

FISHERIES RESEARCH BOARD OF CANADA

MANUSCRIPT REPORT SERIES

No. 1316

TITLE

Index to Original Manuscripts Retained at the
Biological Station, St. Andrews, N.B.,
1918-1972

AUTHORSHIP

P.E.K. Symons

Establishment

Biological Station,
St. Andrews, N. B.

Dated June 1974

This series includes unpublished preliminary reports and data records not intended for general distribution. They should not be referred to in publications without clearance from the issuing Board establishment and without clear indication of their manuscript status.

JUL 23 1974

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INTRODUCTION

Original Manuscript Reports of the Biological Station at St. Andrews were used from 1918 until 1972 to report preliminary data, observations or experiments gathered by visitors to the Station, by seasonal employees, and by full-time staff.

Many of the original manuscripts were of limited value; some were useful only to the author; information in others appeared later in Manuscript Reports or full publications, but some information remained which was of considerable historical importance, unavailable elsewhere. One hundred and fifty-seven reports judged to contain such valuable information have been retained and are indexed in this Manuscript Report. Because of the preliminary or incomplete nature of the data in these reports, which renders them vulnerable to misinterpretation, permission to cite them or quote from them must be obtained from the Biological Station.

The first part of the Index lists by number those reports that have been retained, giving authorship and title. The second part consists of an author-, locality-, subject-index which is cross-referenced.

Miss Linda Cunningham, Mrs. Ruth Garnett, and Mr. H.H.V. Hord have cooperated to sort the manuscripts and compile the Index. Many members of the Station's staff assisted in evaluating material; the Director, Dr. R.O. Brinkhurst, suggested and encouraged compilation of this report.

P.E.K. Symons,
June 10, 1974.

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9. Notes and data on the lobster and lobster industry along the south shore of P.E.I. (June 24-Sept. 12, 1918).
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11. General report upon lobster investigations at Richmond Bay, P.E.I. for 1919.
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375 (Caim Cove Weir, N.S.); 733 (winter flounder in SW Nova Scotia, May 1-June 30, 1948); 735 (laboratory data on winter flounder (*Pseudopleuronectes americanus*) & smooth flounder (*Liopsetta putnami*), 1947-48); 849 (temperature as a factor limiting survival)

FOOD

427 (histories of new food fishes: tomcod)

FRB & N.S. ECONOMIC SURVEY COMMITTEE

723 (hydrographic observations, Northumberland Strait Coast of N.S., 1939 & 1940)

FRIEDMAN, M.H.

228 (low temperatures & zonal distribution of amphipoda during summer & winter, 1929); 369 (toxicities of sea water for amphipoda); 370 (water content in marine amphipoda); 472 (ability of mollusca to withstand low temperatures)

FRITZ, CLARA W.

416 (distribution of diatoms); 420 (plankton diatoms)

FUNDULUS (*See* Killifish)

FUNDY, Bay of

389 (general hydrography, 1924-30); 937 (pollock (*Pollachius virens* (L.)) biology, 1960 observations);

Fisheries & surveys (1931-32): 336 (sea urchin); 337 (squid); 338 (mussel); 339 (periwinkle); 340 (striped bass); 341 (eel); 342 (cod); 343 (weirs & trap-nets); 344 (mackerel); 348 (cusk); 349 (hake); 350 (halibut); 351 (smelt); 352 (albacore); 353 (statistics: alewife, shad, herring, sardine, scallop, clam, cockles, winkles, mussel, eel, tomcod, bass, etc.); 354 (shad); 355 (pollock); 356 (data collected, Nov. 16-30, 1931); 357 (haddock); 358 (resources of)

GADIDAE

1044 (eastern Atl. Coast)

GAMMARUS LOCUSTA (See Amphipoda)

GASPEREAU

375 (Caim Cove Weir, N.S.)

GILLIS COVE, N.S.

870 (water temperatures, 1941-1955)

GLYCERA (See Bloodworm)

GLYCOGEN

86 (muscle, haddock); 314 (post-mortem glycogen lactic acid reaction fish muscle)

GRAND MANAN

788 (lobster fishery, 1945-51)

GREAT BRAS D'OR

842 (invertebrates); 888 (mysids); 958 (fishes); 959 (nematode parasites)

GROWTH

141 (light intensity & growth *Monostroma grevelli* [grevillei]); 164 (growth marine algae in relation to depth); 309 (growth of organs & parts in relation to whole body of haddock); 919 (*Chondrus crispus* (L.))

HACHEY, H.B.

31 (coastal waters & Maritime climates, 1931); 223 (seasonal variations in phosphate content of waters, Passamaquoddy Region); 363 (sub-surface water temperatures between Halifax, N.S. & Hamilton, Bermuda, 1927-30); 389 (hydrography, Bay of Fundy, 1924-30); 430 (circulation of waters in Passamaquoddy Bay); 431 (factors determining hydrography of Passamaquoddy Region); 471 (diary, Hudson Bay, 1930); 662 (hydrography, Scotian Shelf, 1937); 668 (temperature-salinity, Scotian Shelf); 671 (correlations between sea & atmosphere); 672 (summary hydrography Scotian Shelf, 1932 & 1933); 679 (water movements, Atl. Coast, 1935); 681 (status of hydrography, 1936)

HADDOCK

86 (muscle glycogen); 309 (growth of organs & parts in relation to whole body); 357 (fishery, Fundy area); 372 (slime secretion of skin); 849 (temperature limiting survival); 1044 (of eastern Atl. Coast); 1064 (tagging, 1935-40)

HAGFISH

209 (slime secretion); 657 (colour changes)

HAKE

595 (Atlantic Coast fishery); 1044 (of eastern Atl. Coast)

HAKE, Silver

375 (Cairn Cove Weir, N.S.)

HALIBUT

350 (fishery, Fundy area); 375 (Cairn Cove Weir, N.S.); 701 (S.W. Nova Scotia)

HALIFAX, N.S.

363 (sub-surface water temperatures between Halifax, N.S. & Hamilton, Bermuda, 1927-30); 441 (warm water distribution, June-Sept. 1924); 581 (animal plankton, 1932); 587 (phosphate content of sea water, 1932)

HAMILTON, BERMUDA

363 (sub-surface water temperatures between Halifax, N.S. & Hamilton, Bermuda, 1927-30)

HART, J.L.

915 (oceanography & Canadian Atl. fisheries)

HAVRE BOUCHER, N.S.

803 (hydrographic observations in relation to holding live lobsters)

HENDERSON (*See* Stevenson, J.A.)

HENDERSON, JEAN T.

396 (temperature effect on cardiac rhythm of certain schizopods)

HERRING

353 (use of statistics, Fundy survey); 375 (Cairn Cove Weir, N.S.)

HUDSON BAY

471 (diary, H.B. Hachey, 1930)

HUNTSMAN, A.G.

356 (data, Fundy survey, Nov. 16-30, 1931); 358 (fishery resources, Fundy area); 413 (whiting); 431 (hydrography of Passamaquoddy); 497 (importance of Passamaquoddy mechanism); 498 (effect of dams on Passamaquoddy mechanisms); 501 (tidal currents & climate); 711 (Pomquet River, Antigonish Co., N.S.); 820 (species & lethal temperatures)

HYDROGEN

522 (hatching of fish eggs)

HYDROGRAPHY

316 (effect of Cooper Dam on Passamaquoddy Region); 364 (Magdalen Islands, July & Aug. 1931); 389 (Bay of Fundy, 1924-30); 404 (Passamaquoddy); 421 (Cheticamp (C.B.)); 430 (Passamaquoddy); 431 (Passamaquoddy); 441 (Halifax); 474 (Lunenburg); 654 (Malpeque Bay, II. 1930, 1931, 1932); 655 (Malpeque Bay, III. 1933-1937); 662 (Scotian Shelf, 1937); 671 (sea & atmosphere correlations); 672 (Scotian Shelf, 1932 & 1933); 674 (Malpeque, IV. analysis); 681 (present status, 1936); 723 (Northumberland Strait Coast of N.S., 1939 & 1940); 803 (Bayfield, N.S. & Havre Boucher, N.S., holding live lobsters, 1952); 867 (Malpeque Bay, V. open water, 1938, 1939, 1940); 868 (Malpeque Bay, VI. temperatures, 1932-40); 869 (Malpeque Bay, VII. temperatures, 1941-45); 870, 871, 872 (oyster studies, I, II & III); 915 (oceanography & Atl. fisheries); 927 (Malpeque Bay, IX. open water, 1941-45); 928 (Malpeque Bay, X. temperatures, 1951-55); 930 (Malpeque Bay, XII. open water, 1951-57); 1050 (Passamaquoddy Bay, 1951)

INTERNATIONAL PASSAMAQUODDY FISH. COMM. 1931-32

660 (phytoplankton tables, Sept. 1931; April, June, August 1932)

ION (*See Hydrogen*)

IRISH MOSS

140 (factor controlling downward distribution); 693 (bleaching experiments); 919 (growth in submersed population); 1025 (experiments on curing)

JEFFERS, A.M.

353 (use of statistics, Fundy survey); 354 (shad fishery, Fundy survey)

JEFFERS, G.W.

342 (cod fishery, Fundy survey); 351 (smelt fishery, Fundy survey); 352 (albacore fishery, Fundy survey)

JOHNSTON RIVER, P.E.I.

872 (water temperatures, open water, 1939, 1940, 1942-55)

KEARNEY, CHAS. & KEARNEY, C.E.

562 (plankton, S.E. Coast of N.S., 1932); 581 (animal plankton, Halifax, 1932)

KEMPTON, A.R.

701 (halibut of S.W. Nova Scotia); 733 (winter flounders, S.W. Nova Scotia, May 1-June 30, 1948); 734 (Danish seining, July-Aug. 1948)

KILLIFISH

1067 (effect on rats)

KLUGH, A.B.

12 (lobster investigations, Richmond Bay, P.E.I., 1919; search for small lobsters); 164 (marine algae growth in relation to depth)

KOMAROV, S.A.

332 (skin extracts affecting blood pressure of skate)

LACTIC ACID

127 (methods of estimation); 314 (post mortem reaction in fish muscle, 1927)

LAKE (See Trout)

LANDLOCKED (See Salmon)

LANTERNFISHES

1019 (Myctophidae, Canadian Atl.)

LARVAE

708 (lobster, 1938 & 1939, Northumberland Strait, P.E.I. to Magdalen Islands); 960 (surveys, 1954-55)

LEIM, A.H.

520 (salinity & temperature, mysid *Michtheimysis stenolepis*, 1922); 1059 (lethal temperatures, eggs & larvae, Atlantic salmon, lake trout & whitefish, with data on heart beat frequency); 1060 (temperature & vertebral counts, landlocked salmon); 1061 (temperature & salinity, development of smelt eggs)

LEMON, HERBERT W.

209 (slime secretion of *Myxine glutinosa*); 372 (slime secretion of haddock skin)

LETHAL (See Temperatures)

LIGHT

141 (rate of growth, *Monostroma grevelli* [grevillei])

LIOPSETTA PUTNAMI (See Flounder)

LOBSTER

8 (Cape Tormentine, N.B., 1918); 9 (industry, south shore, P.E.I., June 24-Sept. 12, 1918); 11 (Richmond Bay, P.E.I., 1919); 12 (small lobster search, Richmond Bay, P.E.I., 1919); 199 (Maritime Provinces & Magdalen Islands, summer 1930); 225 (fishery, Northumberland Strait); 226 (Yarmouth & Northumberland Strait districts, 1928); 533 (measurements, 1931); 643 (investigations, St. Andrews Biological Station, summer 1934); 651 (measurements, 1936); 699 (Rept. #1, District #8, Aug. 10-Oct. 5, 1942); 700 (Rept. #2, District #4, 1942-43);

LOBSTER (continued)

708 (larvae, 1938 & 1939, Northumberland Strait & P.E.I. to Magdalen Islands); 713 (Rept. #3, District #7, May 1-June 30, 1943, & District #8, Aug. 10-Oct. 5, 1943); 737 (Rept. #4, District #7, May-June, 1944); 773 (Rept. #5, District #8, Aug. 10-Oct. 5, 1944); 788 (Grand Manan, 1945-1951); 803 (holding, Bayfield, N.S. & Havre Boucher, N.S.); 853 (physical & chemical conditions, Conley's Lobster Pound, Deer Island, N.B., Aug. 1954); 916 (underwater observations, Richibucto, Aug. 27, 1959)

LOCKEPORT, N.S.

901 (nematodes in cod)

LUNenburg DISTRICT

438 (warm water survey, 1925; continuation of report for 1924);
440 (warm water survey, 1924); 474 (warm water survey, first 3 weeks)

MACKAY, D.A.

8 (lobster investigations, Cape Tormentine, N.B., 1918); 11 (lobster investigations, Richmond Bay, P.E.I., 1919)

MACKAY, MARGARET E.

86 (muscle glycogen in haddock); 332 (skin extracts & blood pressure of skate)

MACKEREL

344 (fishery, Fundy survey)

MACLEOD, J.W.

285 (experiments with *Gammarus locusta*, 1924)

MACPHAIL, J.S.

1093 (clam worm & bloodworm populations, N.B. & N.S., 19-22 May 1950);
1094 (abundance, clam worm & bloodworm, Charlotte Co., N.B., 25-27 April 1950)

MAGDALEN ISLANDS

199 (lobster investigations, 1930); 364 (temperature & salinity, July & August 1931); 708 (lobster larvae, 1938 & 1939)

MALPEQUE BAY

654 (hydrography, open water, 1930, 1931, 1932); 655 (hydrography, open water, 1933-1937); 674 (hydrography, analyses); 867 (hydrography, open water, 1938, 1939, 1940); 868 (hydrography, water temperatures, 1932-40); 869 (hydrography, water temperatures, 1941-45); 927 (hydrography, open water, 1941-45); 928 (hydrography, water temperatures, 1946, 1947, 1951-55); 930 (hydrography, open water, 1951-57)

MARTIN, J. RUSSELL

140 (factor controlling downward distribution of *Chondrus crispus*);
141 (correlation between light intensity & growth rate of *Monostroma grevillei* [*grevillei*])

MCCRACKEN, F.D.

735 (laboratory data on winter flounder (*Pseudopleuronectes americanus*) & smooth flounder (*Liopsetta putnami*) for 1947-48)

MCFARLAND, C.J.

849 (temperature as a factor limiting survival of smooth flounder, pollock, cod & haddock)

MCKENZIE, R.A.

356 (Fundy survey, Nov. 16-30, 1931); 357 (haddock fishery, Fundy area); 722 (water movements, Miramichi, 1943 & 1944); 760 (cod vertebral counts, Halifax, 1933-1941); 892 (water temperatures & salinities, Miramichi River, N.B., 1941-57); 1026 (cod & water temperature); 1052 (exploratory fishing); 1064 (haddock tagging off Canadian southern mainland, 1935-40)

MCLEAN, DELBERT

1067 (effect of *Fundulus* on rats)

MCLEESE, D.W.

853 (physical & chemical conditions, Conley's Lobster Pound, Deer Island, N.B., August 1954)

MECHANISMS (See Passamaquoddy)

METAL (See Pollution)

M'GONIGLE, R.H.

271 (salmonidae, I. preliminary investigation, 1929); 330 (salmonidae, II. feeding investigations); 380 (some factors involved in the well-being of certain salmonidae, IV. water-flow experiments, 1930); 410 (some factors involved in the well-being of certain salmonidae, III. lethal temperature, 1930); 449 (study of certain limiting factors in a salmon retaining pond)

MICROGADUS TOMCOD (See Tomcod)

MIRAMICHI

416 (diatoms at the mouth of, 1918); 722 (water movements, 1943 & 1944); 892 (water temperatures & salinities, 1941-57)

MONOSTROMA GREVELLEI [*GREVILLEI*] (See Algae)

MOLLUSCA

472 (ability to withstand low temperatures)

MONKFISH

375 (Cairn Cove Weir, N.S.)

MORTALITY

250 (lower temperature, young tomcod)

MORTON, J.M.

223 (seasonal phosphate content of Passamaquoddy); 404 (phosphate content, Passamaquoddy); 587 (phosphate content of sea water, Halifax, 1932)

MOUNCE, IRENE

603 (eel grass experiments, 1933)

MOVEMENTS (See Water)

MUSCLE

86 (muscle glycogen in haddock); 312 (water in muscle juice); 314 (glycogen lactic acid reaction)

MUSSEL

338 (fishery, Fundy area); 353 (use of statistics in Fundy survey)

MYCTOPHIDAE (See Lanternfishes)

MYSID

520 (varying salinity & temperature); 888 (biology, III. & illustrations, Great Bras d'Or); 959 (biology, IV. nematode parasites, Great Bras d'Or)

MYXINE GLUTINOSA (See Hagfish)

NEEDLER, A.B.

858 (the cod)

NEEDLER, A.W.H.

Hydrography, Malpeque Bay (654, 655 & 674)

NEMATODES

901 (incidence in cod at Lockeport, N.S., 1957); 959 (biology, Great Bras d'Or, IV. parasites of mysids)

NEREIS (See Clam Worm)

NORTHUMBERLAND STRAIT

225 (lobster fishery); 226 (lobster investigation, 1928); 708 (lobster larvae, 1938 & 1939); 723 (hydrographic observations, 1939 & 1940)

OAKE, GEORGE

1067 (effect of *Fundulus* on rats)

OCEANOGRAPHY (See Hydrography)

OLSEN, A.M.

916 (underwater observations, lobsters, Richibucto, Aug. 27, 1959)

OSMOSIS (See Amphipoda)

OXIDE (*See* Trimethylamine)

OYSTER

870 (I. water temperatures at Gillis Cove, N.S., 1941-55);
871 (II. water temperatures at Brackley Bay Point & Scotchfort,
P.E.I., open water, 1936-38, Corran Bann, P.E.I., open water,
1936); 872 (III. water temperatures at Johnston River, P.E.I.,
open water, 1939, 1940, 1942-55)

PASSAMAQUODDY

196 (water movements, 1930); 197 (planktonic diatoms, 1924-1931);
223 (seasonal phosphate content of the waters); 316 (probable effect
of the Cooper Dam); 404 (phosphate content of water); 430 (circulation
of the waters, 1927); 431 (factors determining the hydrography);
497 (relative importance of the mechanism); 498 (effect of the dams
on the mechanisms); 660 (phytoplankton tables, 1931, 1932);
1050 (hydrography, 1951)

PATERSON, R.E.

164 (growth rate of marine algae in relation to depth)

PERIWINKLE

339 (fishery, Fundy area); 353 (use of statistics, Fundy Survey)

PHOSPHATE

223 (content in Passamaquoddy Region); 404 (content of Passamaquoddy
water); 587 (changes in sea water content in Halifax area, 1932)

PHYTOPLANKTON

660 (tables, Passamaquoddy Bay, Sept. 1931, April, June, August 1932)

PLANKTON

197 (Passamaquoddy Region, 1924-1931; Halifax area, July & August 1930);
420 (Cheticamp Region, May 23-Sept. 14, 1917); 562 (S.E. Coast of Nova
Scotia, 1932); 581 (quantitative study, Halifax Survey, 1932); 708 (tows
for lobster larvae, Northumberland Strait & P.E.I. to Magdalen Islands,
1938 & 1939)

POLLOCK

355 (fishery, Fundy area); 375 (Cairn Cove Weir, N.S.); 849 (temperature as a factor limiting survival); 937 (biology, Bay of Fundy, 1960); 1044 (eastern Atl. Coast)

POLLUTION

1086 (with reference to use of diatoms as indicators)

POMQUET RIVER, ANTIGONISH COUNTY, N.S.

711 (trout)

POND

449 (limiting factors in a salmon retaining pond)

PORROCAECUM DECIPIENS (See Codworm)

PRINCE EDWARD ISLAND

Lobster fisheries, *See* Lobster; oyster studies, *See* Oyster; Water temperatures, *See* Malpeque Bay, Brackley Bay, Johnston River

PRODUCTION

197 (effect of sea bottom mud on production of diatoms in sea water)

PSEUDOPLEURONECTES AMERICANUS (See Flounder)

PUBNICO DISTRICT, N.S.

248 (warm water distribution)

PURSE SEINER (*See* Tuna)

RICE, F.A.H.

1025 (curing Irish Moss, 1944)

RICHIBUCTO

916 (underwater observations, lobster, Aug. 27, 1959)

RICHMOND BAY, P.E.I.

11 (lobster investigations, 1919); 12 (search for small lobsters, 1919)

RITCHIE, A.D.

127 (methods of estimation of lactic acid)

SALINITY

364 (Magdalen Islands, July & Aug. 1931); 369 (toxicities of sea water to amphipoda); 520 (effect on mysid *Michtheimysis stenolepis*, 1922); 522 (effect on hatching fish eggs); 668 (diagrams for Scotian Shelf); 892 (Miramichi River, N.B., 1941-57); 1061 (effect on development of smelt eggs)

SALMON

375 (Cairn Cove Weir, N.S.); 449 (limiting factors in a retaining pond); 1060 (effect of temperature on vertebral counts)

SALMONIDAE

271 (some factors involved in well-being, I); 330 (II. feeding); 380 (IV. water flow experiments); 410 (III. lethal temperature)

SARDINE

353 (Fundy survey)

SCALLOP

353 (Fundy survey)

SCHIZOPODS

396 (effect of temperature on cardiac rhythm)

SCOTIAN SHELF

662 (hydrography, 1937); 668 (temp.-salinity diagrams); 672 (summary of the hydrography, 1932 & 1933)

SCOTCHFORT, P.E.I.

871 (hydrographic observations related to oyster studies, II. water temperatures, 1936-38)

SCOTT, DAVID M.

765 (life history & ecology of codworm in Canadian Atl. waters, Oct. 1949); 901 (incidence of nematodes in cod, Lockeport, N.S., 1957)

SCOTT, W.B.

1019 (lanternfishes in the Canadian Atl. region)

SEA URCHIN

336 (fishery, Fundy area)

SEINING (*See* Danish Seining)

SERJEANT, T.R.

309 (relation of growth of organs & parts to growth of whole body in haddock)

SHAD

353 (use of statistics in Fundy survey); 354 (fishery, Fundy survey); 375 (Cairn Cove Weir, N.S.)

SHAW, EVELYN B.

312 (estimation of bound water in the muscle juice of fish)

SHRIMP

657 (colour changes)

SIMPSON, W.W.

314 (post mortem glycogen lactic acid reaction in fish muscle, 1927)

SKATE

332 (effect of substances extracted from skin of skate on blood pressure of the fish, Part II)

SKIN

332 (effect of substances extracted from skin of skate on blood pressure of the fish, Part II); 372 (slime secretion of skin of haddock, 1931)

SLIME SECRETION

209 (of *Myxine glutinosa*); 372 (of the skin of the haddock, 1931)

SMELT

351 (fishery, Fundy Survey); 375 (Cairn Cove Weir, N.S.); 1061 (temperature & salinity effects on development of eggs)

SPARKS (*See* Stevenson, J.A.)

SQUID

337 (fishery, Fundy area)

ST. ANDREWS, NEW BRUNSWICK

603 (eel grass experiments, Biological Station, Sept.-Oct. 1933);
643 (lobster investigations, Biological Station, summer 1934)

STATISTICS

353 (use of, in Fundy Survey)

STEELE, D.H.

937 (pollock biology, Bay of Fundy, 1960)

STEVENSON, J.A.

820 (species & lethal temperatures)

SURVEY

Fundy Survey, *See* Fundy

SULLIVAN, G.J.W.

788 (Grand Manan lobster fishery, 1945-51)

TAGGING

1064 (of haddock off Canadian southern mainland, 1935-40)

TAYLOR, A.R.A.

919 (growth of *Chondrus crispus* (L.) in a submersed population)

TAYLOR, E.M.

522 (effect of varying temperature, salinity & hydrogen ion concentration on hatching fish eggs)

TEMPERATURES

Water temperatures, *See* specific location or Hydrography;

228 (influence of low temperatures on zonal distribution of amphipoda during summer & winter); 250 (lower temperature at which death occurs in young tomcod); 396 (cardiac rhythm of certain schizopods); 472 (ability of certain mollusca to withstand low temperatures); 520 (effect of varying salinity & temperature on the mysid *Michtheimysis stenolepis*, 1922); 522 (effect of varying temperature, salinity & hydrogen ion concentration on the hatching of fish eggs); 820 (lethal temperatures); 849 (limiting survival of smooth flounder, pollock, cod & haddock); 870 (oyster studies, Gillis Cove, N.S., 1941-55); 871 (oyster studies, Brackley Bay Point & Scotchfort, P.E.I.); 872 (oyster studies, Johnston River, P.E.I., 1939, 1940, 1942-55); 1026 (cod); 1059 (lethal to fish eggs & larvae of Atl. salmon, lake trout & whitefish); 1060 (effect on vertebral counts in landlocked salmon); 1061 (effects on development of smelt eggs)

TEMPLEMAN, W.

199 (lobster investigations, Maritime Provinces & Magdalen Islands, summer, 1930); 364 (temperature & salinity records, Magdalen Islands, July & Aug. 1931); 533 (lobster measurements, 1931); 643 (lobster investigations, St. Andrews, summer 1934); 651 (lobster measurements, 1936)

TIDAL CURRENTS (*See* Climate)

TOMCOD

250 (lower lethal temperature in young); 353 (use of statistics in Fundy Survey); 375 (Cairn Cove Weir, N.S.); 426 (life history); 427 (histories of new food fishes)

TOXICITIES (*See* Salinity, Temperature)

TRAP-NETS

343 (Fundy Survey)

TRIMETHYLAMINE

206 (occurrence of trimethylamine oxide in marine forms)

TROUT

711 (Pomquet River, Antigonish County, N.S.);

TROUT, Lake

1059 (lethal temperatures)

TUNA

1083 (operation of tuna purse seiner *ATLANTIC J.A.G.*, 1968)

TUSKET, N.S.

248 (warm water distribution)

VACHON, ALEXANDER

421 (hydrography of the Cheticamp (C.B.) Region)

VASS, S.E.

Hydrography: of Malpeque Bay, 867, 868, 869, 927, 928, 930;
in relation to oysters, 870, 871, 872

VERTEBRAL COUNTS

760 (cod, off Halifax, 1933-41); 1060 (effect of temperature, land-locked salmon)

VLADYKOV, V.D.

350 (halibut fishery, Fundy area); 355 (pollock fishery, Fundy area)

WATER (See Hydrography)

WATSON, E.E.

196 (water movements, Passamaquoddy Bay, 1930); 316 (probable effect of Cooper Dam on Passamaquoddy Region)

WEIRS

343 (Fundy Survey); 375 (Cairn Cove, N.S.)

WHITEFISH

1059 (lethal temperatures for eggs)

WHITE, H.C.

375 (Cairn Cove Weir, Apple River, N.S., 1931)

WHITING

413 (the whiting)

WILDER, D.G.

699 (lobster, Dist. #8, Aug. 10-Oct. 5, 1942, Rept. #1);
 700 (lobster, Dist. #4, 1942-43, Rept. #2); 708 (lobster larvae,
 1938 & 1939); 713 (lobster, Dist. #7, May 1-June 30, 1943;
 Dist. #8, Aug. 10-Oct. 5, 1943); 737 (lobster, Dist. #7, May-June,
 1944); 773 (lobster, Dist. #8, Aug. 10-Oct. 5, 1944, Rept. #5);
 803 (hydrographic observations, Bayfield, N.S. and Havre Boucher,
 N.S. in relation to holding live lobsters, 1952); 916 (underwater
 lobster observations, Aug. 27, 1959)

WINKLES (*See* Periwinkles)

WOOD, K.G.

1044 (gadidae of eastern Atl. Coast)