



Making Waves

*The early days of Oceanography
at Dalhousie University*



DALHOUSIE
UNIVERSITY

Inspiring Minds

oceanography.dal.ca

Pete Wangersky



Roger Pocklington



Oceanography History

Ocean research plays a part throughout much of Dalhousie University. This year we celebrate the 40th anniversary of the Department of Oceanography.

In the beginning

Dalhousie's Institute of Oceanography was founded in 1959, partly on the initiative of Dr. F. Ronald Hayes, a biology professor who later founded and directed the School of Resource and Environmental Studies. The federal government realized the need for oceanography research and training in Canada and sponsored a program of graduate training in oceanography at the University of British Columbia in 1949. By 1959, as government interest in oceanography increased further, it was recognized there was a need to expand to the East Coast.



*(left) 1941, May
L.V. Warthington, Dean Bumpus,
Fritz Fuglister, Gordon Riley on Atlantis*



*(right) 1966
Sifford Pearre, Kai Mai Pond in
the Bedford Basin*

Through the Joint Committee on Oceanography – which included representatives from the Royal Canadian Navy, the Fisheries Research Board, the National Research Council, the Defence Research Board and the Canadian Hydrographic Service – an appeal to the National Research Council of Canada resulted in a grant of \$900,000. With these funds, the Institute of Oceanography at Dalhousie was established. According to an article in the journal *Nature*, the Royal Canadian Navy, the Fisheries Research Board and other agencies would offer opportunities at sea for graduate oceanographers. All branches of marine science would come under investigation. Dr. Hayes was appointed director of the Institute when it was founded in 1959.

For a long time, this annual grant provided a cushion of funding for the faculty members within the Institute. Early faculty members have described the initial years of the Institute as being an idyllic setting of sufficient research funding and enough support from the university to keep things going in the classroom. Faculty members were hired to do research and teach at the graduate level in marine branches of biology, chemistry, geology and physics.



*(left) 1967
Unknown, Carl Boyd,
Unknown, Jerry Dale,
Unknown, on Hudson*



*(right) 1966
Joleen Aldous, Sifford Pearre,
Manu Raheja, Walton Watt,
Peter Eaton at Hayes Pit Cave*

There were some challenges in acquiring staff. One faculty member and his wife endured two snowstorms their first winter in 1960-61, and left – enough was enough! Carl Boyd filled the position in February 1962 and wasn't swayed by the challenging winter he faced.

The faculty members were part of the Institute, but were appointed members of science departments such as Biology, Chemistry, Geology and Physics. At times the divided authority over the faculty members caused some tension and challenges, but the team of oceanographers worked well together. The fact that it was a small group made the oceanographers closer – they did research together, and saw each other regularly. Even though the Institute's members were scattered throughout a variety of buildings on campus, there was also a social aspect that kept the group cohesive, including canoe trips, beer brewing, Saturday night parties, and other activities that brought faculty and graduate students together outside of research.



1968

*Chung Il Choi, Pete Wangersky
at Moose Cove Lake*



*(right) 1968
Oceanography picnic at
Carl Boyd's house on Oak Lane*

There was some turnover of faculty members during the early years. Chemist Alan Mills returned to England, so the name of Dr. Peter Wangersky, a chemical oceanographer from Yale, was brought up as a possible replacement. When the opportunity was discussed with him, he mentioned his colleague, Gordon Riley, as being another person who might be interested in joining the Institute of Oceanography. Around the same time, Ron Hayes left to go to Ottawa, so it was proposed that Peter Wangersky and Gordon Riley would be brought in, Wangersky as chemical oceanographer and Gordon Riley as replacement director. Both Drs. Wangersky and Riley came from Yale to Dalhousie in 1965, and started the modern era of oceanography at Dalhousie.

In the early days of the Institute of Oceanography, facilities for the Oceanography faculty members were “terrible,” according to Carl Boyd. Offices were scattered throughout the campus – the Dunn Building, the Chemistry Building, and the Forrest Building. Research facilities were sparse, and space was tight for the faculty members and their graduate students. Equipment was also sorely lacking. There were no facilities to keep fish and other aquatic organisms alive.



*(left) 1967
Pete Wangersky, Bob Cooke,
Roger Pocklington on Baffin*



*(right) 1967
Roger Pocklington, Bob Cooke on Baffin*

Because of these problems, new buildings and facilities were soon discussed, including a large seawater facility that came to be called the Aquatron. Carl Boyd prepared a proposal to the National Research Council for “something a little over \$1 million,” Boyd says, for the seawater facility. These plans were developed over a two year period with the support of university president Henry Hicks. One million dollars was awarded, and this was eventually parlayed to \$2 million through NRC. President Hicks took the \$2 million to the Atlantic Development Board, who saw this as a potential stimulus to business in oceanography and marine science in the region and contributed a further \$4 million. This success was then presented to the Province of Nova Scotia which was asked for \$12 million to help build facilities for oceanography, psychology and biology. The provincial government agreed, which brought the total to \$18 million to build the complex. The resulting Life Sciences Centre was completed in 1971.



*(left) 1973
Chris Garrett (red jacket)
Labrador*



*(right) Oct 1973
Ed Anderson, plankton collection.
Labrador*

In 1971, mainly for administrative reasons, and at the urging of Gordon Riley, the Institute was reinstated as a graduate Department of Oceanography. This coincided with the opening of the Life Sciences Centre and provided faculty with some independence of the other science departments. It did eventually lead to some resentment that Oceanography faculty didn't do much undergraduate teaching, although its graduate programme went from strength to strength. The transition from Institute to Department happened at a time when the university was able to continue expanding. New faculty members were gained in Oceanography and throughout the university until the recession in the late 1980s.

The Aquatron

For the past 40 years the Aquatron has been a unique facility in a land-based university. Its design, overseen mainly by Carl Boyd, was based on similar features in other marine research centres, but seldom on the scale seen at Dalhousie. In particular, the tower tank and pool tank allow work on the water column and on marine fish and mammals that are difficult to do elsewhere in one laboratory.



*(left) Oct 1973
Ed Horne (tall with toque),
Chris Garrett (right).
Nain Bay, Labrador*



(right) Bob Fournier (r)

Department Chairs

The strength of the Institute and later the Department has come from its heads and chairs, as well as its faculty members. Gordon Riley, the greatest biological oceanographer of his time, and one of the best chairs in the department's history, was respected by everyone from the beginning. He established the aspirations that still motivate the Department. Riley's standards, his example, and the quality of his scientific work remain the gold standards for oceanography at Dalhousie, and indeed throughout the world of the marine sciences in universities.

Moving Forward

The story of Oceanography at Dalhousie University doesn't end at this point. Beyond these early years the Department of Oceanography, its faculty and students continue their research, and ocean research continues to move forward. It remains a leader in oceanography.



*(left) Bob Hessler, Allan Michael,
Fred Cooke, Eric Mills
Cape Horn - Hudson 70*



*Sheila Byers
Benthic Ecology*

Dalhousie Oceanography Timeline

- 1959 Institute of Oceanography begins. F. Ronald Hayes, director
- 1963 Concept for Aquatron Lab begun by Ron Hayes, Walter Trost and Carl Boyd
- 1964 Ron Hayes leaves. Ewart Blanchard, acting director.
- 1965 Gordon Riley becomes director
- 1971 Life Sciences Centre built. Department of Oceanography begins with Gordon Riley, chair
- 1974 Opening of Aquatron Lab. Carl Boyd, director.
- 1976 Gordon Riley, retires
- 1977 Peter Wangersky, chair. 14 faculty and 1 adjunct.
- 1981 Bob Fournier, chair. 15 faculty and 2 adjuncts.
- 1982 Ron Hayes dies.
- 1985 Tony Bowen, chair. 17 faculty and 2 adjuncts. Gordon Riley dies on Oct 7
- 1988 Ocean Productivity Enhancement Network (OPEN) begins.
- 1989 Joint Atmospheric Science program with Physics begins.
- 1990 Eric Mills, chair. 22 faculty and 6 adjuncts
- 1993 Tony Bowen, chair. 20 faculty and 18 adjuncts
- 1997 Canadian Foundation for Innovation (CFI) begins.
- 1999 Bob Moore, chair. 24 faculty and 16 adjuncts
- 2000 Canada Research Chairs (CRC) program begins.
- 2001 Canadian SOLAS program begins. Bill Miller, director
- 2002 Centre for Marine Environmental Prediction (CMEP) begins. John Cullen, director.
- 2003 Bernie Boudreau, chair. 21 faculty and 16 adjuncts
- 2008 Keith Loudon, chair. 24 faculty and 18 adjuncts.
- 2010 Major refit of Life Sciences Centre
- 2011 Marlon Lewis, chair. CERC in Ocean Science and Technology begins. Start construction of Ocean Excellence Centre.



*(left) 1983
Robert Moore with Douglas Wallace on
Canadian Expedition to Study the Alpha
Ridge (CESAR)*



*(right) Route of
Hudson, 1970*



A team from Oceanography board the CCGS Amundsen as part of an international scientific collaboration in the Northwest Territories.



Tower tank of the aquatron



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