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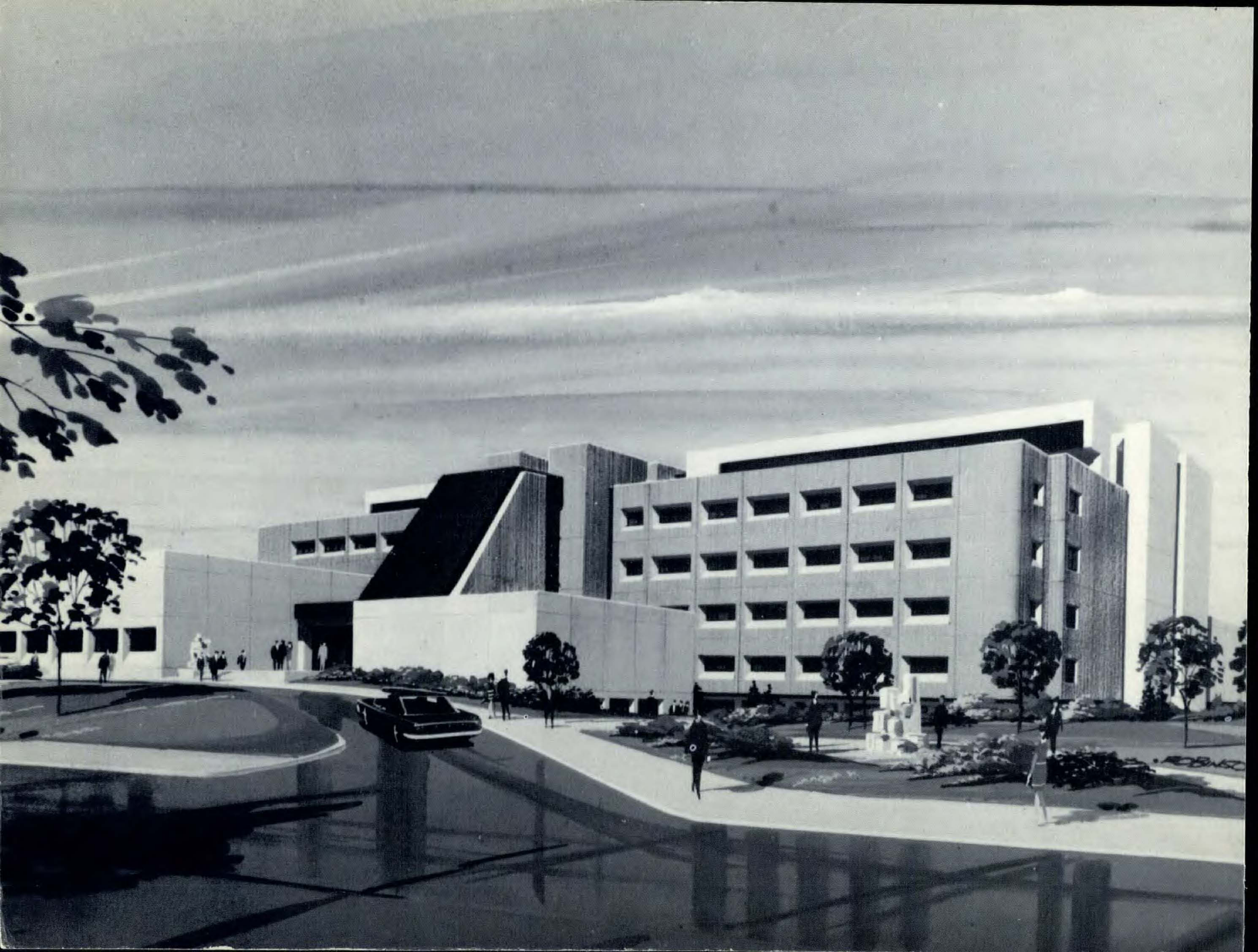
FISHERIES RESEARCH BOARD OF CANADA 1898 TO 1973

Environment Canada
Environnement Canada



FISHERIES RESEARCH BOARD OF CANADA 1898 TO 1973

Miscellaneous Special Publication No. 20
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Environment Canada Environnement Canada

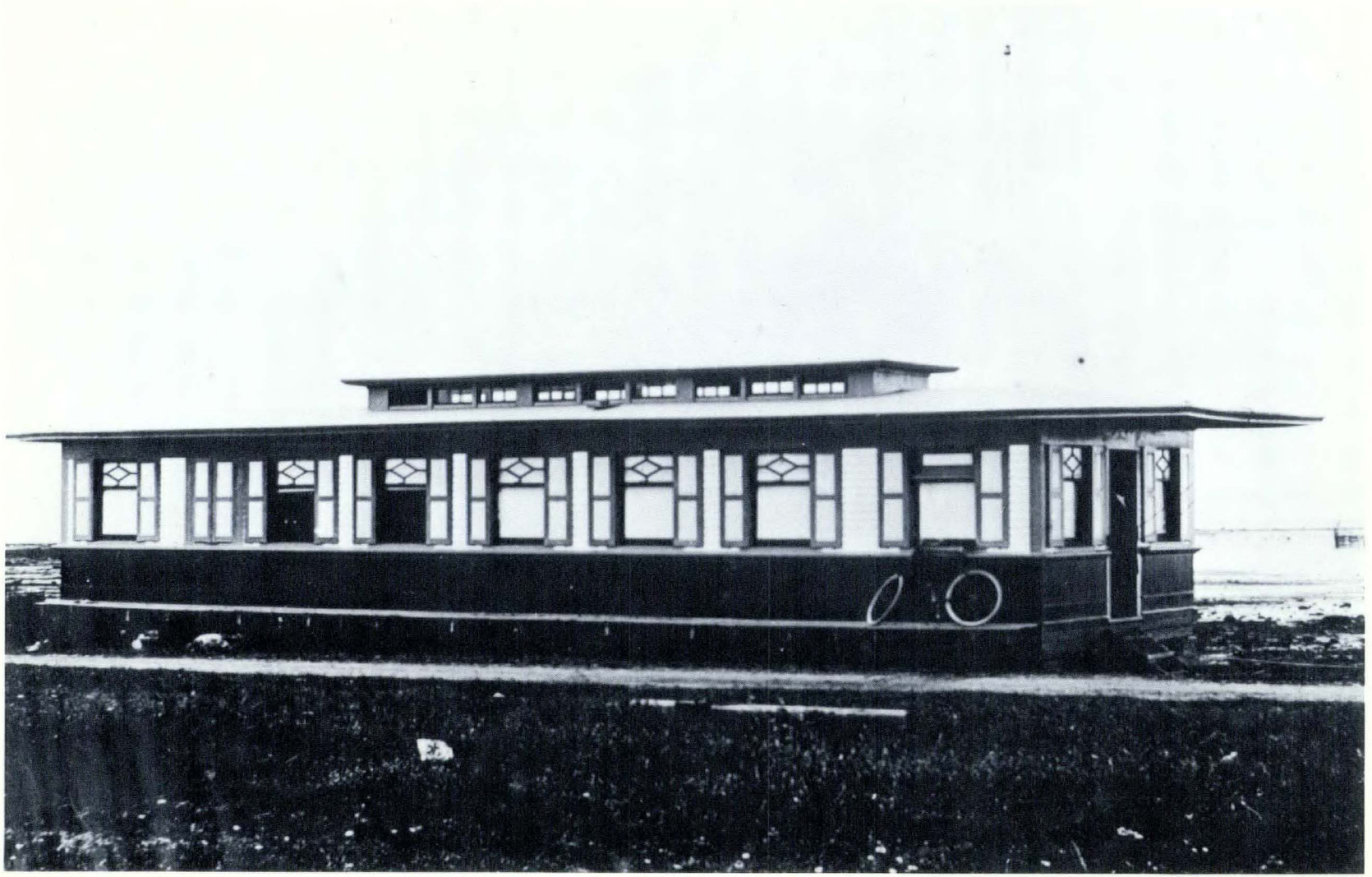
Architect's sketch of the new Freshwater Institute building on the University of Manitoba campus. It was occupied early in 1973, and is shared by several services of the Department of the Environment.

FOREWORD

It seemed appropriate on the occasion of the 75th Anniversary of the Fisheries Research Board of Canada to produce a brochure summarizing the highlights of events and accomplishments during the Board's first 75 years. It is timely in that it reviews a number of turning points in the life of the Board, culminating in the new advisory role assumed in 1973. For convenience, it is presented chronologically by periods corresponding with the regime of each chairman. I believe it to be of great credit to the Board and worthy of wide distribution through the mailing list for Board publications and to all those interested in Canadian fisheries and aquatic science.

As background for preparations of the brochure and the proposed history of the Board, Dr. J. C. Stevenson made a series of taped interviews with many senior Board people. This, together with his own long and intimate association as Editor of Board publications, has placed him in an ideal position to write and publish this short history. On behalf of the Board, I wish to express my appreciation to Dr. Stevenson and his various associates for the thorough and authoritative effort involved in producing this document.

J.R. Weir
Chairman



THE FIRST SEVENTY-FIVE YEARS

A résumé of the history of the Fisheries Research Board of Canada from 1898 to 1973

In 1973 the Fisheries Research Board of Canada celebrates its 75th anniversary.

From a small beginning as a movable floating laboratory on the Atlantic coast, it became the largest aquatic research organization in Canada and one of the most prestigious in the world. During three-quarters of a century virtually every Canadian involved in aquatic research and development activities became closely associated with the Board as a member, employee, administrator, author or referee of its publications, or grant recipient. The Board concept of conducting research has proven successful, and it has spread to other Canadian government institutions and other countries.

This brochure is a brief review of people, events, and major scientific developments associated with the Board during its nine chairmanships. The Board's accomplishments cover every area of aquatic science and are too numerous to review in this short account. They range from the broad achievements of unravelling the life histories of Canada's aquatic fauna and elucidating the complex circulation patterns of the lakes and oceans in which these animals live to specific successes such as the development of rainbow trout farming in prairie 'pothole' lakes and refrigerated seawater storage for fish products. A book on the history of the Board is in preparation and will be published next year.

The Marine Biological Station, Canada's first fisheries research facility. This wooden building, 50 by 15 ft., was built in 1899 to be loaded on a 60 by 20 ft. scow for relocation at several places, where it was landed above high water. The Station was located at St. Andrews, N.B. in 1899-1900; then at Canso, N.S., 1901-02; at Malpeque, P.E.I., 1903-4; and at Gaspé, Que., 1905-06.

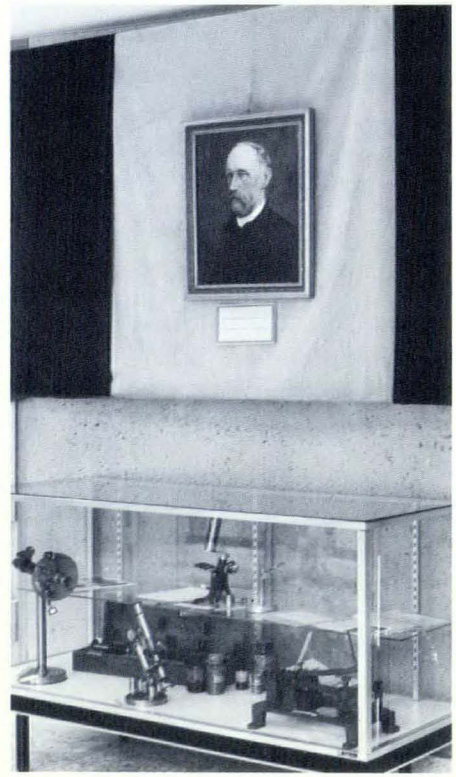
THE BEGINNING OF THE BOARD

The key figure in creating the Board was a Scotsman, E. E. Prince, appointed in 1893 as Commissioner and General Inspector of Fisheries for Canada. He quickly became aware of the lack of knowledge of Canada's aquatic resources, rumors of depletion of certain stocks, and the concern of many Canadian scientists who had to leave their country to study aquatic resources in foreign waters. In his report for 1893, Prince wrote "... professors in our universities, as well as practical fishing authorities, have given strong expression to views in favour of a biological station for Canada, on the lines of such institutions in other countries."

In 1897 the British Association for the Advancement of Science met in Toronto and sponsored a Canadian Committee, composed of representatives of Canadian universities and scientific organizations, to advance the need for a marine station on the Atlantic coast. The Royal Society of Canada also played an active role in pressing the government to take action.

Prince was the chairman of the Committee, and on April 20, 1898, the Committee presented a 'memorial' to the Minister requesting establishment of a marine station on the Atlantic coast. Among the items in the memorial was one stating "that while the station remain a government institution, the administration be vested in a special Board consisting of one or more representatives from the Department of Marine and Fisheries and one representative from each of the universities in support of this petition." The proposal was accepted by Parliament on June 10, 1898, and the Minister appointed Prince to represent the Department on the special Board, called the Board of Management of the Marine Biological Station of Canada. Prince became its first chairman.

Thus began the Board concept of managing government research. The Board of Management became, by Act of Parliament, the Biological Board of Canada in 1912 and the Fisheries Research Board of Canada in 1937. In the meantime, the idea spread and formed the basis for the National Research Council of Canada in 1917 and the Defence Research Board in 1947. Time has shown the capacity of this system of research administration to nurture sound science through the counsel of scientists' peers and to allow recruitment and advancement of the best scientists with minimum bureaucratic procedures.



In the entrance to the new George W. Taylor wing of the Pacific Biological Station, Nanaimo, hangs a portrait of its first Director. Pieces of historic scientific apparatus include the Rev. Mr. Taylor's microscope, built about 1830.

THE FIRST QUARTER CENTURY
E.E. Prince (1898–1921)

Prince lost no time in establishing a marine research station, which operated as a floating laboratory successively at four temporary locations on the Atlantic coast from 1899 to 1907. In 1908 permanent marine stations were opened at St. Andrews, N.B., and at Nanaimo, B.C., and pioneering freshwater studies were carried out in Georgian Bay from 1901 to 1913.

Biological Station, St. Andrews, N.B., the Board's first permanent establishment. The town and Passamaquoddy Bay lie in the background.

The Pacific Biological Station, Nanaimo, B.C. The recently completed Taylor Wing, standing partly in front of the main building which dates from 1949, is shown in this aerial view of the station complex. The research vessel G.B. Reed *is in the center foreground. The* A.P. Knight, *barge* Velella, *and* Caligus *are also alongside.*

Prince was chairman for almost one-third of the Board's history and the Board's accomplishments in this period were impressive. Studies by Canadian university scientists who were instrumental in the Board's formation significantly advanced our knowledge of the life histories and distributions of the main commercial fish species. Great strides were also made in identification of aquatic invertebrates, and there were beginnings on understanding the physical and chemical environments in which marine organisms live. Recognizing that research is not complete until the findings are published, Prince initiated a scientific journal in 1901 which has become one of the world's largest and most respected primary aquatic journals – the *Journal of the Fisheries Research Board of Canada.*

The long history of publication by Board Scientists is illustrated by the first issue of "Contributions", dated 1901, to the current issue of the Journal of the Fisheries Research Board of Canada. *The bound volumes contain all issues published under earlier names; the current series runs from Vol. 4, 1938, to the present Vol. 30.*

Conscious of the domination of research by academics, Prince became sensitive to the need for practical studies to benefit the fishing industry and to assist the government in managing the fisheries. He therefore encouraged practical studies and developed a flair for presenting scientific knowledge in a popular style. Debate on the practicality of the Board's research was to continue throughout the Board's history. In 1918 it led to a proposal for amalgamation of the Board with the Department, and although the Bill passed the House of Commons, it was blocked in the Senate through the influence of Board Member A. B. Macallum, who at the time was the first president of the National Research Council.

In the first decade of the century, Prince, as Commissioner of Fisheries, became increasingly involved in administrative matters, including the work of various newly established international fisheries commissions with the United States. Reorganization of the Department in 1909 permitted him to devote most of his time to scientific pursuits and he remained as chairman until 1921 and as a Board member until his death in 1936.

At the beginning of his chairmanship, Prince stated that the Board's primary objectives would be to increase existing knowledge of Atlantic fishes and other organisms and to give special attention to "the interests of the fishing population resident along our shores." His accomplishments far exceeded his initial hopes, with the spread of the Board's activities from the Atlantic to the Pacific Ocean.

Important in management of fish resources, fish counting fences provide data used to estimate population sizes. This fence has been used for counting migrant salmon on the Northwest Miramichi River since 1950.

ENLARGEMENT OF PERSPECTIVE WITH INITIATION OF TECHNOLOGICAL RESEARCH

A.P. Knight (1921–25)

Knight (Queen's University) was one of the original Board members in 1898, an active researcher, and a dominant figure throughout Prince's long chairmanship. At the beginning of his chairmanship, one of the shortest in the Board's history, Knight expressed determination to orient the Board towards more practical studies. His personal research covered many such fields, ranging from the effect of sawmill pollution on fish in the early years of the century to lobster studies that led to enactment of a government grading system during his regime. But Knight's greatest accomplishment was probably the establishment of technological stations at Halifax, N.S., and Prince Rupert, B. C., to study the biochemical and bacteriological problems associated with the processing of fish. During this period, industry representatives were for the first time appointed as Board members.

FRB Bulletins from the series that now number close to 190 titles.

Although maintaining the system of volunteer university investigators, Knight began a permanent Board staff and encouraged the initiative of station directors in proposing research programs. The first permanent employees were A. H. Leim at St. Andrews, who made major contributions on the biology of shad, fisheries technology, and fish taxonomy, and R. E. Foerster, at Nanaimo, who began the first intensive studies on the life history, propagation, and ecology of Pacific salmon – studies that continued for 40 years and made him a foremost international authority on this important group of commercial fishes. Much of their life work is contained in two significant monographs published as Bulletins of the Board in the 1960s – *Fishes of the Atlantic Coast of Canada* and *The Sockeye Salmon.*

ESTABLISHMENT OF PERMANENT STAFF AND DECREASE IN UNIVERSITY INFLUENCE

J.P. McMurrich (1926–34)

The chairmanship of McMurrich (University of Toronto) marked a clear shift from university dominance of Board research to that of government-employed scientists. This was accomplished in spite of the economic depression of the 1930s, which resulted in the Board's budget being reduced from $400,000 in 1930 to less than $200,000 in 1933.

But retrenchment gave way to a quality of research, a diversity of effort, and a sense of purpose not known before. Unlike the volunteer university scientists, the permanent staff looked to the Board for their future careers; they were not tied to a university that provided their salaries. Hence they developed a type of specialization in research that characterized the Board for almost three decades. They made the first frontal attack on many urgent biological and oceanographic problems about which knowledge was scarce or nonexistent, and they grappled seriously with the numerous biochemical and bacteriological difficulties involved in processing fish products. The scene was set for the much more sophisticated research of the future.

Former directors of the Nanaimo and Prince Rupert stations included in this old snapshot (1927) of the Board's investigators on the west coast are (from right, sitting) Drs. D.B. Finn and W.A. Clemens, (standing) Drs. R.E. Foerster and H.N. Brocklesby.

In this short account it is not possible to identify the numerous scientists who made the Board a major scientific institution. However, the handful of scientists recruited as permanent employees in the McMurrich period deserve special mention. Their individual accomplishments, leadership, and dedication sparked the Board's productivity of the following half century. Among them were B. E. Bailey, S. A. Beatty, H. N. Brocklesby, N. M. Carter, W. A. Clemens, D. B. Finn, H. B. Hachey, J. L. Hart, E. Hess, R. A. McKenzie, A. W. H. Needler, A. L. Pritchard, W. E. Ricker, M. W. Smith, W. Templeman, A. L. Tester, J. P. Tully, H. C. White, and O. C. Young.

One scientist, A. G. Huntsman, towered above all others in this period, and indeed his brilliant mind was a major force throughout most of the Board's history. His active association with the Board started with the Georgian Bay Biological Station in 1904 and continued into the mid 1950s. In recent years, until his death in 1973 at the age of 89, he spent his summers in St. Andrews taking every opportunity to discuss with scientists his views on fisheries research. Huntsman investigated virtually every area of aquatic science, had practical ideas that were decades ahead of his time, was director of two stations (St. Andrews, 1911-33, and Halifax, 1924-29) and Editor of the Board's publications (1933-49), and influenced countless students during his 50 years' association with the University of Toronto. Although never employed full-time by the Board, he was the significant link in this period of the Board's transition to a permanent staff.

Halifax Laboratory, on Halifax Harbour, N.S. This establishment was started in 1924, with that at Prince Rupert, as technological experimental stations.

STABILIZATION AND POSTWAR REVITALIZATION
A.T. Cameron (1934–47)

Cameron (University of Manitoba) began his chairmanship in the depth of the depression with reduced budgets, and it continued through the war years when staff was seriously depleted by military recruitment and low salaries. His leadership ended shortly after the war as a new generation of scientists entered the Board's employ.

The change in the Board's name in 1937 from the Biological Board of Canada to the Fisheries Research Board of Canada signified the shift in emphasis from university-directed research to government-oriented studies that had occurred during the McMurrich period. Little change took place in the nature of the research under Cameron. Classical biological studies on the commercial fish stocks continued at an accelerated pace, and the scope of the Board's activities broadened greatly. In 1936 a technological station was opened at Grande-Rivière, Quebec. The Board, the only government employer of oceanographers in Canada, initiated the advisory Joint Committee on Oceanography (later the Canadian Committee on Oceanography) in 1939 along with the National Research Council and other government departments and universities. Oceanographic Groups were established at St. Andrews and Nanaimo in 1947. In 1944, a freshwater station was established in Winnipeg, and a headquarters for biological research in the Arctic was set up in Montreal in 1946. In 1942 the Prince Rupert station was moved to Vancouver, mainly to be closer to the head offices of the west coast fishing companies.

Cameron was a forceful chairman who kept a tight rein on the directors, and reduced Huntsman's long dominance in Board affairs. He devoted a large part of his time and energy to Board business and eventually died in its service. It was becoming clear that there was need for a full-time, government-employed chairman.

The Vancouver Laboratory on the University of British Columbia campus was located in Vancouver in 1942 as a continuation of the former Pacific Fisheries Experimental Station, established at Prince Rupert in 1924.

THE JOINT CHAIRMANSHIP
G.B. Reed and J.R. Dymond (1947–53)

By 1947 the onerous responsibility of the chairmanship led to the sharing of the work between the chairman, Reed (Queen's University), and the vice-chairman, Dymond (University of Toronto), with the former concentrating on technological research and the latter on biological studies.

This period saw the establishment of a permanent Ottawa headquarters. During the 1940s the Board's administration was carried out by D. H. Sutherland, an employee of the Department of Fisheries who was Assistant Deputy Minister in the latter part of the decade, but this part-time arrangement became inadequate to cope with the rapidly growing administrative requirements of the Board. Hence a headquarters unit was established in 1951 through the secondment of staff members A. W. H. Needler (later replaced by C. J. Kerswill) and O. C. Young, and the employment of a full-time executive assistant, H. A. Wilson. Also, W. E. Ricker after 11 years of university association rejoined the Board as its first full-time editor, attached to the headquarters staff.

This period was marked by increased effort on assessment of commercial fish species on both coasts, stimulated in part by the formation in 1949 of the International Commission for the Northwest Atlantic Fisheries. It was at this time that the first serious attention was given to unutilized species, fish physiology and behavior, fish parasites, and fishing methods. Increased study was undertaken on quality and nutritive value of fish products, improved processing methods, and fish by-products. Shortly after Newfoundland entered Confederation in 1949, the St. John's biological station was assimilated into the Board's Atlantic coast activities and a substation of the Halifax station was established in St. John's in the technological field.

St. John's Biological Station, Newfoundland, came into the FRB organization in 1949, and is housed in the building for fisheries research completed in 1940 by the Newfoundland government.

The Reed-Dymond chairmanship was an easygoing type of leadership, in contrast to the more autocratic imprints of both the preceding and the following regimes. It was also a period in which the powers of station directors grew, along with a resentment and fear by directors and staff of greater control by the Ottawa headquarters.

UNPRECEDENTED GROWTH AND INTERNATIONAL RECOGNITION

J.L. Kask (1953–63)

With a doubling of the Board's budget from one to two million dollars between 1948 and 1953, the time had come for a salaried full-time chairman and chief executive officer. Kask, a Canadian with a long record of service in research and development of aquatic resources with United States organizations and with the Food and Agriculture Organization of the United Nations, was chosen for the job.

His first concern was that the directors were working more or less independently in geographic isolation, and he set out to make the Board an integrated national organization. He acted quickly and within two years the directors of the four major stations were replaced or relocated. At the same time he increased the headquarters staff from 4 to 12 people but, maintaining his belief in a small efficient staff, he permitted it to grow only to 18 by the end of his 10-year regime. Also

he established five-year terms for Board members, who previously had often served indefinitely, and he developed regional advisory committees which differed from their previous counterparts in that their main responsibility was to assess program priorities rather than to handle administrative details.

This period saw many major changes in Board policy. The technological stations broadened their perspective of fish products and processing by moving into the field of physiological, biochemical, and bacteriological studies of live animals, and this trend continued under later chairmen with impressive results. Studies on marine mammals were centralized in the new Arctic Biological Station at Ste. Anne de Bellevue, Quebec, and freshwater research was moved from Winnipeg to London, Ontario, because of the dominant position of the Great Lakes in Canadian freshwater production and the threat of the sea lamprey. In the meantime, physical oceanography, which had been the Board's prerogative for over half a century, was largely handed over to another government department to prevent, as Kask has stated, "the oceanographic tail from wagging the fisheries dog."

The Arctic Biological Station has been located at Ste. Anne de Bellevue, Que. since 1955. It investigates the fisheries resources of the Canadian Arctic.

The Kask decade witnessed a significant increase in the activities of established international fisheries commissions of direct interest to Canada, such as those concerned with northwest Atlantic fisheries, whales, and fur seals. In addition, Canada ratified the International North Pacific Fisheries Convention and the Great Lakes Fishery Convention. The Board was the only source of Canadian knowledge on the stocks involved in these commissions and an increased amount of effort of the Board's staff was directed towards providing scientific information and advice to the Canadian Commissioners. These international obligations led to expanded programs of new and imaginative research.

An entangled narwhal is extricated from a net at Koluktoo Bay, northern Baffin Island.

During this same period the activities of the Fish Culture Branch of the Department of Fisheries increased rapidly to deal with practical stream enhancement projects and the fisheries aspects of major industrial development programs. As the technical staff, including engineers and biologists, of the Branch increased, research programs were conducted similar to many traditionally undertaken by Board scientists. It was difficult to clearly define the areas of responsibility of the two groups and differences of opinion occurred. The inability to bring research and development together as a single Board mandate was Kask's biggest disappointment.

Kask proved to be a strong and able administrator and, as the Board's total staff more than doubled to over 800 people, the decade became one of the most noteworthy periods in the Board's history. The high morale and productivity of Board scientists gave a status to Canadian aquatic research that was the envy of the world, a position it has maintained ever since.

THE INTERIM CHAIRMAN
W.E. Ricker (1963—64)

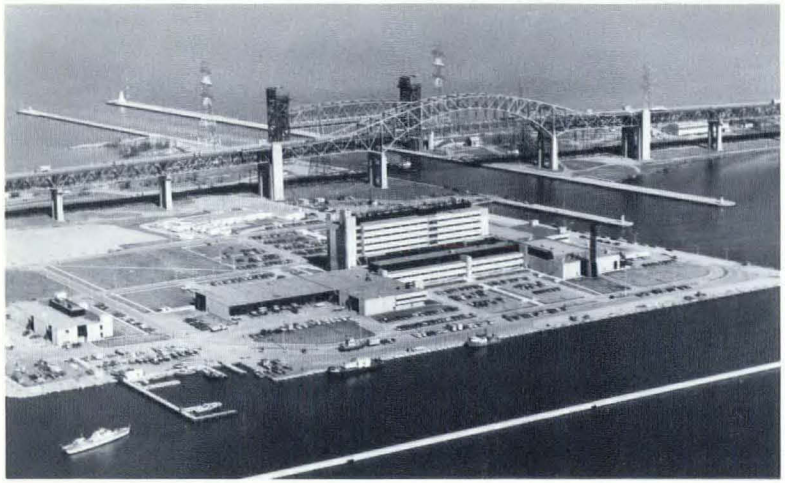
There was no obvious candidate to assume the Board's seventh chairmanship, and Ricker, the Board's Chief Scientist, who had served in numerous senior staff capacities, agreed to be acting chairman until a successor was appointed. He ably carried the work of the Board through the year of this interim leadership.

Ricker, who retires in the year of the Board's 75th anniversary, is a remarkable scientist who has earned the respect of colleagues around the world. He has been called the Board's "man for all seasons," having served effectively in all senior Board positions. His scientific versatility compares only with that of Huntsman. His major thrusts have been in the dynamics of fish populations and Pacific salmon biology, but he has made significant contributions to aquatic entomology, lake circulation theory, fish transplants, and the development of primary scientific publication. Countless scientists have benefitted by his stimulation, and his advice has been sought around the world. Probably more than any other individual, he has been responsible for improving communication in aquatic science between the USSR and western countries, through his efforts in promoting knowledge of the Russian language, development of publication exchange agreements, and involvement with several international commissions and agencies.

INCREASE IN INFLUENCE OF UNIVERSITIES
F.R. Hayes (1964—69)

Two major policy changes characterize the chairmanship of Hayes (Dalhousie University). One was the great stimulus to involvement of universities in Board activities by establishing a grants program to develop centers of excellence in aquatic science in Canadian universities, by encouraging universities to use Board facilities, by promoting graduate student and postdoctoral fellowships at Board stations, and by encouraging Board scientists to accept honorary university appointments. During this period, the Board promoted the establishment of the Huntsman Marine Laboratory at St. Andrews in 1970, jointly sponsored by the Board and a consortium of eastern Canadian universities. Universities had not been as prominent in Board affairs since the time of Knight and McMurrich.

The other policy change, not entirely unrelated, was the increase in influence of Board members. In contrast to Kask, who permitted staff to dominate Board meetings, Hayes held most meetings in camera with staff participating only when requested.

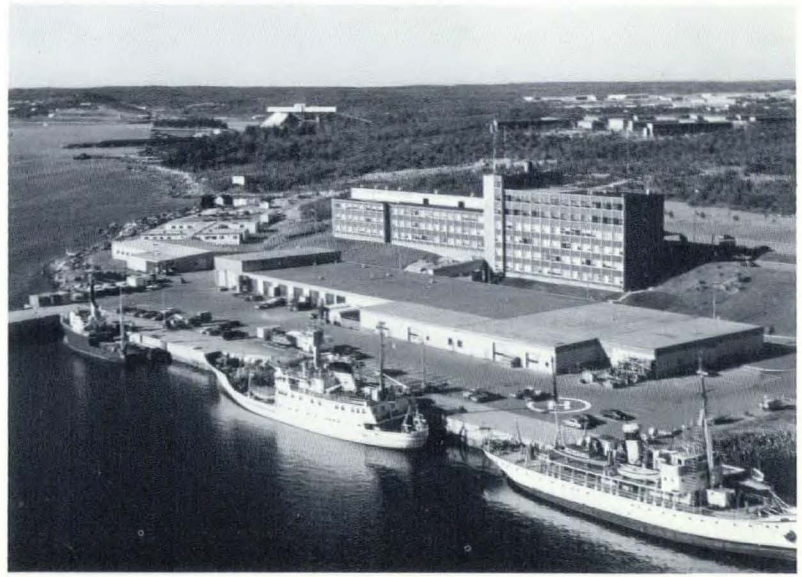


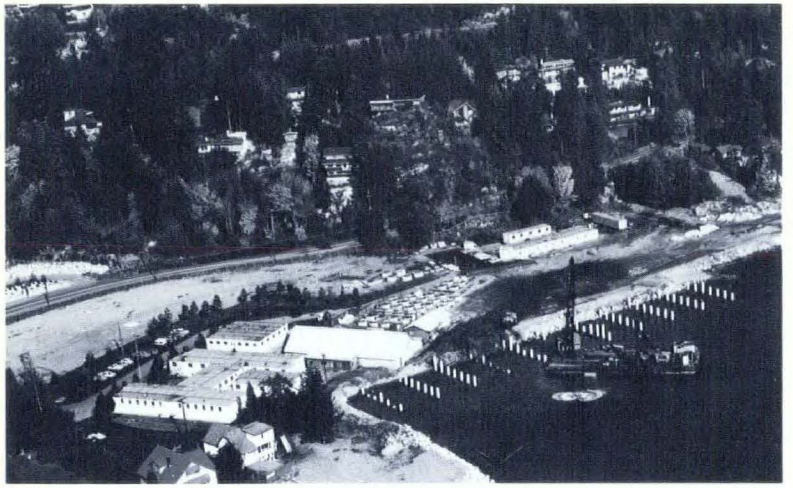
The Great Lakes Biolimnology Laboratory at Burlington, Ont., occupies part of the Canada Centre for Inland Waters complex.

The growing awareness of water pollution and lake eutrophication, and the emerging interest in resource enhancement and aquaculture had a profound effect on the nature of the Board's research in this period. These new urgencies led to an unprecedented diversity in the Board's research, and a further shift away from classical biology to experimental investigation and the ecosystem approach to studying aquatic life. The research thrust was directed towards productivity studies, effects of heavy metals and organochlorine pesticides on aquatic organisms, fish diseases, and the role of hormones in fish physiology. These studies were accompanied by development of highly sophisticated water facilities in the laboratories. Along with these developments descriptive and survey biology, a major component of the Board's effort from the beginning, was de-emphasized, although the output of information in this area did not lessen because of the rise in use of the computer.

This period saw the traditional functional distinction between the biological and technological laboratories practically disappear as most laboratories encompassed research in numerous disciplines. This was clearly reflected in the establishment of the multidisciplinary Freshwater Institute on the University of Manitoba campus in 1966. At the same time the London station was closed, and shortly afterwards the Board's first laboratory on the Great Lakes was established at Burlington, Ontario, as a substation of the Institute. This multidisciplinary trend was also evident, but less complete, in the planning of the Marine Ecology Laboratory at the Bedford Institute in Dartmouth, N. S. (1968) and the Pacific Environment Institute in West Vancouver, B.C. (opened 1970), with the former concentrating on marine productivity studies and the latter on antipollution research.

Marine Ecology Laboratory occupies part of the Bedford Institute's main building at Dartmouth, N.S. The MEL Fish Laboratory and trailer complex are at left middle ground.





Located in West Vancouver, B.C., the Pacific Environment Institute is in trailer accommodation pending construction of permanent quarters. The marginal wharf and float were completed by September 1972.

During this period, government policy dictated the loss of the Board's separate employer status, a feature that many thought was significant in engendering the high calibre of Board scientists. Strong objection to this move by Hayes, Board members, and directors was to no avail. At the same time, government financial conditions and a shift in public demand from natural science studies to sociological and economic research caused a virtual halt to Board expansion. And a series of broad government administrative changes began with the merger of the Department of Fisheries and the federal forestry service, accompanied by a policy shift towards 'mission-oriented' programs. These were disquieting times for the Board with more changes clearly in sight, but Hayes, with the able assistance of the Deputy Chairman, W. R. Martin, who served in this capacity over four regimes, left the chairmanship with the quality of Board research undiminished.

FUNCTIONAL CHANGE FOR THE BOARD

J.R. Weir (1969–)

Weir assumed the chairmanship after a distinguished career in agriculture, in which field he rose to dean of that faculty at the University of Manitoba. His first major contact with government was as a member of the Royal Commission on Government Organization (Glassco Commission) and later he was director of the government's Science Secretariat in the Privy Council office. Weir's appointment as chairman was in conjunction with the post of Special Advisor in Renewable Resources to the Minister, signifying another swing of the pendulum from university to government influence. And in 1971 he became Assistant Deputy Minister of Fisheries in the new Department of the Environment, while continuing as the Board's Chairman. He had the same total responsibility for federal fisheries activities as Prince, the first chairman, had in the first decade of the Board's existence.

Scientists involved in aquaculture development have made extensive studies on the suitability of prairie "pothole" lakes for raising rainbow trout.

From 1969 to 1972 the general pattern of Board research established under Hayes continued but with increased diversification of effort aimed at integrated attacks on all components of Canadian aquatic life, and at recognition of the fact that Canada, with the longest coastline of any country, shares the world ocean with other nations. The former led to greatly increased efforts on bringing research, development, and management together, to the partial regionalization of research administration by the appointment of coordinators on the Atlantic and Pacific coasts, and to the employment of socio-economists. The latter resulted in the participation of Board scientists in a much wider range of international fisheries work, following Canada's joining two international tuna commissions and the International Council for the Exploration of the Seas.

The winds of change continued. On the eve of its seventy-fifth anniversary, January 1, 1973, the Board became an advisory body as its research stations were integrated into the Fisheries and Marine Service of the Department of the Environment. The Board now has a new role with broad responsibility for assessment of all research and development undertaken in the federal fisheries and marine field. Weir, who continues as Chairman, is enthusiastic over the Board's new challenge. He sees it embarking on an "energetic program of objective analysis of the research work done in the entire Service, free of the administrative details of operating laboratories."

EPILOGUE

As the Board enters the final quarter of its first century, some see it as vital as ever to the quality of Canadian aquatic research. Others are less optimistic about the future and wonder if sound science and the complex requirements of modern fisheries management can co-exist without the buffer provided by the original Board concept of managing research.

No one, however, questions the value of the Board's monumental accomplishments over the past 75 years.

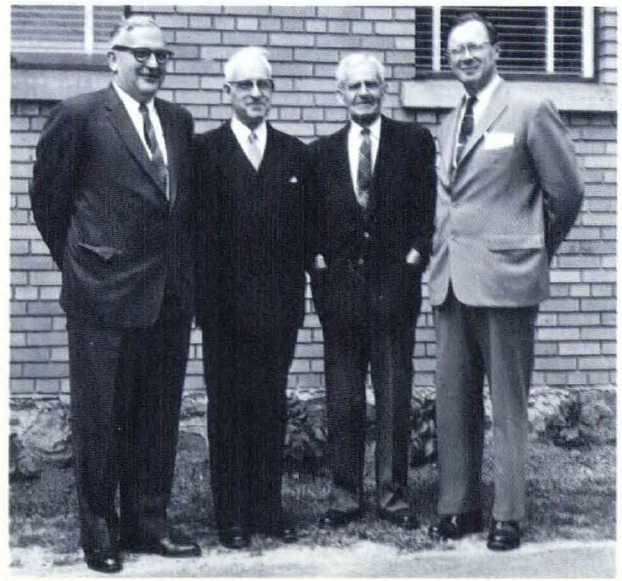
This brochure was written by J. C. Stevenson with the advice of numerous people, and it was produced by the Office of the Editor.

Editors of Board Publications

E. E. Prince	1901–1918
J. P. McMurrich	1918–1924
A. Willey	1924–1926
A. H. Leim	1926–1929
A. G. Huntsman	1929–1948*
W. E. Ricker	1950–1962
J. C. Stevenson	1962–

*The Chairman and Vice-Chairman acted as Editors from 1948–50.

Former directors of the St. Andrews Biological Station (from left): Drs. A.W.H. Needler, A.H. Leim, A.G. Huntsman, and J.L. Hart.



PRINCIPAL ESTABLISHMENTS OF THE FISHERIES RESEARCH BOARD AND DIRECTORS

Past and Present (including Curators, Program Heads, and major "Acting" appointments.)
Establishments are shown under 1972 titles, with original title beneath.

Marine Biological Station (portable) 1899–1907

J. Stafford

Georgian Bay Biological Station 1904–1913

B. A. Bensley
E. M. Walker
J. W. Mavor

FRB Biological Station, St. Andrews, New Brunswick

Atlantic Biological Station (St. Andrews)

D. P. Penhallow
A. G. Huntsman
A. H. Leim
A. W. H. Needler
J. L. Hart
J. M. Anderson
F. D. McCracken
R. O. Brinkhurst

FRB Biological Station, Nanaimo, British Columbia

Pacific Biological Station (Nanaimo)

G. W. Taylor
C. McL. Fraser
W. A. Clemens
R. E. Foerster
J. L. Hart
A. W. H. Needler
P. A. Larkin
K. R. Allen
K. S. Ketchen
W. E. Johnson

FRB Vancouver Laboratory, Vancouver, British Columbia

Fisheries Experimental Station (Pacific), Prince Rupert

W. A. Clemens
D. B. Finn
H. N. Brocklesby
N. M. Carter
H. L. A. Tarr
N. Tomlinson
W. E. Razzell

FRB Halifax Laboratory, Halifax, Nova Scotia

Fisheries Experimental Station (Atlantic), Halifax

A. G. Huntsman
A. H. Leim
D. B. Finn
A. Labrie
S. A. Beatty
H. Fougère
D. R. Idler
J. E. Stewart
E. G. Bligh

Gaspé Fisheries Experimental Station, Grande Rivière

A. Labrie
A. Nadeau
H. Fougère
P. Dussault
F. W. VanKlaveren
R. Legendre

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