

## Richard James Beamish



Dick Beamish is a major international figure in fisheries science. The vitality he brings to an organization and energy he devotes to ensuring its success is boundless. Many organizations have benefited from his participation. His contributions to PICES are known to us all, but he has worked with and influenced the direction of many international organizations, including the International North Pacific Fisheries Commission (INPFC), the North Pacific Anadromous Fisheries Commission (NPAFC), and the International Pacific Halibut Commission (IPHC) to name a few. To describe Dick in a capsule form one can call him an intellectual maverick. It is his propensity for independent thinking and his readiness to question and challenge the established “authorities” that has catapulted him from the files of pedestrian researchers into the unique position he now occupies in the world of fisheries research. He displayed his capacity for original thinking early as a postgraduate student, when he became one of the first pioneers who discovered and studied the phenomenon of acid rain.

After completing his PhD in Zoology at the University of Toronto (1969), Dick headed to Woods Hole Oceanographic Institute as a postdoctoral fellow. He conducted investigations on myctophids and other mesopelagic fishes of the Atlantic, then as now, a little-studied component of the ocean ecosystem. While there he was a part of the scientific team aboard the C.S.S. Hudson, the first vessel to circumnavigate the America’s, and participated in deep-diving submarine experiments aboard the DSV Alvin. It was during these cruises that Dick developed his love of the ocean and his belief that “to understand how it worked you had to go out and study it”.

In 1971, Dick accepted a position as Research Scientist with the Canadian Department of the Environment at the brand new Freshwater Institute in Winnipeg (a city he still considers his second home). Over the next few years he investigated the effects of various pollutants from point-source emissions (mines) on fish populations in the natural environment. At this time he completed his work on “Acid Rain”, started in his last year at the University of Toronto. In 1972, he co-authored the initial scientific observations linking acidification of Canadian lakes to decreasing fish populations. This research set the stage for the general recognition of this major pollution problem and promoted international co-operation and research in this field.

While in Winnipeg he came to the attention of Dr. W. (Wally) Johnson, Director of the Freshwater Institute and, when Dr. Johnson accepted the position of Director of the Pacific Biological Station, he soon recruited Dick to the west coast. Placed in the ranks of the Groundfish Program scientists, Dick almost immediately became recognized for the originality of his approach to the field, no less than for his capacity for ruffling feathers of the more orthodox practitioners of the subject. It was obvious that he did not fit the role imposed on him by his “job description”. After a less-than-decent interval of time, he was asked to take over the leadership of the program. Characteristically, Dick balked at the proposal at first, protesting that he was not ready to become a supervisor. His reluctance overcome, he took over the Program and in no time at all made of it a unit all to itself, run by him like that other famous seafarer - Captain Bligh - in the best possible sense. The Program was welded into a team with many features that distinguish a family. The team spirit extended beyond the official duties of its members. The “groundfishers” had their own common bank account, which they used to finance their social activities. The climax of these activities was an annual yachting excursion during which Dick was ceremoniously tossed over the side - fully clothed. It became obvious that he was able not only to demand a lot from his subordinates but also to command their respect and slightly amused affection.

In Nanaimo, Dick continued his rigorous research activities, initially studying the biology of fishes in the Strait of Georgia, and groundfish biology and stock assessment of west coast stocks. In particular, his contributions to age determination methodology,



*Checking the catch (early 70's)*



*First day on the job as Director, PBS (1980)*

validation of techniques and sources of bias are fundamental to our concept of fish life histories and population dynamics. This work led to the re-evaluation of fisheries management strategies both in North America and abroad. At this time Dick developed an interest in lampreys and, through his interest in systematics, has significantly advanced the understanding of the evolution of primitive fishes.

While continuing his own research, the time had come for Dick to take a more active role in the activities of others. In 1980 he was appointed Director of the Pacific Biological Station. Over the next 12 years (except for a 6-month stint as a Director General in Ottawa) Dick provided dynamic scientific leadership. He initiated new programs, which now enjoy an international reputation for excellence, and increased the scientific productivity of the Station. He increased scientific services provided to the management sector and to industry and stimulated attention to developments for the future, including aquaculture and bioengineering projects. He was especially effective in fostering links with universities and colleges, throughout British Columbia and elsewhere in Canada.

During his years as Director his skills as an administrator were surpassed only by his skill at getting the most out of people. During those years it was not unusual to find staff at the Station evenings and weekends, working on some special "Beamish" project. All for free of course. As most in PICES know, he has brought these same skills to this organization.

Although Dick has been involved in international activities for most of his career through INPFC, the Canada-U.S. Groundfish Committee, and other organizations, it was in the mid-1980's that he increased his efforts to stimulate international co-operation. This he has done in the Pacific Rim. In 1985, he initiated and became the chairman of the International Recruitment Investigation in the Sub-Arctic (IRIS) project. This initiative eventually led to an international symposium in 1988 on the effects of ocean variability on recruitment, which was co-sponsored by INPFC.

In 1990, Dick was appointed as a Commissioner of the International Pacific Halibut Commission. This was one of the first times a scientist has been asked to fill this role. Dick carried the same skills he shows in science into the activities of meeting with fishermen, managers, and the Commission staff. He encouraged the Commission staff to broaden its consideration of environmental events as driving forces in halibut population dynamics. Because of his concerns for careful stewardship of the halibut resource, Dick has acted to reduce bycatch mortality of halibut in non-directed fisheries in both the U.S. and Canada. Dick's relationship with the halibut industry has grown over his years as a Commissioner. Industry respects his commitment to resource management and his scientific initiatives concerning halibut. Beyond that, harvesters and processors have come to realize that Dick is approachable and responsive to their concerns. His appointment to a third term as a Commissioner clearly emphasizes the wide recognition of his skills in this international arena.



*Dick in charge – executive meeting (1986)*



*Helicopter ride to Kuril Lake (Kamchatka) with Dr. W.E. Ricker (1992)*



*With Drs. Leo Margolis (centre) and Don Noakes (left) on board the research ship W. E. Ricker (1996)*

He was also instrumental in the formative meetings leading to the development of a North Pacific Marine

Science Organization, which became known as PICES. Since its inception Dick has been an active member of PICES, striving to ensure that the multidisciplinary goals of this organization are reached. The first formal meeting of PICES was held in conjunction with a symposium that Dick organized on climate change and northern fish populations. He has promoted the fisheries component of PICES through his membership on the Fisheries Science (FIS) committee and has worked to ensure close ties between member nations in the study of fish and fisheries related issues. Most recently, as co-chairman of Basin Studies Task Team (BASS) of the PICES-GLOBEC Climate Change and Carrying Capacity Program (CCCC), he is leading discussions on all aspects of meteorological and physical forcing and the resulting ecosystem dynamics of the important “basins” in the North Pacific. He took a lead role in organizing the Science Board Symposium (PICES 1997 meeting) on “Ecosystem Dynamics in the Eastern and Western Gyres of the Subarctic Pacific”, and was willing to return to his post-doc interests in myctophid fishes when unable to find anyone else to speak on the topic. This symposium brought together, for the first time, experts in many disciplines to examine available information on the dynamics of these two gyres specifically to examine differences in responses of these two areas. The resulting proceedings will become the textbook for future studies.

In addition to his work within international organizations, Dick has promoted trans-Pacific understanding by means of personal contacts between research workers. He has organized several meetings in Canada, and over the years has led several “groups” to Japan and Russia. Most notably, he organized and led several scientists and industry representatives on the first fisheries “expedition” to Vladivostok and Petropavlovsk-Kamchatki, after those ports were opened to Westerners.

Dick is just as active at regional and local levels. He is a member of the Georgia Basin Marine Science Panel and co-author of their report “The Shared Marine Waters of British Columbia and Washington”, which reviewed the current conditions of, and trends in, the marine waters of the Strait of Georgia, Strait of Juan de Fuca, and Puget Sound. This report identified areas that required immediate and joint action and provided recommendations, which will form the basis for





*PICES Sixth Annual Meeting (1997)*



*With Sandy McFarlane looking for “research funds” in Vladivostok (1995)*



*Holidays with daughter Heather – electrofishing for lamprey (1984)*

development of this sensitive area. He is chairman of the B.C./Washington panel on protection of marine

animals and plants in the shared waters of the Georgia Basin. He co-authored “Shared Waters: the Vulnerable Inland Sea of British Columbia and Washington” which provides recommendations to both governments on actions to halt or reduce the deterioration of these waters. He is an Affiliate Professor in Fisheries and Aquaculture at Malaspina University College (University of Victoria) and teaches a course on Fisheries Management which has become one of the most popular with students over the last few years. He is a member of the Board of the Morrell Sanctuary where goals are to preserve the unique ecosystems of this site for the enjoyment and education of the public.

He is founder and president of the Fisheries Science Documentary Society, which produces videos portraying biographies of some better known researchers in various aspects of fisheries science. He was executive producer for an award winning video on the life of one of Canada’s more famous fisheries scientist, Dr. W. E. (Bill) Ricker. This was especially gratifying, as Dr. Ricker has been both friend and mentor to Dick since they met in the early 1970’s. Bill and Dick share the same passion for science. One recent December 31<sup>st</sup>, Bill remarked to Dick that it was the last day of the year to discover “something new”. Dick shares the same enthusiasm for scientific discovery and this has been a trademark of his career.

Through all this he has maintained his strong record of research activity. His papers ranged from biochemical and cytological studies of marine and freshwater fishes to acidification of freshwater lakes and resulting effects on fish populations. He has published on fishing gear design and the systematics and evolution of lamprey. His papers on age determination methodology and biology of marine fishes led to major changes throughout the world on how we study, and manage fish populations. For the last decade, his major interest has been the relationship between climate, ocean productivity and fish dynamics. He has published numerous papers linking climate change to salmon and marine fish production. Currently he is studying the mechanisms underlying this relationship. In all he has published more than 150 peer-reviewed scientific papers. He has also served as editor of two books on climate change and fish populations. Quite some achievements, especially considering he started out his university career in



*In the garden (1995)*

medicine. Luckily, a few summers at St. Andrews Biological Station working on Atlantic fishes changed his direction. Some of us wonder what he might have accomplished had he chosen a career in medical research.

Although it doesn't seem possible, Dick does have moments of leisure. In true fashion he fills them. He is an avid gardener and he spends hours (or his wife Ann does) tending his 100's of Rhododendrons, Dahlias and just about every other plant or tree which fill his property in Nanaimo. His knowledge on rhododendrons is renowned and even professional gardeners seek his advice. He is a gourmet chef (long-time member of *Chine de rotisseur*), and chocolate maker, which he makes for every occasion. He collects stamps, specializing in Canadian and Japanese; and art. He is a member of the Nanaimo Hornets "over-forty" rugby team and enjoys travelling with the team to tournaments to have various bones broken; most recently during a tour of Japan (April 97). Fortunately for fisheries science, Dick's energy is unabated and we can look forward to many more years of leadership both at the international level and as part of research teams "going out to see how it works".



**This paper is written by Dr. Gordon McFarlane in appreciation and recognition of Dr. Richard Beamish's outstanding service to fishery science and PICES over many years.**

*Gordon (Sandy) McFarlane is head of the Marine Fish Population Dynamics Section at the Pacific Biological Station, Nanaimo. He has been a member and advisor to many International commissions (INPFC, PICES, Canada/U.S. Groundfish Committee) and participated in several international research programs. His personal research centers on determining and refining biological parameters used in stock assessments; examining climatic and oceanographic factors influencing the dynamics of marine fish, and the physical, biological and fisheries oceanographic linkages of large marine ecosystems. Dick and Sandy have collaborated on numerous projects over the last 3 decades.*

*(cont. from page 14)*

offers excellent water systems and live holding facilities as well as top quality research space and equipment, will be a center for collaborative work among the partners with those involved sharing the operating costs for the facility. Also affiliated with PIAB are two other initiatives, COFRI- Canada's Offshore Frontiers Initiative and ORNEP, a concept of an ocean science network linking Pacific Rim research centers. COFRI is a partnership between private sector, university and government ocean research interests on Canada's West Coast and seeks to develop innovative programs in ocean science through partnerships with the backing of loan funding from the Government of Canada. Further information

on any of these initiatives can be obtained from the author.

From the perspective of PICES and development of collaboration with the PICES community, from the above, it is clear that opportunities to work with Canadian scientists can be found by developing contracts with federal organizations, private sector companies or university faculty members engaged in fisheries, habitat or ocean science and ocean engineering or biotechnology. Those contracts provide the necessary connection into the Canadian marine science community and the funding and laboratory infrastructure that is present in Canada.