BULLETIN No. 110

Index and List of Titles, Publications of the Fisheries Research Board of Canada, 1901-1954

Prepared by
YVONNE BISHOP, NEAL M. CARTER,
DOROTHY GAILUS, W. E. RICKER
AND J. MURRAY SPEIRS

PUBLISHED BY THE FISHERIES RESEARCH BOARD OF CANADA UNDER THE CONTROL OF THE HONOURABLE THE MINISTER OF FISHERIES

OTTAWA, 1957

Price 75 cents

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W. E. RICKER

N. M. CARTER

Editors

Bulletins of the Fisheries Research Board of Canada are published from time to time to present popular and scientific information concerning fishes and some other aquatic animals; their environment and the biology of their stocks; means of capture; and the handling, processing and utilizing of fish and fishery products.

In addition, the Board publishes the following:

An *Annual Report* of the work carried on under the direction of the Board.

The *Journal of the Fisheries Research Board of Canada*, containing the results of scientific investigations.

Atlantic Progress Reports, consisting of brief articles on investigations by the Atlantic stations of the Board.

Pacific Progress Reports, consisting of brief articles on investigations by the Pacific stations of the Board.

The price of this Bulletin is 75 cents (Canadian funds, postpaid). Orders should be addressed to the Queen's Printer, Ottawa, Canada. Remittance made payable to the Receiver General of Canada should accompany each order.

For a complete list of the Board's publications, write to:

Fisheries Research Board of Canada,
Publications Office,
Ottawa, Canada.

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CONTENTS

FOREWORD

The subject–author index presented here has been prepared in response to requests for a guide to the published work of the Fisheries Research Board of Canada and of its predecessor, the Biological Board of Canada. Because of the rather large number of publications involved, the Board's Publications Committee considered that a really comprehensive index would be too great a task, but that an index based mainly on the *titles* of papers would have considerable value. However, during its compilation many entries covering specific information in their text and tables, but not mentioned in their titles, were included.

In addition to the names listed on the title page of this Bulletin, numerous employees of the Board have assisted with the index in one way or another. Dr. Lyle A. Swain, formerly of the Board's Technological Station in Vancouver, B.C., deserves special mention.

PUBLICATIONS INDEXED

The Index covers the following seven series of publications. A complete list of titles included in these, to the end of 1954, is given in the Appendix. Titles subsequent to 1954 in the continuing series are listed in the Annual Reports of the Board.

1. (*a*) CONTRIBUTIONS TO CANADIAN BIOLOGY.

Issues appeared with the following dates: 1901, 1902-05, 1906-10, 1911-14 (in two Fascicles), 1914-15, 1915-16, 1917-18, 1918-20, 1921 (in two Parts). Each issue contained several papers serially numbered.

(*b*) CONTRIBUTIONS TO CANADIAN BIOLOGY (NEW SERIES).

Beginning in 1922, the *Contributions* were grouped into volumes which were continuously paged, though composed of a number of separate issues. These issues were not numbered, but each separate paper carried a number. Two volumes appeared under this title, from 1922 to 1925.

(*c*) CONTRIBUTIONS TO CANADIAN BIOLOGY AND FISHERIES (NEW SERIES).

In 1926 the above change of name was made, but the sequence of volumes was not altered. Volumes III-VIII appeared under the new title, during 1926-34. Beginning with Volume VI, Nos. 11-12, the articles were grouped into four Series: A. General; B. Experimental; C. Industrial; and D. Hydrographic. However, the numbers assigned under these headings are best ignored in bibliographic citation, since they are additional to the regular numbered sequence of papers in each volume.

2. (*a*) JOURNAL OF THE BIOLOGICAL BOARD OF CANADA.

The *Journal* replaced the *Contributions* with the completion of Volume VIII of the latter. Three volumes of the *Journal* were issued under this name, in 1934-37. Each volume consisted of five numbered issues of about 100 pages each. Numbering of individual papers was discontinued, as was the grouping into the four Series above.

(*b*) JOURNAL OF THE FISHERIES RESEARCH BOARD OF CANADA.

This change in the name of the *Journal* followed on the change in name of the Board by Act of Parliament, but the numbering of volumes was not interrupted. The first issue under the new name appeared in 1938, and Volumes IV-XI were published during the years 1938-54. With Volume VI, the number of issues per volume was increased to 7; it was 10 in Volume VII, 7 in Volume VIII, 9 in Volume IX, 8 in Volume X, and 6 in Volume XI.

3. (*a*) BULLETINS OF THE BIOLOGICAL BOARD OF CANADA.

This series was begun in 1918, and 55 issues appeared under this name, to 1937.

(*b*) BULLETINS OF THE FISHERIES RESEARCH BOARD OF CANADA.

Bulletins 56–101 appeared under this name, during 1939-54.

4. (*a*) CANADIAN ATLANTIC FAUNA.

This series was begun in 1921. Five parts, numbered 3a; 9b; 10m; 10n; and 12d,e,f have appeared at irregular intervals, though not in the order shown, to the latest one in 1948.

(*b*) CANADIAN PACIFIC FAUNA.

This series was begun in 1937. Six parts, numbered 1a,b,c,d; 1e; 1f,g; 9b(1); 9b(2); and 10e have appeared at irregular intervals, though not in the order shown, to 1955.

5. STUDIES FROM THE BOARD'S STATIONS (reprints). (See also under 10.)

(*a*) STUDIES FROM THE BIOLOGICAL STATIONS OF THE BIOLOGICAL BOARD OF CANADA.

(*b*) STUDIES FROM THE BIOLOGICAL STATIONS OF THE FISHERIES RESEARCH BOARD OF CANADA.

(*c*) STUDIES FROM THE STATIONS OF THE FISHERIES RESEARCH BOARD OF CANADA.

Separates of articles embodying work done at the Board's Stations, published in journals other than the Board's own, have been collected under the *Studies* series listed above. The series was begun in 1919, each addition being numbered consecutively throughout the changes in name of the series. The number of copies obtained was not great and no general distribution was attempted until 1952, beginning with No. 327. A complete or nearly complete set of *Studies* is available in the libraries of most of the Board's Stations, and at its Headquarters in Ottawa. Studies No. 1–395 appeared to the end of 1954 and are included in this Index. Copies of *Studies* are not available for sale.

6. RESEARCH BULLETINS OF THE NEWFOUNDLAND GOVERNMENT LABORATORY.

The 18 Bulletins of this series were published from 1932 to 1948. This series and the next were discontinued at the time Newfoundland entered Confederation in 1949. They are included in the present Index because the Fisheries Research Board of Canada can be considered the successor in interest to the fisheries research work done by the Newfoundland Government Laboratory prior to 1949.

7. SERVICE BULLETINS OF THE NEWFOUNDLAND GOVERNMENT LABORATORY.

The 15 Bulletins of this series are dated from 1935 to 1940.

REPORTS NOT INDEXED

The series of publications listed above comprise a major part of the published work of the Fisheries Research Board and its predecessor the Biological Board, but not all of it. Series *not* included in this Index are described briefly below.

8. *Annual Reports* of the Board's work, published first for the year 1925, and annually since. (Listed on page 165 of Appendix.)

9. Two series of *Progress Reports* are published approximately quarterly concerning the work done at the Board's Atlantic and Pacific Stations. These series commenced in 1931 and 1929, respectively.

(*a*) *Progress Reports of the Atlantic Coast Stations* (titles on pages 167-180 of Appendix)—indexes in issues No. 16, 20, 27, 33, 53 and 60.

(*b*) *Progress Reports of the Pacific Coast Stations* (titles on pages 181-209 of Appendix)—indexes in issues No. 60, 80 and 100.

10. The *Studies* series described under 5 was begun only in 1919. Titles of papers which appeared prior to 1919 are included in a list of publications for the years 1901-21, which appeared in Contributions to Canadian Biology for 1921, No. 12, pages 169-183. Even since 1919, some papers have been omitted from the *Studies*, either through inadvertence or because their interest was considered to be too local or too fleeting. Titles of most of these may be found in a list of publications for 1922-30, published in the Board's Bulletin No. 28, and in the lists of publications included in each year's printed Annual Report.

11. Other sources of information concerning the Board's work include the *Circulars* and *Industrial Memoranda* which have been issued by several of the Stations, and the *Manuscript Reports* which are prepared for use within the organization. Titles of these are listed each year in the Annual Report.

PLAN OF THE INDEX

The Index has been prepared mainly from the titles of the articles, with some reference to the abstracts, subheadings and conclusions. With the biological papers, the aim has been to list the main references to species and localities, and the kind of information obtained. Technological subjects are listed under the type of process concerned and the kind of product involved, as well as the fisheries source material.

Names of authors and co-authors of papers are also included in the Index.

NAMES OF FISHES, BIRDS AND MAMMALS. For papers where only a few different species are mentioned, entries have been made under each species. For the biological papers that mention many species, entries have been made under one of the general headings such as Fauna; Distribution of fish; Birds.

When a single species of fish has a large number of entries, they have been divided between the subheadings "biology" and "technology". With species having fewer entries, technological references are usually indicated by a descriptive word in brackets after the page number.

References have been listed under the common English name of the fish; where there are variants, the name selected for Pacific species has usually been that used in the Board's Bulletin No. 68, while for Atlantic or freshwater fishes we have usually used the name recommended by the latest revision of the American Fisheries Society's list of approved names. In all cases the American Fisheries Society name is cross-indexed (hyphens have been dropped from a few). Scientific names are listed, but only by a reference to the English name (except that *single* entries are repeated under the scientific name).

In some technological papers only a collective name for the fish in question is given; these entries appear after the individual species names: e.g., Skates appears at the end of the list of all the particular kinds of skates.

NAMES OF OTHER ORGANISMS. Commercial species appear under their common English name (e.g., Clams, Irish moss, etc.). Most other organisms appear under the name of the Order, Sub-order or Family in which they are classified. The groups so listed are indicated in brackets after the name of a more general term, e.g., Molluscs; Bivalves; etc.

GEOGRAPHICAL REFERENCES. Only the references to well-known geographical localities are listed, or those places where a great deal of biological investigation has been done. A note concerning the main purport of the paper is added to each geographical entry. Under the names of the Provinces reference is made only to those papers in which no particular locality is specified, or in which the locality is not sufficiently well known to warrant a separate entry.

PHYSICS AND CHEMISTRY OF NATURAL WATERS. Papers dealing with the composition or properties of sea water, the distribution of water masses, currents, tides, etc., appear under the headings Oceanography or Currents. Similar papers for inland waters appear under Limnology.

FISHERIES AND FISH POPULATION BIOLOGY. These topics are listed under one or more of the following headings: Abundance; Age composition; Catch per unit effort; Catchability; Depletion; Exploitation; Food studies; Growth rate; Management; Mortality; Statistics; Surveys; Tagging. Each entry is followed by an indication of the kinds of fish involved.

SUBDIVISION OF HEADINGS. Headings under which there are many entries have been subdivided. Examples are: Bacteria; Chemical composition; Disease; Distribution; Limnology; Oceanography; Oil; Physiology; etc.

ABBREVIATIONS

For distinguishing in the Index the various series of publications, initials are used as follows:

C: Contributions

J: Journal

B: Bulletins

AF: Canadian Atlantic Fauna

PF: Canadian Pacific Fauna

S: Studies

NR: Newfoundland Research Bulletins

NS: Newfoundland Service Bulletins

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APPENDIX

(Reprinted in large part from the 1953 Consolidated Annual Catalogue of Canadian Government Publications)

LIST OF PUBLICATIONS AND TITLES 1901-1954

DEALING WITH WORK OF THE

FISHERIES RESEARCH BOARD OF CANADA

(Formerly the Biological Board of Canada)

1. CONTRIBUTIONS

(a) CONTRIBUTIONS TO CANADIAN BIOLOGY

1901. pp. 1-62, 1901. 45¢.

1. Marine biological station of Canada. Introductory notes on its foundation, aims and work. By E. E. Prince, pp. 1-8.
2. The effects of polluted waters on fish life. A preliminary report. By A. P. Knight, pp. 9-18.
3. The clam fishery of Passamaquoddy bay. By J. Stafford, pp. 19-40.
4. Report on the flora of St. Andrews, N.B. By James Fowler, pp. 41-48.
5. Food of the sea urchin (Strongylocentrotus dröbachiensis). By F. H. Scott, pp. 49-54.
6. The paired fins of the mackerel shark. By E. E. Prince and A. H. MacKay, pp. 55-58.
7. Report on the sardine industry in relation to the Canadian herring fisheries. By B. Arthur Bensley, pp. 59-62.

1902-05. pp. 1-128, 1907. (*Out of print.*)

1. The plankton of eastern Nova Scotia waters. An account of floating organisms upon which young food-fishes mainly subsist. By R. Ramsay Wright, pp. 1-19.
2. The effects of dynamite explosions on fish life. A preliminary report. By A. P. Knight, pp. 21-30.
3. On the fauna of the Atlantic coast of Canada. An introductory report. By J. Stafford, pp. 31-36.
4. A further report upon the effects of sawdust on fish life. By A. P. Knight, pp. 37-54.
5. The Diatomaceae of Canso harbour, Nova Scotia. A provisional list. By A. H. MacKay, pp. 55-58.
6. Report on the flora of Canso, Nova Scotia. By James Fowler, pp. 59-70.

7. The seaweeds of Canso. Being a contribution to the study of eastern Nova Scotia algae. By C. B. Robinson, pp. 71-74.
8. Report on the marine Polyzoa of Canso, N.S. By George A. Cornish, pp. 75-80.
9. Notes on the fishes of Canso. By George A. Cornish, pp. 81-90.
10. Preliminary report on the Trematodes of Canadian marine fishes. By J. Stafford, pp. 91-94.
11. The eggs and early life-history of the herring, gaspereau, shad and other clupeoids. By Edward E. Prince, pp. 95-110.
12. Sawdust and fish life. Final report. By A. P. Knight, pp. 111-120.
13. Professor Macallum on the chemistry of Medusae. A condensed résumé of results. By Edward E. Prince, pp. 121-128.

1906-10. pp. 1-305, 1912. $2.25.

1. Report on the Atlantic Biological Station of Canada, St. Andrews, N.B., for 1908. By D. P. Penhallow, pp. 1-21.
2. Fishery bait experiments. A preliminary report upon the comparative merits of different kinds of bait used in cod fishing along Gaspé peninsula. By A. P. Knight, pp. 23-32.
3. Notes on the Actiniae occurring in the neighbourhood of the Biological Station, St. Andrews, N.B. By J. Playfair McMurrich, pp. 33-35.
4. On the fauna of the Atlantic coast of Canada. Second report. —Malpeque, 1903-1904. By J. Stafford, pp. 37-44.
5. On the fauna of the Atlantic coast of Canada. Third report —Gaspé, 1905-1906. By J. Stafford, pp. 45-68.
6. On the fauna of the Atlantic coast of Canada. Fourth report. By J. Stafford, pp. 69-78.
7. Notes on fishes of Tignish, Prince Edward Island. By George A. Cornish, pp. 79-81.
8. On a collection of Crustacea made at St. Andrews, N.B. By D. L. MacDonald, pp. 83-84.
9. Parasitic copepods from Nanaimo, British Columbia, including eight species new to science. By Charles Branch Wilson, pp. 85-101.
10. Holosomatous ascidians from the coast of western Canada. By A. G. Huntsman, pp. 103-185.
11. Preliminary list of one hundred and twenty-nine species of British Columbia Decapod Crustaceans. By George W. Taylor, pp. 187-214.
12. A new genus and species of Cottoid fish from Departure bay, Vancouver island. By Charles H. Gilbert, pp. 215-216.
13. Oyster culture and clam fishing, Prince Edward Island. By E. W. MacBride, pp. 217-220.

14. On the recognition of bivalve larvae in plankton collections. By J. Stafford, pp. 221-242.
15. Some recent diatoms, freshwater and marine, from the vicinity of the Biological Station, St. Andrews, N.B., August 20-30, 1909. By L. W. Bailey, pp. 243-264.
16. Notes on the flora of the St. Croix river valley and Passamaquoddy region, New Brunswick. By A. B. Klugh, pp. 265-276.
17. Contributions to the physiology of the American lobster. The physiology of the intestine. By F. R. Miller, pp. 277-280.
18. The temperatures and densities and allied subjects of Passamaquoddy bay and its environs. Their bearing on the oyster industry. By G. G. Copeland, pp. 281-294.
19. The geological environment of the British Columbia Biological Station at Departure bay, Vancouver island. By E. M. Burwash, pp. 295-305.

1911-14. pp. 1-75, 1-222, 1915. $2.20.

Fasc. I. Marine biology. pp. 1-75. 55¢.

1. The plankton in St. Andrews bay. By A. Willey, pp. 1-9.
2. The plankton diatoms of the bay of Fundy. By L. W. Bailey, pp. 11-23.
3. Studies on the Sporozoa of the fishes of the St. Andrews region. By J. W. Mavor, pp. 25-38.
4. A new Caprellid from the bay of Fundy. By A. G. Huntsman, pp. 39-42.
5. Preliminary notes on the Mollusca of St. Andrews and vicinity, New Brunswick. By John D. Detweiler, pp. 43-46.
6. A list of fleshy fungi collected at St. Andrews, New Brunswick. By Adaline Van Horne and Mary Van Horne, pp. 47-50.
7. The iodine content of the marine flora and fauna in the neighbourhood of Nanaimo, Vancouver island, B.C. By A. T. Cameron, pp. 51-68.
8. On some of the parasitic copepods of the bay of Fundy fish. By V. Stock, pp. 69-71.
9. Some experiments on the freezing and thawing of live fish. By W. H. Martin, pp. 73-75.

Fasc. II. Fresh water fish and lake biology. pp. 1-222. $1.65.

1. The fishes of Georgian bay. By B. A. Bensley, pp. 1-51.
2. Notes on the Odonata of the vicinity of Go Home bay, Georgian bay, Ontario. By E. M. Walker, pp. 53-94.
3. The Mollusca of Beorgian bay. By A. D. Robertson, pp. 95-111.
4. Rearing experiments and ecology of Georgian bay Ephemeridae. By W. A. Clemens, pp. 113-128.

5. Life-histories of Georgian bay Ephemeridae of the genus Heptagenia. By W. A. Clemens, pp. 131-143.
6. The fresh-water Malacostraca of Ontario. By A. G. Huntsman, pp. 145-163.
7. Notes on the Hirudinea of Georgian bay. By C. G. S. Ryerson, pp. 165-175.
8. Contributions to the life history of Proteocephalus ambloplitis Leidy. A parasite of the black bass. By A. R. Cooper, pp. 177-194.
9. Bryozoa of the Georgian bay region. By H. T. White, pp. 195-199.
10. Preliminary report on the plants of Georgian bay. A contribution to the biology of the Georgian bay waters. By W. T. MacClement, pp. 201-211.
11. List of Georgian bay fleshly fungi and myxomycetes. By T. H. Bissonnette, pp. 213-218.
12. Notes on the aquatic plants of Georgian bay. By A. B. Klugh, pp. 219-220.
13. Entomostraca of Georgian bay. By G. O. Sars, pp. 221-222.

1914-15. pp. 1-173, 1916. $1.25.

1. Investigation into the Pacific halibut fisheries, British Columbia. By Arthur Willey, pp. 1-18.
2. Notes on the egg and larval stages of the halibut. By Edward E. Prince, pp. 19-23.
3. The commercial value of the kelp-beds of the Canadian Pacific coast.—A preliminary report and survey of the beds. By A. T. Cameron, pp. 25-39.
4. Lobster sanctuaries and matching ponds: An investigation of the Long beach lobster pond, Digby county, Nova Scotia, in 1914. By A. P. Knight, pp. 41-54.
5. First report on the "barren oyster bottoms" investigation, Richmond bay, P.E.I. By A. D. Robertson, pp. 55-71.
6. A supposed disease of quahaugs from New Brunswick. By Philip Cox, pp. 73-79.
7. Investigation of a disease of the herring (Clupea harengus) in the gulf of St. Lawrence, 1914. By Philip Cox, pp. 81-85.
8. The life-history of the hake (Urophycis chuss Gill) as determined from its scales. By E. Horne Craigie, pp. 87-94.
9. Investigation of the haddock fishery, with special reference to the growth and maturity of the haddock (Melanogrammus aeglefinus). By Dorothy Duff, pp. 95-102.
10. Report on the life history of the cod as determined from the scales and other data. By R. P. Wodehouse, pp. 103-113.
11. Are migrating eels deterred by a range of lights—Report on experimental tests. By Philip Cox, pp. 115-118.

12. Possible lobster planting areas on the east coast of Vancouver island, B.C. By C. McLean Fraser, pp. 119-132.
13. Variations in density and temperature in the coastal waters of British Columbia—Preliminary notes. By C. McLean Fraser and A. T. Cameron, pp. 133-143.
14. An investigation of the bays of the southern coast of New Brunswick with a view to their use for oyster culture. By J. W. Mavor, E. Horne Craigie, and J. D. Detweiler, pp. 145-149.
15. Hydrographic investigations in the St. Croix river and Passamaquoddy bay in 1914. By E. Horne Craigie, pp. 151-161.
16. A hydrographic section of the bay of Fundy in 1914. By E. Horne Craigie, pp. 163-167.
17. The water and iodine contents of some Pacific coast kelps. By A. T. Cameron, pp. 169-173.

1915-16 (English and French editions). pp. 1-112, 1917. 90¢.

1. The winter plankton in the neighbourhood of St. Andrews, 1914-15. By J. Playfair McMurrich, pp. 1-9. 15¢.
2. Diatoms and lobster rearing. By W. T. MacClement, pp. 11-20. 15¢.
3. On the scales of the spring salmon. By C. McLean Fraser, pp. 21-38. 20¢.
4. On the life-history of the coho. By C. McLean Fraser, pp. 39-52. 20¢.
5. An investigation of oyster propagation in Richmond bay, P.E.I., during 1915. By Julius Nelson, pp. 53-78. 25¢.
6. The marine Algae of the Passamaquoddy region, New Brunswick. By A. B. Klugh, pp. 79-85. 15¢.
7. On serially striped haddock in New Brunswick. By Edward E. Prince, pp. 86-91. 15¢.
8. Notes on the phyto-plankton of the bay of Fundy and Passamaquoddy bay. By L. W. Bailey, pp. 93-107. 20¢.
9. The geological features of the St. Croix river and Passamaquoddy bay. By L. W. Bailey, pp. 109-112. 10¢.

1917-18. pp. 1-369, 1918. $2.60.

1. British Columbia sea-lion investigation. Special Commission's preliminary and main reports, pp. 5-52. 30¢.
2. Lobster investigations at Long Beach pond, N.S. By A. P. Knight, pp. 53-71. 20¢.
3. The pearly fresh-water musels of Ontario. By John D. Detweiler, pp. 75-91. 25¢.
4. Notes on the habits and distribution of Teredo navalis on the Atlantic coast of Canada. By E. M. Kindle, pp. 93-103. 15¢.

5. Rearing sockeye salmon in fresh water. By C. McLean Fraser, pp. 105-109. 10¢.
6. On the age and growth of the pollock in the bay of Fundy. By James W. Mavor, pp. 111-125. 20¢.
7. Further hydrographic investigations in the bay of Fundy. By E. Horne Craigie and W. H. Chase, pp. 127-148. 25¢.
8. Examination of affected salmon, Miramichi hatchery, New Brunswick. By F. C. Harrison, pp. 149-168. 20¢.
9. Report on affected salmon in the Miramichi river, New Brunswick. By A. G. Huntsman, pp. 169-173. 10¢.
10. The smoking of "haddocks" for Canadian markets—an investigation conducted at the Marine Biological Station at St. Andrews, N.B. By Olive Gair Patterson, pp. 175-178. 10¢.
11. Some observations on haddocks and "finnan haddies" relating to the bacteriology of cured fish. By F. C. Harrison, pp. 179-180. 10¢.
12. The bacteriology of swelled canned sardines. By Wilfred Sadler, pp. 181-215. 30¢.
13. Bacterial destruction of copepods occurring in marine plankton. By Wilfred Sadler, pp. 217-228. 15¢.
14. Bathymetric check list of the marine invertebrates of eastern Canada with an index to Whiteaves' catalogue. By E. M. Kindle and E. J. Whittaker, pp. 229-294.
15. Hydrography in Passamaquoddy bay and vicinity, New Brunswick. By Alexander Vachon, pp. 295-328. 35¢.
16. Hydroids of eastern Canada. By C. McLean Fraser, pp. 329-369.

1918-20. pp. 1-188, 1921. $1.45.

1. Further studies on the growth rate in Pacific salmon. By C. McLean Fraser, pp. 7-27. 25¢.
2. Some apparent effects of severe weather on the marine organisms in the vicinity of Departure bay, B.C. By C. McLean Fraser, pp. 29-33. 10¢.
3. Temperature and specific gravity variations in the surface waters of Departure bay, B.C. By C. McLean Fraser, pp. 35-48. 20¢.
4. Plankton diatoms, their distribution and bathymetric range in St. Andrews waters. By Clara W. Fritz, pp. 49-62. 20¢.
5. Experimental cultures of diatoms occurring near St. Andrews, N.B. By Clara W. Fritz, pp. 63-68. 10¢.
6. Contribution to the biology of the muttonfish *Zoarces anguillaris*. By Wilbert A. Clemens and Lucy Smith Clemens, pp. 69-83. 20¢.
7. Eastern Canadian plankton.—The distribution of the Tomopteridae obtained during the Canadian Fisheries Expedition, 1914-1915. By A. G. Huntsman, pp. 85-91. 15¢.

8. Eastern Canadian plankton.—The distribution of floating tunicates (Thaliacea) obtained during the Canadian Fisheries Expedition, 1914-1915. By A. G. Huntsman, pp. 93-97. 10¢.
9. An investigation into the rate of putrefaction in the commoner food fish caught in and around Passamaquoddy bay, N.B. By Louis Gross, pp. 99-102. 10¢.
10. Canned sardines.—The cause of "swells" or "blown cans". By Wilfred Sadler, pp. 103-108. 10¢.
11. List of fishes collected in 1917 off the Cape Breton coast and the Magdalen islands. By Philip Cox, pp. 109-114. 10¢.
12. The diatoms of Canada. By L. W. Bailey and A. H. Mackay, pp. 115-124. 15¢.
13. The utilization of dogfish and selachian fishes of eastern Canada (including Report on analyses of canned grayfish (dogfish) by Emil J. Baumann). By James W. Mavor, pp. 125-135. 15¢.
14. Key to the hydroids of eastern Canada. By C. McLean Fraser, pp. 137-180.
15. A new genus and three new species of algae from the Miramichi river, New Brunswick. By A. Brooker Klugh, pp. 181-183. 10¢.
16. The histology of the flexor tendon in the crushing claw of the lobster. By A. P. Knight, pp. 185-188. 10¢.

1921. pp. 1-183. $1.40.

Nos. 1 and 2. pp. 1-48, 1921. 45¢.

1. Some bacterial organisms occurring in the clam (*Mya arenaria*) which may produce "blackening" in tins. By Jennie L. Symons, pp. 1-14.
2. A study of the sea mussel (*Mytilus edulis* Linn). By Bessie K. E. Mossop, pp. 15-48.

Nos. 3 to 12. pp. 49-183, 1922. $1.05.

3. The fishes of the bay of Fundy. By A. G. Huntsman, pp. 49-72.
4. A study of the ciscoes of lake Erie. By Wilbert A. Clemens, pp. 73-85.
5. The food of ciscoes (*Leucichthys*) in lake Erie. By Wilbert A. Clemens and N. K. Bigelow, pp. 87-101.
6. The Pacific herring. By C. McLean Fraser, pp. 103-111.
7. On the development of the angler (*Lophius piscatorius,* L.). By C. J. Connolly, pp. 113-124.
8. The composition of lobster muscle. By Sadie N. Boyd, pp. 125-131.
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68. Fishes of the Pacific Coast of Canada. By W. A. Clemens and G. V. Wilby, pp. 1-368, 1946. (Cloth bound $2.00) (Paper bound $1.50).
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87. List of publications of the Fisheries Research Board of Canada (formerly the Biological Board of Canada), 1901-1949. Pp. 1-96, 1950. Free.

88. Eastern Arctic waters. By M. J. Dunbar, pp. 1-131, 1951. $1.00.

89. Marine oils, with particular reference to those of Canada. Edited by B. E. Bailey; revised from Bulletin 59, with the editorial assistance of N. M. Carter and L. A. Swain; pp. 1-413, 1952; $3.00 paper bound; 4.00 cloth bound.

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3. Arctic Copepoda in Passamaquoddy Bay. By A. Willey. *Proceedings of the American Academy of Arts and Sciences*, Vol. 56, No. 5, pp. 185-196, 1921.

4. A new species of *Spirontocaris* with notes on other species from the Atlantic coast. By A. H. Leim. *Transactions of the Royal Canadian Institute*, Vol. 13, pp. 133-145, 1921.

5. Faunal notes from the Atlantic Biological Station (1920). By A. Willey and A. G. Huntsman. *Canadian Field-Naturalist*, Vol. 35, No. 1, pp. 1-7, 1921.

6. The success of reproduction in *Sagitta elegans* in the Bay of Fundy and the Gulf of St. Lawrence. By A. G. Huntsman and Margaret E. Reid. *Transactions of the Royal Canadian Institute*, Vol. 13, Pt. 2, pp. 99-112, 1921.

7. A further study of the respiratory processes in *Mya arenaria* and other marine Mollusca. By J. B. Collip. *Journal of Biological Chemistry*, Vol. 49, No. 2, pp. 297-310, 1921.

8. Retinal reflexes of narcotized animals to sudden changes of intensity of illumination. By A. T. Cameron and C. H. O'Donoghue. *Biological Bulletin*, Vol. 42, No. 5, pp. 217-233, 1922.

9. A new *Cyclocypris* from eastern Canada. By A. Brooker Klugh. *Transactions of the Royal Canadian Institute*, Vol. 14, pp. 337-342, 1923.

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