonad histology; parasites; etc.);

Scallop, giant (biology) (cont'd)

373:134,149 (eggs & larvae parasites); 376 (case histories of toxicity to man & domestic animals); 395; 423; 449; 648; 650; 807-809; 842; 880; 881 (explorations & surveys for); 415 (investigations, Boughton Is., P.E.I.); 430:35 (Nfld.); 449 (growth, mortality, migration, harvesting gear trials); 473(A;B); 526 (productivity, Digby, N.S., area); 638 (high-temperature mortality); 648 (exploratory fishing, ages, sizes & meat weights, W & SW Nfld.); 675 (past, present & future of fishery); 888 (comparison of two odometer types for exploratory dragging)

Scallop, giant (technology)

B 194 (muscle digestibility); 197:18; 373:44; 806 (utilizations); 376 (re paralytic shellfish poison); 415; 806 (shucking methods)
E 43 (canned muscle; canned paste); 44 (analysis; frozen; canned fried; tissue tensile strength)

Scallop, Iceland (Chlamys (Pecten) islandicus)

B 373:2 (non-commercial Maritimes species); 430:35 (Nfld.); 650:12; 807-809 (re giant scallop, Gulf of St. Lawrence)

Scallops, deepwater

B 717; 746 (Chlamys & Pecten in B.C.)

Schizaster fragilis (see Sea urchins)Schizothaerus muttalli (see Clam, horse)

Schooling

B 336(14:23) (Atl. salmon parr & smolts); 352:21 (Atl. herring)

Schweitzer, T.T.

B 760 (employment re controversy between sport & commercial fishing)

Scomber japonicus (see Mackerel, Pacific)

scombrus (see Mackerel, Atlantic)

Scomberesox saurus (see Saury, Atlantic)

Scorpaenidae (scorpionfishes; rockfishes)

OL 175 (taken during NE Pac. midwater trawling)

Scotian Shelf

B 94; 136; 168; 170; 172; 174 (hydrography); 105; 167; 169; 171; 173; 418; 572:10 (hydrodynamics); 353-356 (depths, salinities, temperatures); 388 (winter incursion of slope water); 475 (temperature & salinity re water mixing); 535; 538; 577 (temperature distribution); 553 (herring explorations); 564 (re Continental Shelf); 796 (recent trends in cod & haddock landings from)

OL 35 (temperature distribution); 40 (re IGY Polar Front Survey oceanography); 64; 65 (oceanography); 95; 207 (oceanography, Halifax to); 107; 127 (sediments re acoustical reflection)

Scotland

B 705 (oceanography of two lochs re pulpmill pollution)

Scott, D.C.

- B 565; 601 (spawning lake trout & whitefish study, Great Slave L.); 580; 595;
602; 620 (Great Slave L. commercial fisheries); 60C (spawning whitefish,
Rae Arm, Great Slave L.)

Scott, David M.

- B 361 (yellowtail flounder biology)

Scott, W.B.

- B 878 (Atl. cod & haddock comparative axial skeleton)

Sculpin (an Atlantic)

- B 28 (heat effect on muscle opacity); 342 (muscle physiology)

Sculpin, arctic hookear (Arctediellus uncinatus)

- B 651 (Laurentian Channel)

Sculpin, longhorn (Myoxocephalus octodecemspinosus)

- B 35 (rigor phenomena)

Sculpin, shorthorn (Myoxocephalus scorpius)

- B 35 (rigor phenomena)

Sculpin, soft (Gilbertidia sigalutes)

- OL 199 (Saanich Inlet, B.C.)

Sea butterfly (Clione limacina)

- OL 202 (at Pac. Ocean Weather Station "P")

Sea cucumber (Cucumaria)

- B 342 (C. frondosa longitudinal muscle physiology); 650:13 (C. frondosa re
scallop, Gulf of St. Lawrence)

Sea level

- OL 42 (IGY program at Halifax & St. John's)

Sea lion, northern (Eumetopias jubata)

- B 281 (1929 expedition against B.C.; feed); 675 (past, present & future of
B.C. catch)

Sea otter (Enhydra lutris)

- B 675 (past, present & future of B.C. catch)

Sea poacher, Atlantic (Agonus decagonus) (alligatorfish)

- B 651 (Laurentian Channel)

Sea urchins

- B 650:13; 807-809 (Strongylocentrosus dröbachiensis re scallop, Gulf of St.
Lawrence)

- OL 145 (heart urchin, Schizaster fragilis, abundance in Gulf of St. Lawrence)

Sea water (see also Hydrography; Oceanography; also other headings relating to
characteristics of sea water)

- B 71; 139; 294; 403 (analytic methods & procedures)

- OL 18; 19 (standard methods for analysis); 24 (tables of physical properties)

Seal, fur (see Seal, northern fur)

Seal, gray (Halichoerus grypus)

B 846 (biology; economics; feed; as Phocanema vector)

Seal, harbour (Atlantic) (Phoca vitulina concolor)

B 115(16:14) (Margaree Harbour, N.S.)

Seal, harp (Phoca groenlandica)

B 115(16:14) (Margaree Harbour, N.S.); 430:54 (Nfld. fishery & investigations); 588 (reproduction); 591 (biology & fishery); 675 (past, present & future of catch)

Seal, hooded (Cystophora cristata)

B 675 (past, present & future of catch)

Seal, northern fur (Callorhinus ursinus)

B 629; 700; 719; 736; 761; 825; 850; 875 (research, abundance, etc.); 675 (past, present & future of Canadian participation in catch); 754 (key to female reproductive condition)

OL 66 (bathythermograms re exploratory fishing off W coast Vancouver Is.)

Seal, ringed (Phoca hispida)

B 675 (Canadian Arctic fishery); 716 (weather re hunting from boats, E Canadian Arctic)

Seaperch, striped (Embiotoca lateralis)

B 323 (digestive tract histology)

Seaperches

OL 86 (B.C. fishery, re possible radioactive wastes disposal)

Seasnail, longfin (Careproctus longipinnis) (sea tadpole)

B 651 (Laurentian Channel, & their feed)

Seaweeds (Atlantic) (see also Algae; Dulse; Eel-grass; Flora; Irish moss)

B 206(5) (of islands off mouth of Moser R., N.S.); 341(1) (utilizations, Bay of Fundy); 341(2) (ecology, Miramichi area, N.B.); 675 (potential for Canadian harvests)

E 47 (Fucus, Laminaria, etc.: iodine & carbohydrate analysis & content)

Seaweeds (Pacific) (see also Algae; Dulse)

B 425:32; 675 (B.C. potential); 733 (of Prince Rupert vicinity, re pulp mill pollution effects)

Sebastes diploproa (see Rockfish, splitnose)

marinus (see Redfish)

Sebastes alutus (see Perch, Pacific ocean)

flavidus (see Rockfish, yellowtail)

proriger (see Rockfish, redstripe)

zacentrus (see Rockfish, sharpchin)

Secchi disk (see Transparency of waters)

Sediments, marine (see also Silt)

B 46 (Passamaquoddy Bay sand porosity)

OL 6 (nature of, in discolored ice, Foxe Basin, N.W.T.); 45 (mineralogy of, Foxe Basin); 89 (E Canadian Archipelago); 107; 127 (Gulf of St. Lawrence & Canadian Atl. continental shelf, re acoustical reflection); 140 (CaCO₃ distribution in St. Lawrence R., estuary & gulf); 145 (Gulf of St. Lawrence re benthic communities); 189 (analysis methods for silicate bases)Seining, Danish (see also Fishing methods; Gear; Vessels, fishing)

B 377 (observations in Scandinavia)

Seining, purse (see also Exploration; Fishing methods; Gear; Vessels, fishing)

B 753 (salmon catches in B.C. commercial herring seining)

Seminars

OL 51 (on N Pac. physical & hydrodynamical oceanography)

Semotilus atromaculatus (see Chub, creek)corporalis (see Fallfish)Sergeant, D.E.

B 430:48-53 (Nfld. whale fishery); 591 (harp seal problem review)

Serum (see Blood)Seston (see also Plankton)

OL 208 (Nanoose Bay, B.C.); 211 (Strait of Georgia)

Sewage disposal (oceanographic aspects of)B 412; 459 (Vancouver, B.C.); 459 (Fraser R. estuary, B.C.); 547 (Nanaimo, B.C.)
OL 197 (Cordova Bay, B.C.)Sex ratio; Sex distribution (see also names of other species)

B 68 (winter flounder); 77; 107; 895; 896 (lobster); 115(15); 126(8); 206(4) (at different stages of Atl. salmon); 222 (Dungeness crab); 309 (Strait of Georgia flounders); 405:25 (Strait of Georgia lemon sole); 419 (longfinned squid); 427:45 (alewife); 439:23 (American eel); 461:21; 485:17 (beluga, Churchill, Man.); 462:10 (northern pike, Heming L., Man.); 465:8 (goldeye); 483 (ciscoes, Great Bear L., N.W.T.); 629:30; 700; 719; 736 (northern fur seal); 708 (1946-1960 data on Pac. salmon & steelhead trout, Babine R. counting weir, B.C.); 772; 818 (sockeye salmon, Rivers Inlet, B.C.); 834 (shortfin squid); 867; 869 (Pac. ocean perch); 871 (capelin); 895 (red crabs)

Sex reversal

B 82; 82(A-H); 251 (Atl. oyster)

Seymour Inlet, B.C. (see also Inlet and fiord oceanography)

B 737 (feasibility of conversion to freshwater sockeye-producing basin)

Shad, American (Alosa sapidissima)

B 117(30:56) (Margaree R., N.S.); 246 (Maritimes); 327(5) (effect of trap on migration, Petitcodiac R., N.B.); 392(16) (Petitcodiac R. fishery); 394(8) (commercial marine fishery, King Co., N.S.); 675 (past, present & future of Canadian fishery)

- Shand, J.A.
 B 513 (Strait of Georgia internal waves)
- Shark, basking (Cetorhinus maximus)
 B 675 (possible utilization, B.C.)
- Shark, Greenland (Somniosus microcephalus)
 B 675 (Canadian Arctic fishery)
- Shark repellent
 392(16:28) (in Petitcodiac R. fishery, N.B.)
- Sharks (Atlantic)
 B 675 (past, present & future of Canadian fisheries)
- Sharks (Pacific)
 B 675 (past, present & future of B.C. fisheries)
- Shediac Bay, N.B.
 B 76; 184:21; 239; 289; 370:12 (oyster investigations)
- Sheepshead (see Drum, freshwater)
- Sheldon, R.W.
 OL 214 (some applications of Coulter counter to marine research)
- Shell (see also Moulting)
 B 121; 140; 373:72; 415:5; 420; 648 (re giant scallop aging); 162:31,45,56;
 184:51; 239; 331; 370:32,55 (specific gravity, growth, etc., of Atl.
 oyster); 197:19; 373:47; 806 (scallop shell utilizations); 331:46;
 370:55 (oyster shell erosion); 370:32 (chemical composition, Atl. oyster
 & mussel); 440:33 (softshell clam: effect of damage on self-cleansing of
 the clam); 655 (effects of boring sponges on P.E.I. oyster, mussel &
 quahaug)
 E 23 (weight loss on boiling Atl. crab & lobster)
- Shellfish toxicity (see Paralytic shellfish poison)
- Shepard, M.P.
 B 559 (fence effect on migrating young sockeye salmon, Lakelse L., B.C.);
 666; 667; 688; 704; 734; 758 (chum salmon scale variations, N Pac. Ocean);
 728 (exploitation of migrating pink & sockeye salmon by Canadian &
 American commercial fisheries); 731 (distribution & origin of open NE
 Pac. Ocean chum salmon); 757 (scale studies re Gulf of Alaska sockeye
 salmon stocks origin); 786; 823 (pink salmon distribution & abundance,
 B.C. offshore & Gulf of Alaska); 866 (salmons longlining surveys, Gulf
 of Alaska)
- Sherwood, H.P.
 B 249 (oyster larvae, Bideford R., P.E.I.)
- Shiner, creek (Notropis cornutus)
 B 117(30:50) (Margaree R., N.S.); 201(D) (feed, Chamcook Lakes, N.B.);
 263 (effect of piscicides on); 563:28 (movements re light)

Shiner, golden (Notemigonus crysoleucas)

B 246 (Maritimes); 263 (effect of piscicides on)

Shiner, spottail (Notropis hudsonius)

B 246 (Maritimes); 496 (effect of 3 insecticides on)

Shippigan area, N.B.

B 331; 332 (oyster investigations)

Ships, research (see Vessels, research)Shipworm (Bankia setacea)

B 765:10 (resistance to kraft mill effluent effects); 837 (in B.C., & origin of)

Shipworm (Teredo navalis)

B 148; 160:59 (larval behaviour); 152; 159:31; 160:58 (protection of wood against); 162:44 (resistance of various woods to); 684 (larvae description); 837:10 (origin of & occurrence of in B.C.)

Shrimp, coonstripe (Pandalus danae)

B 272 (biology; B.C. fishery)

Shrimp, glass (Pasiphaea pacifica)

OL 199 (Saanch Inlet, B.C.); 213 (distribution & parasitism, Strait of Georgia)

Shrimp, humpback (Pandalus hypsinotus)

B 272 (biology; B.C. fishery)

Shrimp, pink (Pandalus borealis)

B 272 (biology; B.C. fishery); 675 (Canadian Atlantic fishery potential); 768 (in experimental trawling off Kodiak Is., Alaska)

Shrimp, sidestripe (Pandalopsis dispar)

B 272 (biology; B.C. fishery)

Shrimp, striped pink (Pandalus montagui)

B 810:62 (biology)

Shrimps (Atlantic) (Pandalus spp.)

B 675 (fishery potential); 810:54 (biology)

Shrimps (Pacific) (Pandalus spp.)B 425 (B.C. production); 675 (past, present & future of B.C. fishery)
OL 86 (B.C. fishery re radioactive wastes disposal)

Shrinkage (of muscle)

E 23 (of Atl. cod, crab & lobster on heating); 32 (pH effect on); 44 (scallop)

Shubenacadie River system, N.S. (see also names of tributaries)

B 390(4); 393(4); 428; 498; 539; 540 (tagging & tagged salmon); 390(9); 498:79 (alewife migration); 396(3) (plankton & general survey); 400(3); 426 (Fletcher R. smolt trap); 401; 539; 563 (sport fishing data); 426:14; 539 (salmon planting); 427 (fisheries; limnology; plankton; condition of fish species); 498; 539 (salmon management); 498:67 (smelt angling); 498:74 (striped bass angling); 498:92 (Fletcher R. plankton); 563:20 (salmon reaction to light)

Shucking

B 197:18; 373:44; 415; 806 (giant scallop); 288; 378:21; 399 (softshell clam)

E 43; 44 (giant scallop)

Silicate (Note: The numerous data from routine silicate determinations on seawater are not indexed unless having special significance. See also Productivity, primary)

B 403 (analytical method, for seawater)

OL 18 (standard analytical method, for seawater); 20; 135; 179 (in NE Pac. Ocean); 30; 211 (in B.C. coastal waters); 55; 135; 187; 209 (at Pac. Ocean Weather Station "P" re water fertility); 189 (analysis methods for various metal bases of, in marine sediments); 208 (Nanoose Bay, B.C., re water fertility)

Siliqua patula (see Clam, razor (Pacific))

Silt (see also Sediments)

B 257; 280 (cause of gill-net sinkage, B.C.); 257:13 (effect on Dungeness crab, Observatory Inlet, B.C.); 472(E) (re Atl. oyster beds)

Silver Creek, Wiarton, Ont.

B 328(11) (brook & brown trout population)

Sissiboo River, N.S.

B 326; 378; 414 (clam investigations)

Size; Size composition (see also Growth; Length-weight relation; Weight)

Invertebrates:

B 1; 6; 77; 107; 334; 895; 896 (lobster); 75; 76; 149; 239:43; 292; 331; 370:59 (Atl. oyster); 104; 163 (Asterias vulgaris starfish); 196; 763:8 (softshell clam); 222 (B.C. Dungeness crab); 248; 395:4; 415:5; 648; 880; 881 (giant scallop); 372:5; 408 (Polinices drill); 437:11 (Aurelia flavidula jellyfish); 834 (shortfin squid); 895 (red crabs); 419 (longfinned squid)

Vertebrates:

B 43; 427:12; 498:14 (Atl. salmon); 61 (white perch lengths); 68 (winter flounder lengths); 85:10; 99 (Atl. mackerel); 95:8 (swordfish); 223; 256; 283 (eulachon); 286:5 (albacore); 307 (sockeye salmon eggs variation); 348:12 (male & female B.C. lemon sole); 361:36 (yellowtail flounder); 405:25,31 (lemon sole; Pac. cod); 427:32,39 (striped bass; alewife; Shubenacadie R. system, N.S.); 439:8 (eel, Petitcodiac R., N.B.); 445; 450; 508; 509; 510; 544; 554; 567; 570; 597; 598 (L. Winnipeg commercial fishes); 451:3; 487:2; 488:3; 489:5; 490:2; 491:5; 492:2; 515:11; 517; 556; 560; 565; 580; 595; 600; 620; 634; 738; 774; 777-780; 782; 802; * (of commercial catches or species, Great Slave L., N.W.T.); 462:21 (beluga near Churchill, Man.); 478:8 (northern squawfish, Cultus L., B.C.); 483:17 (coregonine fishes, Great Bear L., N.W.T.); 484:9 (L. Manitoba fishes); 505 (Gulf of St. Lawrence herring); 525 (longnose sucker, Great Slave L.); 567; 594; 597 (L. Winnipeg commercial whitefish); 573 (cutthroat trout, Lakelse L., B.C.); 588 (harp seal); 600 (Great Slave L. whitefish); 630 (re Atl. walrus age); 693 (at maturity, re Pac. salmon)

* add: 783; 827; 831; 832; 835; 836; 839-841; 856-859

Size; Size composition (cont'd)

Vertebrates (cont'd)

stocks); 708 (1946-1960 data on Pac. salmon & steelhead trout at counting weir, Babine R., B.C.); 719; 736; 761; 850 (northern fur seal); 767; 768 (Gulf of Alaska halibut); 772; 818 (sockeye salmon, Rivers Inlet, B.C.); 776 (coho & chinook salmon in B.C. fisheries); 787 (commercially caught Atl. cod & haddock); 812; 867; 869 (Pac. ocean perch); 848 (of sockeye salmon re their egg size); 863 (Atl. argentine & silver hake); 870:4 (capelin); 873 (fishes length measurement uniformity proposals)

Size-limit (see also Gear; Management; Size)

B 378:35 (softshell clam)

Skate, barndoor (*Raja laevis*)

B 134 (nervous system re stomach motility & secretion); 135 (muscle nitrogenous constituents); 242 (clasper & clasper glands function); 342 (jaw & heart muscle physiology)

Skate, little (*Raja erinacea*)

B 186 (histidine, adrenaline & spinal cord destruction effect on blood); 242 (clasper & clasper glands function); 342 (wing muscle physiology)

Skate, smooth (*Raja senta*)

B 651 (Laurentian Channel)

Skate, thorny (*Raja radiata*)

B 651 (Laurentian Channel)

Skate, winter (*Raja ocellata*)

B 134 (nervous system re stomach motility & secretion); 242 (clasper & clasper glands function)

Skates (species not stated; chiefly Atlantic)

B 28 (heat effect on muscle opacity); 32 (muscle juice heat coagulation); 35; 38 (rigor phenomena); 38 (protein changes); 675 (past, present & future of Canadian fishery)

E 20; 40; 26 (muscle physical constants); 25 (vitamin A & yield of liver oil)

Skeena River system, B.C. (see also Babine Lake and River system; Lakelse Lake; Milkitkwa Lake)

B 637; 664; 690; 699; 718; 744; 762; 785; 865 (Salmon Management Committee annual reports); 675 (past, present & future of salmon fishery); 882(1-5) (catalog of salmon spawning grounds & escapement tabulations); 882(1:i) (index to spawning grounds)

Skin (see also Seal, northern fur; Slime)

B 329(23) (colour changes in Atl. salmon); 643:46 (weight, of Atl. walrus); 695 (pigmentation of Pac. salmon, re stocks)

Skogsberg, Tage

B 220 (chemical oceanographic data reporting)

Slime (see also Skin)

B 21; 27; 39 (bacteria of haddock)

Slope water (see Georges Bank; Grand Bank; Oceanography; Scotian Shelf)

Smallman, B.N.

- B 116(21-25 (physical conditions; salmon peculiarities; Margaree Forks, N.S.);
146 (oyster culture conditions, Malagash, N.S.)

Smelt, American (Osmerus mordax)

- B 42:17 (stomach contents); 44; 201(B) (possibly landlocked variety);
45 (larvae in N.B. rivers); 97:49 (biological study of Maritimes fishery
statistics); 129(8:10) (Pomquet R., N.S.); 201(A); 202 (Chamcook Lake,
N.B.); 210(12) (eggs eaten by Atl. salmon & trout); 237 (box-net mesh
size re catch); 250 (pulpmill pollution effects, N.B.); 369(1-4)
(tagging, Miramichi area, N.B.); 369(2;3) (movements, Miramichi Bay, N.B.);
401:20; 427:25; 498:74; 539 (sport fishing, Shubenacadie L., N.S.); 675
(past, present & future of Canadian fishery)

Smelt, American landlocked (Osmerus mordax)

- B 210(B) (distinction between varieties)

Smelt, surf (Hypomesus pretiosus)

- B 675 (B.C. fishery)

Smith, G.F.M.

- B 125; 163 (starfish biology re predation on oyster, P.E.I.); 164 (oyster
investigation, Bras d'Or Lakes, N.S.); 193; 334 (Gulf of St. Lawrence
lobster investigations)

Smith, Gertrude

- B 227 (B.C. olams ecology, growth & feed)

Smith, Howard D.

- B 882(1-5) (catalog of Skeena R. system salmon spawning grounds & escapement
tabulations)

Smith, M.W.

- B 57 (unexplained mortality of certain fishes in a N.B. lake); 188 (stocking
N.B. lakes with brook trout); 189; 190 (surveys of Maritimes lakes &
streams re fish culture); 191 (fish cultural procedures discussion);
192 (organic vs. inorganic freshwater fertilizers); 241(A;B); 346
(treating Stephenson's Pond, N.B., for trout); 246 (keys to Maritimes
freshwater fishes); 247 (light effect on Atl. salmon smolts migration);
253 (literature review of salmonids stocking success); 263 (poisoning
undesired fish, Cassidy L., N.B.); 338 (organic fertilization of fresh
waters); 351 (ponding in P.E.I. to improve trout angling); 727
(establishing & managing Maritimes trout ponds)

Smith Inlet, B.C. (see also Inlet and fiord oceanography)

- B 702 (ocean distribution of sockeye salmon run from)

Smoking; Smoked products

- B 357 ("cheese skipper" maggots in Atl. herring)
E 1; 2 (tensile strength of fish muscle for); 4; 5; 10; 27 (procedures &
chemistry); 5 (smoke penetration into flesh & bactericidal action);
6 (protein changes during smoking); 7 (smoking effect on enzymic digestion
of muscle); 8 (description of Atl. commercial); 15 (frozen haddock);
11 (ammonia & trimethylamine in)

Smolt (see name of adult form of salmon or trout)

Smoothtongue, California (Leuroglossus stilbius)

OL 199 (Saanich Inlet, B.C.)

Snail, moon (Polinices lewisii) (see also Drills)

B 416 (unexplained mortality, Nanaimo Harbour, B.C.); 860 (toxicity tests, B.C.)

Snail, shore (Nassarius obsoleta)

B 370:43 (Bideford R., P.E.I.)

Snails (see also Drills)

B 225:13 (Man. freshwater); 378:46 (Odostomia association with softshell clam);
803:13 (in L. Superior bottom fauna)

Snowdrift, Great Slave Lake, N.W.T.

B 738 (Indian domestic fishery survey)

Sodium compounds (see Salt; Salting)

Sole, butter (Iopsetta isolepis)

B 675 (past, present & future of B.C. fishery); 872 (B.C. trawl fishery)

OL 86 (B.C. fishery re radioactive wastes disposal)

Sole, Dover (Microstomus pacificus)

B 675 (past, present & future of B.C. fishery); 767; 768; 890; 891 (in B.C. & Gulf of Alaska experimental trawling); 872 (B.C. trawl fishery)

Sole, English (Parophrys vetulus) (lemon sole)

B 348 (age determination; growth); 405 (trawl fishery, Cape Lazo & Nanoose Bay, B.C.); 441 (re Baynes Sound & Lazo Bight oceanography, B.C.); 675 (past, present & future of B.C. fishery); 872 (B.C. trawl fishery)

OL 86 (B.C. fishery re radioactive wastes disposal)

Sole, flathead (Hippoglossoides elassodon)

B 768 (in experimental trawling off Kodiak Is., Alaska)

Sole, lemon (see Flounder, winter; Sole, English)

Sole, petraie (Eopsetta jordani) (brill)

B 675 (past, present & future of B.C. fishery); 872 (B.C. trawl fishery)

E 57 (liver oil vitamin A and theory of metabolism)

OL 86 (B.C. fishery re radioactive wastes disposal)

Sole, rex (Glyptocephalus zacentrus)

B 768 (in experimental trawling off Kodiak Is., Alaska); 872 (B.C. trawl fishery)

Sole, rock (Lepidopsetta bilineata)

B 316 (acanthocephalan parasites); 323 (digestive tract histology); 405 (trawl fishery, Cape Lazo & Nanoose Bay, B.C.); 675 (past, present & future of B.C. fishery); 768 (in experimental trawling off Kodiak Is., Alaska); 872 (B.C. trawl fishery)

OL 86 (B.C. fishery re radioactive wastes disposal)

Soles (Pacific)

B 425:14; 675; 872 (B.C. fishery); 890; 891 (in northern B.C. & Alaska experimental trawling)

Sollows, E.G.

B 505 (Atl. herring drift-net fishing)

Somass River system, B.C. (see also Alberni Harbour, B.C.)

B 720 (young Pac. salmon & trouts behaviour)

Somerville, G.M.

B 880; 881 (giant scallop survey)

Somniosus microcephalus (see Shark, Greenland)

Sonar (see also Sound, velocity in seawater)

OL 38 (ranging considerations, N Atl. waters)

Sooke, B.C.

B 305 (mortality of salmon in trap, caused by plankton bloom)

Sound, reaction to (see also Ultrasonic waves)

B 755:29 (literature review, re Atl. herring)

Sound, velocity in seawater (Note: The numerous data from routine determinations are not indexed unless having special significance)

OL 24 (tables concerning); 25; 27 (digital computer programming of data); 26 (report on calculation of); 38 (re sonar, N Atl. waters); 61 (use of airborne radiation thermometer re); 108; 144; 146; 198 (oceanographic projects re)

Sounding, echo (see also Echo-scattering layer; Sound, velocity in seawater)

B 505:17 (re Atl. herring experimental drift-netting)

OL 107; 127 (Gulf of St. Lawrence & continental shelf sediments re acoustical reflection)

South Bay, Lake Huron, Ont.

B 556 (ciscoes growth)

Spalding, D.J.

B 629; 700; 719; 736; 761 (Canadian pelagic sea researches)

Spat (see Culture; Oyster; Quahaug)

Spawning (see also Eggs; Fecundity; Reproduction)

B 3; 8 (artificial, of sockeye salmon); 60 (herring, Halifax area); 121; 350:12; 650:14 (giant scallop); 141 (temperature & salinity effects on Atl. oyster); 150; 158-160; 162; 164; 203; 370:60 (& spatting of Atl. oyster); 162:10 (inducing artificial, in Atl. oyster); 211(15) (artificial beds for Atl. salmon); 229 (pink salmon); 256 (eulachon); 352; 755:6 (Atl. herring); 361:23 (yellowtail flounder); 362:34 (Atl. halibut); 424:7 (Atl. cod); 434 (Atl. hake); 520 (minimum adult stock for adequate, in 2 N.W.T. lakes); 525 (northern sucker, Great Slave L.); 565; 601 (lake trout & lake whitefish, Great Slave L.); 579 (of 6 fish species re parasitism, Heming L., Man.); 582:18 (winter flounder); 600; 601 (whitefish, Great Slave L.); 637, etc. (Skeena R. system salmon — see heading Skeena River); 654; 670 (sea lamprey); 675 (potential extension of grounds for B.C. salmon); 676 (potential for chum salmon, Qualicum R., B.C.); 695 (season of Pac. salmon, re distinguishing stocks); 785

Spawning (cont'd)

(sampler for Pac. salmon spawning grounds suitability); 870:14 (capelin); 876 (migratory behaviour of sockeye salmon in lower Fraser & S Thompson R., B.C.); 882(1-5) (catalog of Skeena R. system salmon spawning grounds, & escapement tabulations)

Speciation (see also Meristic characteristics; Morphology; Nomenclature; Taxonomy)

B 640 (of Cyclopidae re Triacnophorus infection)

Species indicators

B 748 (marine benthos re ethology, E Canadian Arctic); 624; 641; 658; 687; 703 (parasites, re Pac. salmon stocks)

Specific gravity (see also Density)

B 370:56 (Atl. oyster shell)

Specific heat (see Heat, specific)Specific volume (of seawater) (see Volume, specific)

Spence, C.M.

B 27 (haddock slime bacterial flora)

Spermatozoa (see also Testes)

B 141 (temperature & salinity effects on Atl. oyster); 373:156 (temperature re giant scallop); 588:49 (harp seal)

Sphaerium spp. (see Clams, fingernail)

Spider Lake, B.C.

B 270 (algae); 282 (phytoplankton)

Spisula solidissima (see Clam, bar)Spisula sp. (a deepwater clam)

B 717; 746 (in B.C. waters)

Spoilage (see Bacteria; Quality of fishery products)

Sponges

B 655 (Cliona, etc. boring sponges investigations re oysters, Malpeque Bay, P.E.I.)

Sport fishing (see Fishery, sport)

Sprague, J.B.

B 771 (toxicity of pollution re aquatic life: Canadian research review); 851 (seawater filtration for biological laboratories); 883 (bottom fauna of St. John R., estuary & harbour, N.B.)

OL 148; 180; 192; 210 (chemical conditions & heavy metals compounds concentrations, NW Miramichi R., N.B.); 181 (chemical survey of St. John R. system & estuary, N.B.)

Squalus acanthias (see Dogfish, spiny)

suckleyi (see Dogfish, Pacific)

Squawfish, northern (Ptychocheilus oregonense)

B 478 (control as sockeye salmon predator, Cultus L., B.C.)

Squid, longfinned (Loligo pealii) (see also Squids)

B 419 (occurrence, biology & behaviour, St. Andrews, N.B.)

Squid, red (Gonatus fabricii) (see also Squids)

B 712 (in echo-scattering layer, Saanich Inlet, B.C.)

OL 202 (at Pac. Ocean Weather Station "P")

Squid, short-finned (Illex illecebrosus)

B 675 (past, present & future of Canadian fishery); 834 (biology in Nfld. waters)

Squids

B 73 (hatching Loligo sp. eggs); 115(16:1) (Loligo sp. in Margaree Harbour, N.S.); 430:33 (Nfld. investigations); 712 (Loligo opalescens in echo-scattering layer, Saanich Inlet, B.C.)

OL 202 (Gonatus spp. at Pac. Ocean Weather Station "P")

Squires, H.J.

B 648 (giant scallop exploratory fishing, Nfld.); 810 (Nfld., Labrador & E Canadian Arctic decapod crustaceans)

St. Andrews, N.B., Station (see also next heading)

B 41 (trout toxicants in water supply)

St. Andrews area, N.B. (see also Passamaquoddy Bay)

B 46 (intertidal belt animal communities); 70; 96; 103 (oceanography); 71 (seawater nitrogen compounds determination); 73 (squid eggs); 248 (scallops); 345 (diatom growth); 414:23 (clams); 419 (occurrence of long-finned squid); 436 (Acmaea testudinalis limpet habitat & viability)

OL 1 (records & forecasting of sea surface temperatures); 2 (sea surface temperatures)

St. Croix River, N.B. and Maine

B 45 (smelt larvae); 198 (zooplankton vertical distribution); 244 (salmon mortality from pollution); 437 (diatom maxima)

OL 2 (daily river discharges)

St. George's Bay, Nfld.

B 861 (salmon fishery)

St. John, N.B. (see Saint John, N.B.)

St. John River, N.B. (see also Saint John, N.B.)

B 48 (hydrography); 98 (drift salmon statistics); 129(1) (salmon scale studies); 130(9) (salmon re salinity in estuary); 211(17) (salmon kelt migration); 240 (gribble); 883 (bottom fauna of river, estuary & harbour)

OL 181 (chemical surveys)

St. John's, Nfld.

OL 42 (temperatures & salinities re IGY Sea-level Recording programme)

St. Lawrence, Gulf of (see also Cabot Strait; Belle Isle, Strait of; Hydrography; Laurentian Channel; Northumberland Strait)

- B 193 (lobster fall season & larvae); 334 (lobster investigations summary); 362 (halibut growth & ecology); 364(B) (cod migration); 395; 423; 449; 650; 807-809; 842 (giant scallop exploration, etc.); 385; 572 (vertical water temperature distribution); 409 (short-term vertical water structure fluctuations); 417; 500; 572 (surface layer features); 456; 572 (deeper layers features); 505 (experimental herring drift-netting; plankton); 593 (Magdalen Shallows bottom temperatures); 606 (temperatures & salinities in SW); 614 (ice & iceberg incidence); 799 (fishes eggs & larvae in zooplankton); 884 (2 spider crab species)
- OL 3; 9; 64; 65; 190 (oceanographic surveys); 11 (ice potentials & heat budget computations); 60:8 (purpose of ice studies re forecasting ice conditions); 107; 127; 145 (bottom sediments); 140 (CaCO₃ distribution in sediments); 145 (benthic communities composition); 183 (average wind-stress data computation); 184; 185 (electric analogs re wind-stress effect on mass transport of waters)

St. Lawrence River, Que.

- OL 140 (CaCO₃ distribution in sediments)

St. Mary's Bay, N.S.

- B 1; 6 (lobster investigations); 65 (lobster mating experiments)

Stanley-Jones, A.R.

- OL 187 (Pac. Ocean Weather Station "P" oceanographic atlas)

Starfishes

- B 88 (Asterias vulgaris embryology re limiting physical factors); 104; 163 (predation on Atl. oyster; eradication methods); 125 (A. vulgaris larvae growth; adult resistivity); 149(B); 205 (Atl. oyster rearing trays to protect from); 159:30; 161; 164:4; 472(E) (re Atl. oyster); 333 (Northumberland Strait, N.S.); 416 (unexplained mortality, Nanaimo Harbour, B.C.); 650:13; 807-809 (A. borealis, polar starfish, re scallop beds, Gulf of St. Lawrence); 717; 746 (encountered in B.C. deepwater clam surveys)

Statistics; Statistical methods (see Catch per unit effort; Fishery, commercial; Fishery, sport; Mathematical treatment of data; also kind of organism, geographical feature, or statistics involved)

Steele, D.H.

- B 651 (Laurentian Channel fishes)

Stenodus leucichthys (mackenziei) (see Inconnu)

Stephen, L.J.

- B 489; 490 (Great Slave L. commercial fishery); 524 (Yellow L., N.W.T., fish survey)

Stephens, K.

- OL 135 (data record of oceanic productivity measurements off B.C. coast); 179 (chemical, physical & primary productivity data, NE Pac. Ocean); 208 (physical, chemical & biological conditions, Nanoose Bay, B.C.); 211 (physical, chemical & biological data, Strait of Georgia)

Stephenson's Pond, N.B.

B 241(A;B;C) (fishes; lime treatment for clearing of fish); 346 (limnology; draining)

Stevens, Edith

B 228 (diatoms as B.C. oyster feed)

Stevenson, J.C.

B 410 (marking & recoveries of fish for study of movements)

Stevenson, John A.

B 121; 140 (Bay of Fundy scallop investigations); 124 (bivalve larvae observations); 197; 373 (Bay of Fundy scallop fishery); 198 (zooplankton vertical distribution re scallop feed); 248; 373; 420 (giant scallop growth rate re temperature & salinity); 373 (giant scallop life history & environment; fishery); 419 (Loligo squid, St. Andrews, N.B.)

Stewart, W. Wesley

E 36 (determining Atl. cod liver oil chemical characteristics); 48 (centrifugal extractors for Atl. cod liver oil); 51 (Atl. cod muscle bound water)

Stickleback, brook (Eucalia inconstans)

B 246 (Maritimes); 496 (effect of 3 insecticides on)

Stickleback, ninespine (Pungitius pungitius)

B 246 (Maritimes freshwater); 496 (effect of 3 insecticides on)

Stickleback, threespine (Gasterosteus aculeatus)

B 246 (Maritimes freshwater)

Sticklebacks (species not stated)

B 117(30:59); 118(37:5) (in NE Margaree R., N.S.)

Stinson, R.H.

B 383 (Polinices clam drill natural history)

Stizostedion canadense (see Sauger)

vitreum glaucum (see Pike, blue)

vitreum vitreum (see Walleye)

Stocking of fish (see also Culture, fish; Fishery, sport; Hatchery; Management)

B 188; 189 (Maritimes lakes & streams with brook trout); 191; 212(3) (discussion of methods); 202(A) (flooding of Loch Lomond, N.B., prior to); 207(9); 210(5); 327(8); 328(10); 336(12;13); 380(6); 381(5;6); 382(8); 391(14;15); 392(17); 396(5) (salmon fry & fingerlings, N.B. & N.S.); 212(3;4;5) (Maritimes rivers & streams with salmon); 241(A;C) (lime treatment of pond preparatory to); 253 (review re success with salmonid fishes); 266 (Jasper Park barren & other lakes); 273 (trout fry, Quamichan L., B.C.); 426:14 (salmon smolt, Shubenacadie L., N.S.); 464 (trout, Clear L., Man.); 539:45 (re eels, Shubenacadie L., N.S.); 727 (ponds for trouts sport fishing in Maritimes)

Stocks (see also Populations; also names of organisms)

- B 396(7) (intermingling of salmon, in Maritimes); 520 (minimum adult, for adequate spawning in 2 N.W.T. lakes); 624; 641; 658; 687; 703 (sockeye & pink salmon parasitism re distinguishing between Asiatic & N American); 644 (Atl. shellfishes); 666; 667; 688; 704; 731; 734; 758 (chum salmon scale studies re origin of); 675 (present & future trends in Canadian fisheries); 695 (Pac. salmons & steelhead trout: environmental & genetic influence on some characters for distinguishing); 735 (continental, of coho & chinook salmon, & ocean intermingling of); 752 (female fin whale, B.C.); 757 (scale studies re origin of Gulf of Alaska sockeye salmon); 786 (central B.C. coast pink salmon: distribution & abundance in NE Pac.)

Stomach (see also Digestion)

- B 134 (skates nervous system re stomach secretion); 323 (histology of some B.C. fishes); 653:46 (weight, in Atl. walrus)

Stomach contents (see Faed; also names of organisms)

Stoneflies (Plecoptera)

- B 208(10:8;13) (species, Moser R., N.S.); 770 (distribution of Canadian); 803:11 (in L. Superior bottom fauna)

Storage (see also Refrigeration)

- B 331:51 (Atl. oyster)
E 1 (effect on Atl. fishes muscle tensile strength)

Strait of ... (see name of Strait)

Stream improvement (see also Culture, fish; Fishery, sport; Management; Salmon, Atlantic; Salmon (Pacific; and names of species); Trout)

- B 382(9); 391(15) (artificial cover for Atl. salmon); 394(7) (cover re behaviour of Atl. salmon); 426:13 (Rawdon R., N.S.); 749 (Robertson Creek, B.C.)

Strength, tensile

- B 28; 33 (heat effect on haddock muscle, re smoking)
E 1; 2 (of Atl. fishes muscle, re smoking); 44 (of giant scallop fibre tissue)

Stress (see Activity; Currents, reactions to)

Strickland, J.D.H.

- OL 18; 19 (standard seawater analyses methods); 30 (data & discussion of special B.C. coastal oceanographic survey); 55 (data record, oceanic fertility & productivity at Pac. Ocean Weather Station "P"); 88 (seawater suspended matter aerial observation studies); 135 (primary productivity measurements data record)

Strongylocentrosus dröbachiensis (see Sea urchins)Sturgeon, (American) Atlantic (Acipenser oxyrhynchus)

- B 246 (Maritimes freshwater)

Sturgeon, lake (Acipenser fulvescens)

- B 609 (evaluation in L. Winnipeg trap-net experiments); 706(1;2;3) (1904-1956 daily catches of a L. Erie commercial fishing company; also caviar from)

Sucker, longnose (Catostomus catostomus) (northern sucker; sturgeon sucker)

B 246 (Maritimes); 445; 554 (L. Winnipeg fishery: availability, sizes, dressed weights); 451:5; 492; 519; 525; 556; 620; 634; 680; 738; 741; 774 (in Great Slave L. fishery); 496 (effect of 3 insecticides on); 519 (Great Slave L.: possibilities for mink feed); 524; 721 (in 3 N.W.T. lakes); 525 (biology, Great Slave L.); 609 (evaluation in L. Winnipeg trap-net experiments); 680; 738 (Indian fishery for commercial use, Great Slave L.); 741 (tagging, Great Slave L.); 774; 777; 778; 827; 831; 832; 835; 840; 856-859 (computerized data for fish & catch weights, etc. in Great Slave L. commercial fishery); 833 (survey, Fort Chimo region, Ungava, Que.)

Sucker, redbhorse (Moxostoma spp.)

B 609 (evaluation in L. Winnipeg trap-net experiments); 706(1;2;3) (1904-1956 daily catches of a L. Erie commercial fishing company)

Sucker, white (Catostomus commersonii)

B 57 (sudden mortality in a N.B. lake); 117(30:53); 118(37:1) (in Margaree R. system, N.S.); 116(25:29); 119(42) (re Atl. salmon & trout in Margaree R.); 201(C) (feed, Chamcook L., N.B.); 263 (effect of piscicides on); 320:16 (biology, etc., Clear L., Man.); 379(4) (lethal temperature; sensitivity to light); 382(11) (depth effect on behaviour to light); 445; 543; 554 (L. Winnipeg fishery: availability, sizes, dressed weights); 451:5; 519; 556; 595:32; 620; 634 (in Great Slave L. fishery); 484 (L. Manitoba fishery); 507:41; 609 (L. Winnipeg catches); 519 (Great Slave L.: possibilities for mink feed); 542 (diel activity, Heming L., Man.); 563:28 (movements re light); 579 (parasitism re spawning & fecundity, Heming L., Man.); 706(1;2;3) (1904-1956 daily catches of a L. Erie commercial fishing company); 721 (in 2 N.W.T. lakes); 833 (survey, Fort Chimo region, Ungava, Que.)

Sullivan, C.M.

B 265 (softshell clam investigations); 265; 337(1); 684; 685 (forecasting Atl. oyster setting); 337(2); 684 (identification of P.E.I. bivalve larvae); 367(1) (softshell clam pumping rate); 367(2) (Gonyaulax in Atl. plankton)

Sulphur compounds (Note: The scattered data on H₂S determinations in seawater have not been indexed; see Inlet and fiord oceanography; Pollution)

B 443 (freezing effect on SO₄/Cl ratio in seawater)
E 28; 50 (H₂S, etc. role in canned lobster discoloration)

Sunfish (see Drum, freshwater)

Superior, Lake (see also Great Lakes)

B 397 (vertical temperature distribution); 654 (river & stream temperatures, N central shore); 710 (sea lamprey ammocoetes distribution in 8 N shore tributaries); 723; 769 (lampricides tests in N shore tributaries); 803 (fishes & bottom fauna collected during electrofishing lamprey larvae survey)

Surveys (see also Census; Exploration; Fishery, commercial; Fishery, sport)

B 675 (past, present & future trends of Canadian fisheries); 803 (sea lamprey larvae in L. Superior N shore streams, by electrofishing)
E59 (economic prospects re technological aspects of Canadian fisheries)

Survival (see also Lethal limits; Mortality; Respiration)

- B 253 (planted salmonid fishes); 326 (exposed littleneck clams); 370:27 (air drying of Atl. oysters); 406; 589 (factors limiting lobster); 464 (planted trout, Clear L., Man.); 472(A) (winter, of Atl. oyster); 525 (rate, Great Slave L. longnose sucker); 539:45 (eels after transplanting); 587; 600 (whitefish, Great Slave L.); 591 (harp seal)

Swiftsure Bank Lightship (see Juan de Fuca, Strait of)**Swimming** (see also Activity; Currents, reactions to; also other stimuli affecting)

- B 742:38 (speed of lamprey ammocoetes); 744:31 (sockeye salmon smolt)

Swordfish (*Xiphias gladius*)

- B 95 (Halifax area fishery); 97:51 (biological study of Maritimes fishery statistics); 675 (past, present & future of Canadian fishery); 792 (Canadian fishery & research in ICNAF Area)

Sydor, Judith

- B 899 (salinity effects on Atl. salmon fry)

Systematics (see Keys; Nomenclature; Taxonomy)

- T -

Tabata, S.

- OL 25 (digital computer program for oceanographic station program); 59; 98; 106; 125; 139 (Pac. Ocean Weather Station "P" data records); 132 (forecasting transient temperature structure in ocean surface layers); 157 (Ocean Weather Station "P" seasonal thermocline)

Tables (mathematical)

- B 773 (round weight to dressed weight of fish, Great Slave L. fishery)
OL 18 (for seawater analyses); 24; 27 (seawater specific volume & sound velocity); 86 (physical & biological half-life of radioactive isotopes)

Tactility

- B 646 (role in sea lamprey predatory behaviour)

Tactosoma macropus (see Dragonfish, arrow)**Tagging and returns** (see also Exploration; Marking; Migration)

- B 77; 334; 618; 895 (lobster); 84; 364(A;B); 430:4 (Atl. cod); 93 (salmon, St. John R., N.B.); 119(47); 123(8); 126(5); 130(11) (salmon, Margaree R., N.S.); 132:27; 210(10); 212(1) (brook trout, Moser R., N.S.); 210(13); 212(1) (salmon, Moser R., N.S.); 211(18) (sea salmon off Margaree, N.S.); 213(8) (marked salmon, Margaree area, N.S.); 222 (Dungeness crab, Boundary Bay, B.C.); 230; 533; 690 (Pac. salmon for spawning populations estimation); 260; 308 (salmon, Barkley Sound, B.C.); 308 (pink salmon); 334 (method, for lobster); 362:31 (Atl. halibut); 369(1;4) (smelt, Miramichi area, N.B.); 393(2) (at Hall's Harbour weir, N.S.); 393(4); 401; 428; 499; 540; 563 (salmon, Shubenacadie R. system, N.S.); 402 (methods, Atl. salmon); 405:16 (lemon sole); 410 (for studying fishes movements); 411 (magnetic tags & recovery, Pac. herring); 448:6; 668 (Atl. herring); 506 (whitefish, etc., L. Winnipeg); 515; 600; 741 (whitefish, etc., Great Slave L., N.W.T.);

Tagging and returns (cont'd)

531; 532; 534; 536; 690 (sockeye salmon re escapement & migration, Babine R. & L., B.C.); 558 (various L. Winnipeg fishes); 591 (harp seal); 636 (analysis of cod & haddock records, re mortalities); 677; 679 (Juan de Fuca Strait coho salmon by Canada & U.S.A.); 690 (Skeena R. system salmon, B.C.); 700; 719; 736; 761; 825; 850; 875 (northern fur seal); 728-730; 732 (Pac. salmon, re Canadian & American exploitation of northward migrating); 731 (re chum salmon distribution & racial origin in open NE Pac. Ocean & Gulf of Alaska); 741 (review of studies of freshwater, Canadian & some American); 766 (salmons, NE Pac. high seas); 848 (Atl. salmon re effect of W Greenland fishery on Canadian fishery); 872:22 (Pac. cod); 889 (salmons, data from B.C. research vessel "Fort Ross"); 892-894 (Canadian salmon in Gulf of Alaska)

OL 143; 169 (bathythermograms re NE Pac. salmon)

Tait, Helga

B 102; 110 (brook trout fingerling nutrition)

Tanaka, S.

B 704 (chum salmon scale characteristics, B.C. coast & open NE Pac. Ocean)

Tank (see also Aquaria; Water supply)

E 56 (hydrodynamics of circulation from jets in a rectangular)

Tap water (see Water supply)**Tapeworms (see Cestoda; Diphyllobothrium; Parasites; Trianaenophorus)****Tar**

B 160 (effect of, on Atl. oyster, from coated collectors)

Tarletonbeania crenularis (see Lanternfish, blue)**Tarr, H.L.A.**

E 38 (Atl. fish muscle decay rate)

Taste (see Flavour; Quality of fishery products)**Tathlina Lake, N.W.T.**

B 520 (minimum adult fish stocks for adequate spawning); 721 (fishery possibilities)

Tautogolabrus adspersus (see Cunner)**Taxonomy (see also Keys; Meristic characteristics; Morphometry; Nomenclature)**

B 236; 298 (pilchard); 292:14 (Atl. oyster); 309 (flounders, Strait of Georgia); 446; 557; 581 (ciscoes: difficulties of); 447 (Polinices drills; 482 (tullibee, Great Slave L.); 481; 509 (ciscoes, L. Winnipeg); 635 (comparative classification of fishes to order level)

Taylor, B.W.

B 92 (Canadian Government Hudson Strait Expedition, 1928)

Taylor, F.H.C.

B 363 (otter trawl savings gear); 512 (underwater television vs. photography)

Taylor, G.B.

OL 95; 207 (temperature, salinity & density distribution, Halifax to Scotian Shelf oceanographic section); 96 (track charts of A.O.G. oceanographic cruises); 97 (temperature, salinity & density distribution, Cabot Strait oceanographic section)

Tedford Lake, N.S.

B 190(B) (poisoning of water)

Teeth (see also Tusk)

B 447:1 (Polinices drill radulae re taxonomy); 461:36; 485:25 (beluga, re age determination); 588 (harp seal, re age determination); 635:24 (Atl. walrus, re age determination)

Television, underwater

B 512 (vs. underwater photography)

Temperature, air (see also Weather; also note to that heading)

B 96 (re sea temperature, St. Andrews, N.B.); 575 (trends, B.C.)

Temperature, effects on non-living tissues (see also Heat; Quality of fishery products; Refrigeration; Thawing)

E 19 (re frozen fish glazing); 33; 38 (fishes muscle decomposition rate); 37 (rise during fish rigor); 38 (rise during fish spoilage)

Temperature, reaction of living organisms to (see also Lethal limits; Survival)

B 1; 6; 80; 182; 183 (lobster growth rate); 4:6; 7:8; 86; 138; 211(10); 336(14:10); 382(10:5) (Atl. salmon fry); 53 (mackerel eggs); 63; 64; 100; 340 (Gammarus amphipods); 73 (squid eggs); 74; 141; 184:38 (Atl. oyster embryo development); 83; 331 (Atl. oyster growth); 87 (copepod feed cycle); 88 (starfish embryology); 90 (2 Atl. flounder species respiratory rhythm); 91; 240 (barnacle & gribble); 125:13 (starfish); 132; 209 (1) 213(10;11) (Atl. brook trout); 141 (Atl. oyster spermatozoa & ova); 187:23,48,53; 471:2 (quahaug); 195 (Atl. herring feeding rate); 207(8) (Atl. salmon mortality); 211(13); 213(11) (Atl. salmon angling); 213(10); 329(19;24) (young Atl. salmon & trout feeding); 213(11) (Atl. trout angling); 238:11 (Atl. salmon scale growth); 248; 373:129; 526; 638 (giant scallop growth rate & abundance); 252; 435 (Atl. cod feeding); 272 (B.C. shrimps); 328(13) (heat stroke of Atl. salmon, etc. in Maritimes rivers); 338 (plankton growth in fertilized waters); 344 (trouts & white-fish eggs hatching); 352 (Atl. herring spawning); 361 (yellowtail flounder); 379(4) (American eel; white perch; white sucker); 406; 489; 662 (lobster, to lethality); 435 (Atl. cod migration, etc.); 436 (a N.B. limpet); 582:4,98,130 (winter flounder); 755:24 (Canadian Atl. herring: literature review); 844 (Atl. cod growth rate under controlled temperature & feed conditions)

Temperature, water (see also Bathythermograms; Hydrography; Limnology; Oceanography; Temperature, reaction of living organisms to; Thermocline; Thermodynamics; Thermometer, airborne radiation) Note: The numerous data resulting from routine determinations of water temperatures, particularly in the Oceanographic & Limnological (OL) Series are not indexed unless having particular significance)

B 69 (vertical heat transfer, Bay of Fundy); 70; 77; 79; 108; 171-181; 537 (Canadian Atl. coast surface); 94; 136; 168; 170; 172; 174; 388; 475; 535; 538; 577 (Scotian Shelf); 175; 176; 385; 386; 584 (Canadian Atl. coast);

Temperature, water (cont'd)

- 208(10:12,17); 209(3); 213(4;7;13); 327(7) (Moser R., N.S.); 327(4) (Petitcodiac R., N.B.); 387 (Hudson Bay); 397 (vertical distribution, Great Lakes); 438; 460; 575 (B.C. coast); 457; 458; 476 (B.C. offshore); 459 (Fraser R. estuary); 500; 578; 606 (Gulf of St. Lawrence); 528; 551 (Bay of Fundy); 552 (Canso Strait, N.S.); 572:29; 584 (ICNAF Convention Area waters); 575 (long-term trends, NE Pac. Ocean, re marine fisheries); 578; 605 (distribution, Laurentian Channel, Gulf of St. Lawrence); 590 (5-year records, L. Winnipeg); 593 (bottom, Magdalen Shallows, Gulf of St. Lawrence); 594 (Cabot Strait Section); 611:93 (distribution & heat budgets, B.C. inlets); 654 (lakes & streams of N central L. Superior shore region); 642; 682 (open NE Pac. Ocean); 820 (thermal structure, Babine & Nilkitkwa Lakes, B.C.)
- OL 1 (records, & forecasting of, sea surface at St. Andrews, N.B.); 23; 48; 67; 68; 104; 131; 160; 161; 177; 195; 204; 215; 277 (B.C. coastal light-houses & lightships data); 35 (vertical distribution, Scotian Shelf); 39 (Canadian Atl. coast); 42 (re IGY sea-level recording, off Halifax & St. John's); 57 (Passamaquoddy Bay & Bay of Fundy); 74 (annual variations, Grand Banks); 95; 207 (Halifax to Scotian Shelf Section); 97 (Cabot Strait Section); 92; 103; 186; 187; 205 (structures, subarctic Pac. Ocean); 132 (transient structure forecasting in oceanic upper layers); 133 (sea surface temperature recorder); 134 (causes of warm & cold years in N Pac. Ocean surface); 157; 187 (seasonal thermocline at Pac. Ocean Weather Station "P"); 177 (B.C. lighthouse data classification, 1915-62); 187; 205 (structures at Pac. Ocean Weather Station "P", 1956-63); 200 (effect on CaCO₃ solubility product in seawater)

Templeman, Wilfred

- B 29 (lobster moulting); 77; 183 (lobster measurements, tagging, temperature conditions); 424 (Atl. cod migrations); 430:1-47 (Nfld. commercial fishes & invertebrates fisheries); 430:61-72; 444 (cod longlining, Bonavista, Nfld.); 584 (temperature horizontal distribution off Nfld. & Labrador)

Tennant, A.D.

- B 503 (self-cleansing of softshell clam)

Tensile strength (see Strength, tensile)Teredo navalis (see Shipworm)

Terhune, L.D.B.

- B 887 (perforated pipe plankton sampler hydrodynamics & trials)
OL 172 (Hecate Strait region hydraulic model construction); 173 (construction of plastic bag for in situ marine photosynthesis studies)

Tern

- 115(16:11) (among birds of Margaree Harbour, N.S.)

Tester, A.L.

- B 310 (estimating abundance of spawning Pac. herring); 311 (chinook salmon fishery competition); 325 (B.C. herring abundance fluctuations)

Testes (see also Baculum; Gonads; Spermatozoa)

- B 434 (Atl. hake); 588:49 (histology, harp seal)

Texture (see also Muscle; Quality of fisheries products)
 B 28; 33 (heat effect on fishes muscle)

Thaleichthys pacificus (see Eulachon)

Thawing (see also Refrigeration)

E 12; 15; 35 (structural changes in fish muscle during); 21; 24; 36 (effect of rate, on drip); 39 (rates of fish in air, water & ice)

Theragra chalcogramma (see Pollock, walleye)

Thermocline (see also Bathythermograms; Limnology; Oceanography; Temperature, water, and the note to that heading)

OL 103; 205 (structure, E subarctic Pac. Ocean); 105; 132 (OCEAN system of bathythermograms assessment); 132 (transient temperature structure forecasting in ocean); 157; 171 (seasonal, at Pac. Ocean Weather Station "P"); 171 (estimate of scale-length of internal waves in seasonal, at Station "P")

Thermodynamics

OL 21; 109; 132 (interpretation of oceanographic data)

Thermometer, airborne radiation

OL 61; 102; 167; 188 (description; tests; improvements; uses; for measuring sea surface layers temperatures)

Thomas, M.L.H.

B 670 (sea lamprey spawning behaviour); 710 (sea lamprey ammocoetes distribution in 8 rivers flowing into N L. Superior); 726 (paper electrophoretic patterns of sea lamprey blood proteins); 742 (biology of stream sea lamprey ammocoetes); 803 (L. Superior bottom fauna re electrofishing sea lamprey larvae); 853 (eel-grass chemical control)

Thompson, T.G.

B 220; 403 (chemical oceanographic data reporting)

Thompson River, B.C.

B 876 (spawning migratory sockeye salmon behaviour in south)

Thomson, J. Arthur

B 663 (standardization of fishing effort statistics for Pac. coast trawl fisheries); 872 (report on B.C. trawl fishery & investigational aspects)

Thorbjarnarson, T.

E 54 (iodine determination in fish muscle)

Thunder Bay district, Ont.

B 523; 524 (Triacnophorus re whitefish)

Thunnus alalunga (see Albacore)

thynnus (see Tuna, bluefin (Atlantic))

Thurber, L.W.

B 399 (softshell clam meat yields); 408 (Polinices clam drill control)

Thymallus arcticus; Thymallus signifer (see Grayling, arctic)

Thyroid

206(1); 209(2) (feeding to induce Atl. salmon smolt metamorphosis)

Tibbo, S.N.

B 430:58-60 (Nfld. herring fishery); 448 (Atl. herring migrations);
505 (Atl. herring drift-net fishing); 553 (herring explorations on
Scotian Shelf); 568 (herring fishing & research methods in Europe);
755 (literature review of Canadian Atl. herring); 791 (review of Canadian
Atl. herring fishery & research in ICNAF Area); 792 (review of Canadian
large pelagic fishes fishery & research in ICNAF Area); 794 (bibliography
of herring in NW Atl. Ocean)

Tides (see also Currents; Hydrography; Oceanography; Pollution)

B 62 (proposed power project effect on Bay of Fundy); 122(6:7) (Margaree R.
estuary, N.S.); 209:7 (re Atl. salmon & trout angling); 329(24:10)
affecting salmon movements, Moser R., N.S.); 413; 442; 514 (simulation in
hydraulic model of Alberni Harbour, B.C.); 459 (Fraser R. estuary, B.C.);
529 (currents, Juan de Fuca Strait); 530 (currents, Hecate Strait, B.C.);
613 (Foxe Basin, Canadian Arctic); 633 (Bay of Fundy); 708 (in semi-
tidal Ogac L., Baffin Is., N.W.T.); 733 (re pulpmill pollution, Prince
Rupert area, B.C.)

OL 2 (daily predicted ranges, Saint John, N.B.); 110; 172 (simulations in
hydraulic model of Hecate Strait area, B.C.); 130 (prediction with TIDAC)

Tolerance (see also Lethal limits; Light, reactions to; Oxygen, dissolved;
Salinity, reactions to; Survival; Temperature, reaction to; Pollution)

B 23 (halophilic bacteria to NaCl)

Tomcod, Atlantic (Microgadus tomcod)

B 675 (Atl. fishery)

Tomopterids (see also Zooplankton)

OL 202 (Tomopteris species at Pac. Ocean Weather Station "P")

Tormentine, Cape, N.B.

B 107 (lobster)

Touch (see Tactility)

Toxicity (see also Algacides; Insecticides; Paralytic shellfish poison;
Pesticides; Piscicides; Pollution; Water supply)

B 20 (of formaldehyde-cured fish); 138 (of pond-water algae to trout);
290 (of mining & pulpmill pollution, by testing with trout); 392(16:28)
(shark repellent); 493 (of various chemicals toward Triaenophorus);
771 (of pollution to aquatic life: Canadian research review)

Tracadie Lagoon, N.B.

B 370:10; 378:45 (oyster)

Transparency of waters (Note: The numerous data for routine determinations of
seawater transparency re other oceanographic measurements are not indexed;
see Productivity, primary)

OL 30; 211 (light attenuation in B.C. coastal & offshore waters)

Transplantation (see also Hatchery; Transportation)

- B 1 (berried lobster); 2; 9; 744 (sockeye salmon eggs); 4; 7; 55; 213(9) (Atl. salmon fry & fingerlings); 76; 239 (Atl. oyster); 233 (Atl. oyster into B.C.); 295 (Atl. salmon eggs into B.C.); 308 (pink salmon); 371:50; 378:17 (Atl. clams); 693; 696-698 (European oyster to Canadian Atl. coast); 775 (Atl. lobster into B.C. waters)
 OL 228 (Atl. lobster into B.C. waters)

Transport of oceanic waters (see also Oceanography)

- B 69 (Bay of Fundy vertical heat transfer); 105 (Scotian Shelf hydrodynamics); 592:10 (Cabot Strait); 619 (Georges Bank slope water); 632 (Grand Bank slope water)
 OL 12 (Hudson Strait); 72; 163; 183; 218 (computer programming for); 77-80; 85; 93; 128; 149-153; 164; 166; 216; 218-225; 229 (N Pac.); 112; 114-124; 156; 162; 165 (N Atl.); 134 (effect on warm & cold years for N Pac. surface temperatures); 183; 185 (Gulf of St. Lawrence); 184; 185 (electric analogs for solving problems concerning)

Transportation (see also Transplantation)

- B 54 (Atl. salmon fry mortality during); 55 (hatchery trout fry); 213(9) (aeration during, for Atl. salmon fingerlings); 233 (Atl. oyster to B.C.); 563:44 (aerial, of live eels)

Traps (see also Fence; Gear; Nets)

- B 104 (for starfishes preying on Atl. oyster); 115(10); 119(45); 380(5) (for spawning Atl. salmon); 130(11); 335; 365; 379(3); 381(2;4) (for marking Atl. salmon smolts); 190(D) (for removing trout predators); 313 (B.C. crab); 327(3); 390(5;7); 393(5); 400; 426:7 498:64 (re Atl. salmon smolt runs); 327(5) (effect on shad migration); 330 (specifications re lobster); 426:1; 427:28; 498:68 (eels, Shubenacadie R. system, N.S.); 466 (for flushing goldeye); 607 (improved lobster); 895; 896 (experimental lobster fishing, Maritimes offshore)

Trawl; Trawling (see also Exploration; Fishing methods; Gear; Vessels, fishing)

- B 363 (savings gear); 405 (commercial fishery, Cape Lazo & Nanoose Bay, B.C.); 813 (European methods & vessels); 663 (standardization of fishing effort statistics, Pac. coast); 712 (midwater, through echo-scattering layer in Saanich Inlet, B.C.); 767; 768; 890; 891 ("G.B. Reed" experimental, B.C. & Gulf of Alaska); 795 (Atl. groundfish discards at sea); 798 (mesh sizes & materials to meet ICNAF regulations); 801 (increased mesh size effect on Nfld. fisheries); 813 (studies of European trawl engineering research); 814-817 (re exemption clause operation for Canadian mainland redfish otter trawlers); 822 (re cod & groundfish caught in Nfld. trawling); 872 (B.C. trawl fisheries report & investigational aspects)
 OL 86 (B.C. trawl fisheries re possible radioactive wastes disposal); 175 (fishes taken in NE Pac. during experimental midwater trawling); 176 (salmon catches in N Hecate Strait midwater trawling, B.C.)

Trays (see Culture; Oyster; Preservatives)**Trematoda (flukes) (see also Parasites)**

- B303 (various, in haddock); 624; 641 (re distinguishing between Asiatic & N American pink & sockeye salmon stocks); 877 (Lecithaster gibbosus in early sea life pink salmon)

Triacnophorus (principally T. crassus; some T. nodulosus, T. robustus and T. stizostenionis) (cestodes)

B 302 (hatching of T. crassus eggs in northern pike); 320 (T. robustus in whitefish); 446; 462; 567 (T. crassus incidence in ciscoes, Heming L., Man.); 462; 479 (northern pike control re T. crassus biology); 464:8 (in whitefish, Clear L., Man.); 479 (effect on whitefish commercial quality; effect of pesticides on); 482 (in Great Slave L. ciscoes); 486; 542 (infestation rate, L. Winnipeg whitefish); 493 (life history; laboratory tests for chemical control); 494 (re whitefish, Nesslin L., Sask.); 509; 545 (re L. winnipeg ciscoes); 521 (re T. nodulosus infection, Heming L., Man.); 522; 523 (life history re whitefish & pike, Thunder Bay District lakes, Ont.); 542 (re whitefish, pike, walleye & sucker movements); 545 (life history re differential infection of L. Winnipeg ciscoes); 546 (re plankton, Heming L., Man.); 555 (in ciscoes, Churchill R., Man.); 576; 604; 622; 623 (hosts in Heming L., Man.); 579 (effect on fecundity of 6 Heming L. fish species); 604 (life history in Heming L. northern pike); 622; 804 (life history in Heming L. Cyclops); 623 (life history in Heming L.: eggs, coracidia, procercoids); 624; 641; 658; 687; 703 (re Asiatic vs. N American pink & sockeye salmon stocks); 631 (bibliography); 640; 804 (infection of Cyclopidae)

Trichoptera (see Caddisflies)

Trimethylamine (see also Ammonia; Nitrogenous constituents and products; Quality of fishery products)

E 11; 33 (re fish spoilage)

Trinity Bay, Nfld.

OL 10 (oceanography)

Tripp, R.B.

OL 111; 113; 129 (Pac. Monitor Project oceanographic data records); 135 (productivity measurements data at Pac. Ocean Weather Station "P")

Trites, R.W.

B 417 (Gulf of St. Lawrence surface layer oceanography); 418 (Scotian Shelf water replacements); 611 (B.C. inlet & fiord oceanography)
OL 5 Laurentian Channel deepwater oceanography); 133 (sea-surface temperature recorder); 167 (Canadian Atl. coast airborne radiation thermometer trials)

Trout, brook (Salvelinus fontinalis) (speckled char; speckled trout)

B 22 (survey of Maritimes hatcheries); 41; 54 (toxicity of water, St. Andrews Station water); 55 (fry handling & rearing in hatcheries); 56 (planting in Forbes Creek, P.E.I.); 102; 110 (fingerling nutrition experiments); 116(25:28); 117(30:15); 118(32:37); 126(1;6) (Margaree R. system, N.S.); 127(14) (behaviour of young to currents); 129(5) (L. Ainslie area, N.S.); 131(12) (Moser R., N.S.); 132 (behaviour & pigmentation, Trout Brook, N.S.); 138 (algal & temperature causes of mortality, Kelly's Pond, P.E.I.); 188 (stocking, etc. of Charlotte Co. lakes, N.B.); 189 (developing sport fishing in Maritimes); 190(C;D); 263 (fish predator control by poison or traps, in lakes); 195 (herring's rate of eating); 202A (feed, Loch Lomond, N.B.); 206(2); 210(9) (scales re growth & age, Moser R., N.S.); 209(1) (life history; catch analysis, Moser R.); 210(6) (predation on salmon fry, Goldmine Brook, N.S.); 210(8) (feed, Goldmine Brook); 210(10) (migrations; tagging, Moser R., N.S.); 210(12) (feeding on salmon smolt eggs, Moser R.);

Trout, brook (cont'd)

- 211(16) (re salmon smolt predation, Goldmine Brook, N.S.); 212(1) (handling re subsequent behaviour); 213(10) (feeding re light & temperature); 213(11) (angling re light & temperature); 214(18) (management, Moser R., N.S.); 214(19) (effect of freshets on, Moser R.); 241 (treating a pond with quicklime for restocking); 253 (review of Maritimes planting success); 290 (used for testing pulp mill & mining effluents for toxicity); 327(1) (catches, Moser R., N.S.); 328(11) (numbers in Silver Creek, Ont.); 336(11) (Petitcodiac R., N.B.); 344 (temperature & salinity effects on hatching); 351; 727 (ponds for, in Maritimes); 401:21 (sport fishing, Grand L., N.S.); 498 (Shubenacadie R. sport fishing, N.S.); 563:31 (movements re light); 723 (used for testing lampricides toxicity); 833 (survey, Fort Chimo area, Ungava, Que.)
E 20; 40 (muscle latent & specific heat); 20 (muscle freezing point)

Trout, brown (Salmo trutta)

- B 22 (survey of Maritimes hatcheries); 55 (fry handling & rearing in hatcheries); 231 (marking, Vancouver Is.); 253:14 (review of Maritimes planting success); 296 (examining eggs for B. salmonicida); 328(11) (numbers in Silver Creek, Ont.); 344 (temperature & salinity effects on hatching); 563:31 (movements re light); 727 (establishing & managing Maritimes ponds)

Trout, cutthroat (Salmo clarki)

- B 5 (description of B.C.); 253:14 (review of planting success); 258 (furunculosis); 262 (feed, Revelstoke, B.C.); 273 (planted in Quamichan L., B.C.); 315 (scale development from integument); 478 (Cultus L., B.C.); 573 (creel census re population, Lakelse L., B.C.); 720 (behaviour of young, Somass R., B.C.)

Trout, Dolly Varden (see Dolly Varden)Trout, Kamloops (Salmo gairdneri) (see also Trout, rainbow; Trout, steelhead)

- B 5 (description of B.C.); 273 (plantings in Quamichan L., B.C.)

Trout, lake (Salvelinus namaycush)

- B 200(B); 202 (description & feeding habits, Chamcook Lakes, N.B.); 301 (Diphyllobothrium plerocercoids in); 451; 487; 488-492; 515; 517; 556; 560; 565; 580; 595; 602; 620; 634; 680; 715; 725; 741; 775 (commercial fishing; size; availability; etc.; Great Slave L., N.W.T.); 464 (survival of planted, Clear L., Man.); 480 (Nueltin L., N.W.T. & Man.); 494 (effect of 3 insecticides on); 519 (possibilities for mink feed); 524 (Willow L., N.W.T.); 565; 601 (spawning population studies, Great Slave L.); 595 (fecundity, Great Slave L.); 680; 738 (Indian catches for domestic use, Great Slave L.); 715 (re Great Slave L. commercial catch regulations review); 725 (Great Slave L. sport fishing survey); 741 (tagging, Great Slave L.); 773 (conversion factors for round to dressed weight, Great Slave L.); 774; 777-780; 782; 783; 827; 831; 832; 835; 836; 840; 841; 856-859 (computerized data re fish & catch weights, etc., Great Slave L. commercial fishery); 833 (survey, Fort Chimo region, Ungava, Que.)

Trout, rainbow (Salmo gairdneri) (see also Salmon, Kamloops; Trout, steelhead)

- B 5 (description of B.C.); 224 (stocking & management, Paul L., B.C.); 246 (Maritimes freshwater); 253:10 (review of planting success in Maritimes); 254 (efficient sampling method for creel census, B.C.); 266 (suitability

- Trout, rainbow (cont'd)
 for stocking Jasper Park lakes, Alta.); 320:24 (suitability for stocking Clear L., Man.); 706(1;2;3) (daily catches in a L. Erie commercial fishery); 720 (behaviour of young, Somass R., B.C.); 723 (used in tests of lampricides toxicity); 727 (establishing & managing ponds for, in Maritimes)
- Trout, sea (see Trout, brook; Trout, steelhead)
- Trout, speckled (see Trout, brook)
- Trout, steelhead (Salmo gairdneri) (steelhead salmon) (see also Trout, Kamloops; Trout, rainbow)
 B 5 (description of B.C.); 315 (scale development from integument); 675 (past, present & future of B.C. fishery); 695 (environmental & genetic influence on some characters for distinguishing stocks of); 708 (1946-60 enumeration & sampling data, Babine R. counting fence, B.C.); 73C (tagging, northern B.C.); 759; 766; 824; 866 (in high-seas Canadian exploratory fishing & tagging of salmon); 889 (tagging data from B.C. research vessel "Fort Ross"); 892:33; 893:16; 894:14 (Gulf of Alaska tagging & recoveries data)
 E 31 (oil chemistry of cold-stored)
- Trout Brook, N.S. (see Ainslie Lake, N.S.)
- Trouts (in general)
 B 266 (stocking barren or other lakes, Jasper Park, Alta.); 322 (diseases & infections by parasites)
- Trypsin (see also Enzymes)
 E 7; 42; 49 (re fish muscle hydrolysis)
- Tsang, Y.W.
 OL 183 (Gulf of St. Lawrence average wind-stress data)
- Tullibee (see Ciscoes)
- Tully, John P. (see also Pacific Oceanographic Group)
 B 219 (dynamic current survey procedure); 268 (W coast Vancouver Is. offshore oceanography procedure); 276 (oyster glycogen routine assay method); 293 (seawater PO₄ determination method); 294 (abstracts of his oceanography & chemistry researches); 403 (manual of oceanographic methods); 547 (oceanography re sewage problem, Nanaimo, B.C.); 548 (seawater structure characteristics); 550 (oceanic surface waters off B.C.); 585(2) (Canadian Pac. coast oceanography review)
 OL 61 (airborne radiation thermometer feasibility tests); 103 (temperature structure assessment in E subarctic Pac. Ocean); 197 (current observations re sewage disposal forecasts, Cordova Bay, Victoria, B.C.)
- Tuna, bluefin (Atlantic) (Thunnus thynnus)
 B 78 (Halifax area fishery); 97:5 (biological study of Maritimes fishery statistics); 675 (past, present & future of Canadian fishery); 792 (Canadian fishery & research in ICAF Area)

Tunicates (see also Invertebrates, lists of)
 OL 174 (in NE Pac. Ocean waters)

Turbot (Atlantic) (see Halibut, Greenland)

Turbot (Pacific) (see Flounder, arrowtooth)

Turner, C.E.

B 866 (salmons longlining surveys, Gulf of Alaska); 894 (tagging returns data from above)

Tusk

B 653:22 (re Atl. walrus age determination)

Tweedie, F.J.

B 118(33-38) (climatology; physiography; birds & fishes; of NE Margaree R., N.S.)

Tzvetcoff, G.A.

OL 197 (current observations re sewage disposal forecasts, Cordova Bay, Victoria, B.C.)

- U -

Uda, Michitaka

B 686 (Japan fisheries)

OL 51 (seminars on theory & practice of physical oceanography)

Ulcer

B 101 (fish feed re)

Ultrasonic waves

B 647; 673 (effects on sea lamprey); 673:6 (bibliography of effects on organisms)

Ultraviolet radiation (see Radiation)

Umatilla Reef Lightship (see Juan de Fuca, Strait of)

Ungava Region, Que.

B 833 (freshwater survey, Fort Chimo area)

OL 56 (physical oceanography field data, "Calamus" Expedition)

Urea

B 135 (in skate & lobster muscle)

E 53; 55 (in various Atl. fishes muscle)

Urophycis chuss (see Hake, squirrel; also Hake (Atlantic))
tenuis (see Hake, white; also Hake (Atlantic))

Urosalpinx cinera (see Drills, clam and oyster)

Utopia, Lake, N.B.

B 44 (landlocked smelt)

Vancouver, B.C.

B 412 (oceanography re sewage disposal)

Vancouver Island, B.C. (see also Oceanography, Pacific, NE inshore; Oceanography, Pacific, NE offshore; also names of localities)

B 216 (clams & Pac. oyster culture possibilities, W coast); 259 (marine parasitic copepods); 274 (W coast plankton); 310 (estimating spawning herring abundance); 349 (W coast zooplankton)

OL 147 (drift-bottle data)

Vandenheuvel, F.A.

E 60 (1960 status of marine oil research, Halifax Station)

Venerupis japonica (see Clam, Manila (littleneck))

Venus mercenaria (see Quahaug)

Vertebrae

B 256 (number in eulachon); 424:13 (counts in Atl. cod); 481 (re ciscoes taxonomy, L. Winnipeg); 695 (re distinguishing Pac. salmon & steelhead trout stocks); 870:10 (capelin)

Vessels, fishing (see also Gear)

B 722; 764 (types in Great Slave L. commercial fisheries); 788 (performance re catch per unit effort, Atl. offshore fishery); 789 (fishing power studies, Atl. offshore fishery); 790 (species selection by, in Atl. offshore fishery); 468 (European trawlers)

Vessels, research

B 767; 768 (F.R.B. "G.B. Reed" and her gear)

OL 90 (Canadian Atl., Pac. & Arctic oceanographic, and Great Lakes limnological; photos & descriptions)

Virus

B 144 (re Malpeque disease of Atl. oyster)

Vision (see also Light, reactions to; Eye)

B 646 (role in sea lamprey predatory behaviour)

Vitamin A

B 425:16 (in B.C. dogfish liver oil); 430:42 (in Nfld. cod, shark, etc. liver oils)

E 14 (in Pac. dogfish liver oil); 14; 17; 25 (in Atl. cod liver oil); 17 (in Atl. dogfish, hake & haddock liver oils); 25 (assay method); 57 (theory of metabolism); 57 (in Pac. petrale sole liver oil)

Vitamin B₁₂

OL 211 (in Strait of Georgia waters)

Vitamin D

E 30 (in Pac. dogfish liver oil)

Vladykov, V.D.

B 199 (haddock feed)

VolSELLA modiolus (see Mussel, horse)

Volume, specific (of seawater)

OL 24 (tables concerning); 25; 27 (digital computer programming of data)

- W -

Walles, G.H.

B 274 (W coast Vancouver Is. plankton)

Waldichuk, M.

B 547 (oceanographic phase of sewage problem, Nanaimo, B.C.); 705 (oceanographic characteristics of a Scottish loch system re pulpmill pollution); 733 (oceanography re pulpmill pollution effect on marine life, Prince Rupert, B.C.)

OL 86; 100; 155 (B.C. coast fisheries re any future radioactive wastes sea disposal); 147 (B.C. coast drift bottle observations); 155 (vertical diffusion in sea from a radioactive point source); 197 (current observations re sewage disposal forecasts, Cordova Bay, Victoria, B.C.); 227 (foreword)

Waldie, Robert J.

B 403 (oceanographic methods); 441 (winter oceanography, Lazo Bight & Baynes Sound, B.C.)

Wallace, Nova Scotia

B 146 (oyster culture conditions survey)

Walleye (Stizostedion vitreum vitreum) (pikeperch; yellow pickerel)

B 445; 450; 507:18; 508:8; 510:9; 543; 544; 554; 567; 570; 571; 598 (L. Winnipeg fishery: gear, availability, sizes, dressed weights); 451; 487-492; 595:32; 620; 634; 680; 725; 738; 741; 773 (in Great Slave L. fishery); 462:12 (feed, etc., Heming L., Man.); 484 (catches & size, L. Manitoba); 519 (possibilities for mink feed, from Great Slave L.); 542 (diel activity, Heming L., Man.); 543 (Loon Straits commercial fishery, Man.); 609 (evaluation in L. Winnipeg trap net experiments); 680; 738 (Indian catches for domestic use, Great Slave L.); 706 (1904-1956 daily catches of a L. Erie commercial fishing company); 721 (in 2 N.W.T. lakes); 725 (sport fishing survey, Great Slave L.); 741 (tagging, Great Slave L.); 773 (conversion factors for round to dressed weight, Great Slave L.); 774; 777; 778; 783; 827; 831; 832; 835; 839; 840; 856-859 (computerized data on size, weight, etc. in Great Slave L. commercial fishery)

Walrus, Atlantic (Odobenus rosmarus rosmarus)

B 653 (biology, E. Canadian Arctic); 675 (past, present & future of Canadian fishery)

Warburton, F.E.

B 655 (boring sponge investigations, Malpeque Bay, P.E.I., re oyster)

Wardle, R.A.

B 321 (salmonid fishes diseases & infections)

Warren, A. Emerson

B 196 (softshell clam growth)

Warren, Leonard

B 392(16) (drift-net fishery, Petitcodiac R., N.B.)

Water analysis (see also Limnology; Oceanography; Pollution; Toxicity)

B 208(14;15) (composition of Moser R., N.S.); 443 (freezing effect on SO_4/Cl ratio of seawater) (See also Analysis, chemical (methods))

Water content (see also Composition, chemical; Denaturation; Drip; Drying; Muscle; Quality of fishery products; Salting; Sediments; Smoking)

E 20; 40 (of various Atl. fishes muscle); 46; 51 (bound & free, in muscle)

Water height (see also Flooding; Freshets; Sea level)

B 118(36) (NE Margaree R., N.S.); 207(6); 208(10:16); 209(3); 213(6;7;13); 327(7); 336(10) (Moser R. system, N.S.); 213(9) (suitable for Atl. salmon & trout angling); 327(4) (Petitcodiac R., N.B.); 365 (Pollet R., N.B.); 498:4 (Shubenacadie L., N.S.)

Water supply (see also Pollution; Toxicity)

B 41 (removal of Fe & Zn toxicity re toxicity to Atl. trout); 54 (re Atl. salmon fry mortality); 272:8 (Cu effect on B.C. shrimps); 851 (seawater filtration for biological laboratories)

Watson, N.H.F.

B 622; 804 (Triænophorus incidence in Cyclops); 672 (coregonine fishes feed, Heming L., Man.)

Waves, marine

B 403 (recording of); 406 (review of studies); 513 (internal, Strait of Georgia); 611 (internal, B.C. inlets)

OL 170 (theoretical analysis of fixed wave suppressors in a hydraulic oceanographic model); 171 (estimate of scale-length of interval, in Pac. Ocean Weather Station "P" seasonal thermocline)

Weather (see also Temperature, air; Wind) (Note: The numerous routine observations of weather made during oceanographic investigations are not indexed unless of particular significance)

B 113(6); 115(17); 116(22;27); 118(34) (meteorological methods for salmon investigations, Margaree R., N.S.); 114(7;8); 115(19;20); 116(23;28); 117(31); 118(35;40); 122(2); 123(7;12); 126(3); 127(12) (meteorology & hydrology data, Margaree R. system, N.S.); 119(41); 123(11) (Margaree Is., N.S.); 132:16 (effect on brook trout migration); 137 (storm effect on copepod vertical distribution); 164; 239:appendix (effect on Atl. oyster beds); 187 (effect on quahaug); 207(6); 327(7); 329(24:15) (Moser R., N.S.); 210(4) (Cheticamp, Grand Etang & Margaree, N.S.); 329(24:15) (effect on Atl. salmon movements); 378:appendix; 414:85 (Petpeswick, N.S.); 398:12 (Belliveau Cove, N.S.); 403 (methods for recording, re oceanography); 422 (re Belle Isle Strait oceanography); 427:4 (Shubenacadie L., N.S.); 716 (re seal hunting from boats, E Canadian Arctic); 740 (Heming L., Man.)
OL 3 (Gulf of St. Lawrence winter); 8; 22; 37; 62; 99; 206 (off mouth of Juan de Fuca Strait); 12 (Hudson Strait region); 34; 41; 42 (N Atl. Ocean IGY program); 40 (Ice Island "Bravo" (T-3) in Arctic Ocean); 103 (re temperature structure of E subarctic Pac. Ocean); 108; 198 (Prince Gustaf Adolf Sea, Canadian Arctic); 126; 136; 137 (re primary production, N & NE Pac. Ocean); 132 (re ocean upper layers transient temperature structure)

Weather Station "P" in NE Pacific Ocean (see Oceanography, Pacific, N open ocean)

Weight (see also Growth; Length—weight relation; Size; also names of species)

B 98:15 (Atl. salmon, St. John R., N.B.); 373:96 (giant scallop); 439:9 (American eel); 445; 450; 508-510; 544; 554; 567; 570; 597; 598 (of fishes in L. Winnipeg fishery, particularly whitefishes); 451, etc. (see list commencing with this number under heading Size (sub-head Vertebrates) for data Reports concerning weights of Great Slave L. commercial fishes & catches); 653:46 (Atl. walrus skin, blubber & internal organs); 678 (coho salmon, Juan de Fuca Strait); 761 (northern fur seal); 773 (round weight conversion factors for Great Slave L. fishes)

Weight—length relation (see Length—weight relation; Size)

Welch, H.E.

B 522; 523 (whitefish re Triaenophorus, Thunder Bay District, Ont.)

Weld, C.B.

E 12; 15; 35 (fish structural changes during freezing & storage); 13 (fish shrinkage during brining)

Welland Canal, Ont.

B 745 (examination for role in sea lamprey migration re Great Lakes)

Wells, R.

B 815 (fishes eggs & larvae in W Greenland plankton); 816; 879 (Nfld. inshore cod catches by types of gear)

Westrheim, S.J.

B 812; 867; 869 (catch rate, sizes, sex, etc. of Pac. ocean perch in experimental fishing); 890; 891 ("G.B. Reed" experimental trawling catches, Queen Charlotte Sound to SE Alaska)

Whale, finback (Balaenoptera physalus) (fin whale) (see also Whales)

B 752 (ovulation counts re age & stock assessment, B.C.)

Whale, white (see Beluga)

Whales (Atlantic)

B 430:48 (Nfld. fishery); 675 (past, present & future of catches)

Whales (Pacific)

B 425:25 (B.C. fishery); 675 (past, present & future of B.C. catches)

Wheatley, J.M.

B 371 (Polinices oyster drill & clams, Belliveau Cove, N.S.)

Wheaton, R.R.

B 451; 491; 492; 517; 518; 556; 560 (Great Slave L. commercial fishery); 494 (whitefish re Triaenophorus investigation, Nesslin L., Sask); 565 (Great Slave L. spawning lake trout & whitefish)

Whelks (see also Drills, clam and oyster)

B 883:16 (toxic, Que.)

White, H.C.

- B 55 (Maritimes hatcheries trout fry handling & rearing); 56 (trout planting, Forbes Creek, P.E.I.); 119(43;44); 131(13;14); 207(7); 328(9); 335(9) (bird & aquatic predators of salmon, Margaree R., N.S.); 207(9) (salmon fry planting, Goldmine Brook, N.S.); 208(11); 210(11); 213(17); 329(20) (bird predators of salmon, Moser R., N.S.); 208(12) (salmon redds & fry production, Moser R.); 210(10) (sea-run brook trout, Moser R.); 210(12) (Atl. salmon parr & trout feeding on smelt eggs); 210(13); 213(15) (salmon run, Moser R.); 210(14) (Atl. salmon & trout parasitic copepod); 211(15) (artificial spawning beds for Atl. salmon); 329(22) (reconditioning salmon kelts, Moser R.); 329(23) (Atl. salmon scale looseness & colour changes); 336(11) (fishes & species distribution, Petitcodiac R., N.B.); 381(2:4) (construction of an efficient Atl. salmon trap)

Whitefish, lake (Coregonus clupeaformis)

- B 11 (investigations, Bay of Quinte, L. Ontario); 200(C) (daily food consumption estimation); 320:15,27; 464:8 (size, parasites, etc., Clear L., Man.); 344 (salinity & temperature effects on hatching); 445; 450; 543; 544; 554; 507; 567; 594; 597; 598; 871 (L. Winnipeg fishery: availability, sizes, dressed weights, etc.); 446; 462; 479; 486; 494; 516; 522; 523; 555; 579; 672 (Triænochorus infection); 451; 487; 488; 489-492; 515; 517; 556; 560; 565; 580; 587; 595; 600; 602; 620; 634; 680; 715; 737; 741; 774; 777-780; 782; 783; 800; 802; 827; 831; 832; 835; 836; 839-841; 856-859 (in Great Slave L. commercial fishery); 462, 463; 579; 672 (parasitism, growth, feed, etc., Heming L., Man.); 480 (Nuelin L., N.W.T. & Man.); 483 (biology, Great Bear L., N.W.T.); 484 (re gear mesh size, L. Winnipeg); 494 (re chemical control of Triænochorus, Nesslin L., Sask.); 506 (recovery of tagged, L. Winnipeg); 516 (Triænochorus infection, Great Slave L. vs. L. Winnipeg); 519 (possibilities for mink feed, from Great Slave L.); 522; 523 (biology re Triænochorus infection, Thunder Bay District lakes, Ont.); 524; 721 (in 3 N.W.T. lakes); 542 (diel activity, Heming L., Man.); 555 (Triænochorus infection, Great Slave L.); 565; 601 (spawning population study, Great Slave L.); 587 (scale age & size composition, Great Slave L. commercial fishery); 592 (scale age & size composition, L. Winnipeg); 599 (availability re temperature, L. Winnipeg); 600 (spawning, Great Slave L.); 609 (evaluation in L. Winnipeg trap-net experiments); 680; 738; 800 (Indian fishery for domestic use, Great Slave L.); 706(1;2;3) (1904-1956 daily catches of a L. Erie commercial fishing company); 715 (re Great Slave L. commercial catch regulations review); 741 (tagging, Great Slave L.); 773 (conversion factors for round to dressed weight, Great Slave L.); 833 (survey, Fort Chimo region, Ungava, Que.)

Whitefish, round (Prosopium cylindraceum)

- B 246 (Maritimes); 451:5; 519; 556; 620; 634; 738; 741; 827; 831; 832; 840; 856-859 (in Great Slave L. fishery); 483 (biology, Great Bear L., N.W.T.); 484 (catches & size, L. Manitoba); 519 (possibilities for mink feed, from Great Slave L.); 738 (Indian fishery for domestic use, Great Slave L.); 741 (tagging, Great Slave L.)

"Whitefishes" (see individual species, e.g. Burbot; Cisco; Ciscos; Perch; Sanger; Sucker; Whitefish, lake; Whitefish, round)

Whiting (Pacific) (see Pollock, walleye)

Whittaker, William R.

- B 236 (pilchard anatomy, taxonomy, nomenclature); 298 (pilchard age by otoliths)

Wickett, W.P.

- B 676 (biological potential, Qualicum R., B.C.)
 OL 216 (Fofonoff computations of Ekman transport for NE Pac. Ocean)
 218-225; 229 (Fofonoff computations of Ekman transport for N Pac. Ocean)

Wigen, S.O.

- OL 197 (current observations re sewage disposal forecasts, Cordova Bay, Victoria, B.C.)

Wilder, D.G.

- B 213(6;7); 327(7) (hydrology & meteorology, Moser R., N.S.); 327(3) (smolt traps operation, Petitcodiac & Pollett R., N.B.); 327(4) (hydrography, Petitcodiac & Pollett R.); 327(5) (traps & shad migration, Petitcodiac R.); 327(6); 336(10) (dams & freshet production, Moser R.); 330 (lobster trap specifications re catches); 608 (lobster trap improvements); 618 (lobster marking & tagging, P.E.I.); 896 (Maritimes offshore lobster trap experimental fishing)

Wilke, H.

- OL 187 (oceanographic data atlas of Pac. Ocean Weather Station "P")

Williams, A.B.

- B 440; 503; 562 (self-cleansing of softshell clam)

Williamson, H. Charles

- B 260 (salmon fishing banks off Barkley Sound, B.C.); 267 (scale age estimation of B.C. herring); 271; 279 (B.C. pilchard fishery problems); 274 (W coast Vancouver Is. plankton)

Willow Lake, N.W.T.

- B 524 (fish survey)

Wilson, C.B.

- B 297 (fish-lice control)

Wind (see also Weather) (Note: The many data records routinely taken in connection with oceanographic investigations are not listed separately here. See Oceanography)

- B 127(12) (Margaree R. system, N.S.); 162:20 (effect on Atl. oyster larvae settlement); 193 (effect on lobster larvae); 206(3) (apparatus for measuring force of); 403 (recording, re oceanography); 527 (at Sambro Lightship off N.S.)
 OL 77-80; 85; 93; 128; 149-153; 164; 166; 216; 218-225; 229 (effect on N Pac. Ocean water mass transport); 112; 114-124; 156; 162; 165 (effect on N Atl. Ocean water mass transport); 134 (effect on warm & cold years in N Pac. surface temperatures); 183 (stress data computations for Gulf of St. Lawrence)

Winnipeg, Lake, Man.

- B 445; 450 ("whitefishes" fishery); 481 (ciscoes meristic characters); 486 (Triaenophorus infection rate of whitefish); 506-508; 510; 543; 544; 554; 558; 567; 570; 571; 590; 594; 597-599 (a series on investigations of commercial fisheries); 507 (gear, regulations, etc.); 508:22 (statistical fishery subdivisions); 509 (ciscoes taxonomy re Triaenophorus); 516 (vs. Great Slave L. re Triaenophorus problem); 545 (differential Triaenophorus

- Winnipeg, Lake, Man. (cont'd)
infection of ciscoes); 558; 609; 626 (trap & gill-net experiments);
567 (summer whitefish industry); 590; 599 (temperatures); 592 (white-
fish scales data); 871:17 (commercial fisheries history & gear)
- Winters, G.H.
B 870 (Nfld. capelin life history)
- Withler, F.C.
B 637; 664; 690; 699; 718 (Skeena R. Salmon Management Committee annual
reports); 728 (exploitation of northward-migrating pink & sockeye salmon
by Canadian & American commercial fisheries)
- Wolffish, Atlantic (Anarhichas lupus)
B 444 (longlining, Bonavista, Nfld.)
- Wolffishes (Anarhichas spp.)
B 430:39 (Nfld. fishery); 675 (past, present & future of Canadian fisheries)
- Wong, J.
OL 187 (atlas of oceanographic data from Pac. Ocean Weather Station "P")
- Wood borers (see Gribble; Shipworm)
- Worm, cod (see Codworm)
- Worm, mudblister (Polydora ciliata)
B 159:32; 162:42; 370:31; 378:42 (re Atl. oyster)
- Worms (in addition to above heading, see Acanthocephala; Annelids; Bloodworm;
Cestoda; Chaetognatha; Codworm; Diphyllbothrium; Nematodes;
Parasites; Philonema; Trematoda; Triaenophorus; Baitworms; etc.)
- Wright, Nelda E.
B 42; 81; 87 (copepods re marine feed cycle)
- Wyman, H.R.
E 21 (refrigeration temperature on subsequent fish muscle drip)
- Wynne, A.M.
E 7 (haddock muscle trypsin hydrolysis)

- X -

Xiphias gladius (see Swordfish)

- Y -

Yarmouth County, N.S.

- B 189 (Clearwater & Granite L. suitability for brook trout);
 190(C) (poisoning Trefry's L.); 190(D) (removing fish with traps)

Young, R.B.

- OL 197 (current observations re sewage disposal forecasts, Cordova Bay, B.C.)

Yukon Territory

- B 675 (survey of past, present & future trends of fisheries)

- Z -Zaprora silemus (see Prowfish)

Zinc compounds

- B 41 (removal from water supply, re toxicity to trout); 862 (accumulation in Atl. oyster from pollution)
 OL 148; 180; 192; 210 (re mine effluent pollution of NW Miramichi R., N.B., also analysis methods); 212 (re mine effluent pollution, Mt. Pleasant area, N.B.)

Zooplankton (see also Plankton; Plankton, lists of; also classification of; for fish larvae found in zooplankton, see name of adult form of fish)

- B 198 (vertical distribution re scallop feed, St. Croix R., N.B.); 348 (W coast Vancouver Is.); 561 (entomostracans counts in, Lakelse L., B.C.); 657; 659 (collections in open NE Pac. Ocean); 707 (Passamaquoddy Bay, N.B.); 709 (biology, Ogac L., Baffin Is.); 712 (re echo-scattering layers, Saanich Inlet, B.C.); 799 (fishes eggs & larvae in W Gulf of St. Lawrence & N.S. Banks); 815 (fish eggs & larvae off W Greenland); 821 (pelagic entomostracan, Babine & Milkitkwa L., B.C.)
 OL 4; 14; 16; 174; 201; 202 (in NE Pac. oceanographic surveys); 17 (B.C. offshore coastal surveys); 135-137; 201; 202 (re primary productivity, NE Pac. Ocean); 199 (re echo-scattering layers, Saanich Inlet, B.C.); 208 (& their ribonucleic acid content, Nanoose Bay, B.C.); 211 (Strait of Georgia major types; also their total carbon & nitrogen content)

Zostera marina (see Eel-grass)

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Concerning the number of pages shown for Reports in this list see item D of the Introduction.

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-
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761. Report on Canadian pelagic fur seal research in 1963. By G.C. Pike, D.J. Spalding, I.B. MacAskie and A. Craig. 29 p., 1963.
762. Skeena Salmon Management Committee Annual Report 1962. By J.G. McDonald. 55 p., 1963.
763. Survey of Eel River Cove, N.B., soft-shell clam (Mya arenaria) population. By J.S. MacPhail. 18 p., 1964.
764. Description of Great Slave Lake commercial fishing vessels in 1963. By J.J. Keleher and Pauline E. Saunders. 33 p., 1964. (#32).
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793. Second survey of Eel River Cove, N.B., soft-shell clam (Mya arenaria) population. By J.S. MacPhail. 11 p., 1964.
794. A bibliography of herring (Clupea harengus) in the northwest Atlantic. A compilation of references submitted by Canada, U.S.S.R. and U.S.A. By S.N. Tibbo and R.A. McKenzie (contributors). 16 p., 1964.
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881. Offshore scallop explorations -- 1957. By T.W. Rowell, G.M. Somerville and E.I. Lord. 60 p., 1966.
882. Catalogue of salmon spawning grounds and tabulation of escapements in the Skeena River and Department of Fisheries Statistical Area 4. By Howard D. Smith and John Lucop. 1966. (In five separately bound Sections: Section 1, 167 p.; Section 2, 267 p.; Section 3, 101 p.; Section 4, 166 p.; Section 5, 80 p.)
883. Bottom fauna of Saint John harbour and estuary as surveyed in 1959 and 1961. Detailed record of identifications and other data. By Delphine C. Maclellan and J.B. Sprague. 25 p., 1966.
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893. Canadian salmon tagging in the Gulf of Alaska, 1962. Recoveries from October 10, 1962, to March 31, 1963. By H. Godfrey. 16 p., 1966.
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900. Index and list of titles of Manuscript Reports (Biological No. 1-900; Experimental No. 1-61; Oceanographic and Limnological No. 1-229) to their conclusion as three separate series in 1966. By Neal M. Carter. 255 p., 1969.
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The above No. 900 concluded the Biological Series.

MANUSCRIPT REPORTS (EXPERIMENTAL SERIES)

of the Fisheries Research Board of Canada

List of titles of the complete Series (No. 1-61)
issued during 1925-1963

This Experimental Series is so called because most of these Reports were issued from Board Stations then known as Experimental Stations.

Concerning subsequent Manuscript Reports of technological nature see Item A of the Introduction.

The number of pages shown for Reports in this list is the total number of pages, including text, tables and figures whether or not the latter bear page numbers.

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1. Investigation into the tensile strength of fish muscle before and after treatment. By J.C. Forbes. 36 p., 1925.
 2. Effect of smoke on the tensile strength of fish muscle. By J.C. Forbes and J.A. Dauphinee. 6 p., 1925.
 3. The microorganisms responsible for the spoiling of fish muscle. By A.H. Gee. 59 p., 1925.
 4. Experiments on the production and the chemistry of wood smoke in connection with the fish smoking industry. By J.A. Dauphinee. 24 p., 1925.
 5. Preliminary report: Influence of smoke and its constituents on the bacteria in the smoke-curing of fish. By Ernest Hess. 31 p., 1926.
 6. Protein changes in pickled and smoked fish. By H.B. Dreyer. 12 p., 1925.
 7. The hydrolysis of haddock muscle by trypsin. By A.M. Wynne. 71 p., 1925.
 8. Methods of handling fish. By Geo. J. Jeffers. 37 p., 1925.
 9. The decomposition of fish flesh under natural conditions together with the quantitative estimation of some of the products formed. By J.A. Dauphinee. 30 p., 1926.
 10. Further experiments on the chemistry of wood smoke in connection with the fish smoking industry. By D. leB. Cooper. 33 p., 1927.
 11. Ammonia and trimethylamine in fish. By N.B. Dreyer. 12 p., 1926.

12. Structural changes in fish during freezing and storage. By C.B. Weld. 63 p., 1927.
13. Changes in size of fish during brining. By C.B. Weld. 21 p., 1926.
14. The determination of the Vitamin A content of the liver oil of the dogfish, Squalus sucklii (Girard). By H.N. Brocklesby. 24 p., 1927.
15. Structural changes of fish muscle during freezing. By D.D. MacKay and C.B. Weld. 20 p., 1926.
16. Determination of specific heat of fresh haddock muscle. By D.B. Finn. 3 p., 1926.
17. An investigation of the vitamin A content of certain fish oils using the colour test. By H. Ritchie Chipman. 3 p., 1927.
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24. The investigation of drip and juice available for drip in frozen fish. By D.A. MacFayden. 14 p., 1927.
25. Some observations on the manufacture and vitamin content of cod liver oil and allied oils. By Hugh Branion. 24 p., 1928.
26. On the rate of freezing of fish muscle. II. By G.O. Langstroth. 9 p., 1929.
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29. The denaturing of fish muscle during storage. By W.W. Johnston. 13 p., 1930.

30. The determination of the vitamin D in the liver oil of the dogfish Squalus sucklii (Girard). By H.N. Brocklesby. 20 p., 1928.
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34. Experiments on the freezing of whole fish and fillet by means of direct and indirect immersion. By D.B. Finn. 34 p., 1925.
35. A brief summary of work during the summer of 1927, at the Fisheries Experimental Station at Halifax, N.S. By C.B. Weld. 5 p., 1927.
36. Methods for determining the chemical characteristics of cod-liver oil (Parts I and II). By W. Wesley Stewart. 18 p., 1930.
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57. A mathematical theory of vitamin A metabolism. By N.E. Cooke. 30 p., 1950.
58. Chronological list of publications of the Fisheries Research Board of Canada Vancouver Laboratory, 1929-1956. By A.G.A. Richards. 44 p., 1958.
59. Some technological aspects of Canadian fisheries. (Prepared for Department of Fisheries submission to Royal Commission on Canada's Economic Prospects.) By N.M. Carter. 1959.
60. Status of marine oil research at the Technological Station, Halifax, N.S., as of January 1960, with recommendations for its continuance. By F.A. Vandenheuvel (slightly abridged by N.M. Carter). 28 p., 1960.
61. Chronological list of publications of the Fisheries Research Board of Canada Vancouver Laboratory, 1957-1962. By J.M. Jorgenson. 14 p., 1963.

The above No. 61 concluded the Experimental Series.

MANUSCRIPT REPORTS (OCEANOGRAPHIC AND LIMNOLOGICAL SERIES)

of the Fisheries Research Board of Canada

List of titles of the complete Series (No. 1-229)
issued during 1957-1966

Manuscript Reports dealing with oceanography or limnology issued before this Series was instituted early in 1957 appeared in the earlier initiated Biological Series; also, a few such Reports dealing to some extent with oceanography or limnology issued after the commencement of this Oceanographic and Limnological Series are in the Biological Series.

The issue numbers and nature of Reports in the Biological Series that deal wholly or partially with oceanography can readily be located under the several Index headings commencing with the word "Oceanography" and under the heading "Hydrography". Some groups of Manuscript Reports dealing with certain oceanographic investigations reported at intervals over a number of years commenced in the Biological Series and continued in this Oceanographic and Limnological Series.

The issue numbers and nature of Reports in the Biological Series that deal wholly or partially with limnology can readily be located under the Index heading "Limnology".

In this Oceanographic and Limnological Series only No. 148, 181, 192, 210 and 212 deal with limnology; the rest deal with oceanography.

Concerning Manuscript Reports of oceanographic or limnological nature issued after the conclusion of this separate Series, see item A of the Introduction.

Concerning certain other series of Board MS Reports on oceanography but not belonging to the type of Manuscript Report Series listed and indexed herein, see item C of the Introduction.

The number of pages shown for Reports in the following list is the total number of pages of text plus pages of tables and figures, whether or not the latter bear page numbers.

1. Variation of surface water temperatures at St. Andrews, N.E. Numerical forecasting of temperatures. By L. Lauzier. 20 p., 1957.
2. Some features of the oceanography of the Passamaquoddy Region. By W.B. Bailey. 56 p., 1957.
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19. Standard methods of seawater analyses. Volume II. By J.D.H. Strickland. 78 p., 1958.
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57. Temperature and salinity observations taken in conjunction with current measurements in Passamaquoddy Bay and the Bay of Fundy, 1957 and 1958. By Atlantic Oceanographic Group. 39 p., 1959.
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