



**IN MEMORIUM
JOHN CARL MEDCOF
1911-1997**

J. Carl Medcof, a well-known and highly respected authority in the field of molluscan biology, oyster biology, and shellfish management in Atlantic Canada, died on 28 February 1997, in St. Andrews, New Brunswick. He was 86 years old.

Carl was born into a family with a strong academic background in Ruthven, Ontario in 1911, and the family moved soon after his birth to Toronto. His father, stepmother (his mother died when he was quite young), and uncles were all teachers. He received his elementary and secondary education mostly in Toronto and enrolled in the University of Toronto, where he received his B.A. in biology in 1932. He received an M.A. degree from the University of Western Ontario in 1934, undertaking a study of a snail, *Campeloma*, in a small river in southern Ontario as his thesis topic. Thus, began his lifelong interest in the field of molluscan biology. He received his Ph.D. degree from the University of Illinois in 1938, studying under Dr. H. J. Van Cleave, who was very influential in his early career. While at the University of Illinois, he was elected to the Phi Beta Kappa Society.

During his senior year at the University of Toronto and throughout his graduate years, Carl served as a teaching assistant. He maintained a keen interest in young people and always welcomed opportunities to talk with students and young scientists and encourage them in their work. He was a lifelong teacher, and many summer students benefited from his store of knowledge.

While an undergraduate, Carl began work as a summer student with the Biological Board of Canada, later the Fisheries Research Board of Canada. His first job was with investigations of Atlantic salmon. Subsequently, he worked as a summer student at Ellerslie, Prince Edward Island, where he came under the influence of Drs. Alfreda B. Needler for "red tides" and Alfred W. H. Needler, the director of the Station. Ellerslie was established to study oyster culture and foster development of the industry in the Canadian Maritimes. Thus, began Carl's enduring association with oyster research and the oyster industry of the Canadian East Coast. The title of his Ph.D. dissertation was "Studies on the larva of the Canadian oyster" and was focused on experiments with *Ostrea* (*Crassostrea*) *virginica* in the Bideford River, Prince Edward Island, Canada.

On completion of his Ph.D., Carl joined the staff of the Fisheries Research Board of Canada and was employed first at the Ellerslie Station, where he assumed responsibility for oyster research. He moved to the Biological Station in St. Andrews, New Brunswick in 1940, where he continued his work with oysters and also assumed responsibility for research work on all molluscan species including soft-shell clams, *Mya arenaria*, quahogs, *Mercenaria mercenaria*, and sea scallops *Placopecten magellanicus* with his technician, Mrs. Esther Lord. Up until 1944, he moved with his family in the summers to Ellerslie and to St. Andrews in the winters.

Carl undertook a wide range of studies on oysters, including investigations on breeding to ensure a supply of juveniles for the industry, work to improve culture methods, and studies to improve harvesting and marketing. He maintained a close working relationship with the industry during his career, and much of his work focused on developing methods to improve it. He enjoyed working with people in industry and had their complete trust. Much of his work with oysters culminated with the publication, *Oyster Farming in The Maritimes*, which became a standard text for oyster culture in eastern Canada. This expertise took him to Cape Breton, Nova Scotia, where he worked with natives from the Eskasone Indian Band to grow oysters. He was also involved in experiments in the mid-1950s to transplant European oysters (*Ostrea edulis*) from France to the Bay of Fundy.

Carl worked extensively on the soft-shell clam with Mr. Stuart MacPhail from the Fisheries Research Board as well as with colleagues

from New England such as Mr. Dana Wallace. His clam work took him to eastern Nova Scotia, the Bay of Fundy, and the Gulf of St. Lawrence, where he worked with local harvesters to survey their areas and methods to increase production. He and Stuart MacPhail introduced the first water jet harvesters for soft-shell clams to the local industry and built prototypes for hand-held models as well as a vessel-equipped escalator harvester. Other clam species were studied as well. He and Ross Chandler from the St. Andrews Biological Station did the early biological work for the ocean quahog clam fishery in southeast Nova Scotia.

Another major scientific contribution Carl made was in the field of shellfish toxins, particularly paralytic shellfish poisoning (PSP). As a result of his work and leadership, much of the history of PSP in the Canadian Maritimes was recorded and the etiology of outbreaks established. Results of this work led to establishment of a monitoring system for PSP to ensure that safe shellfish were marketed. Carl was the guest of honor at the Third International Conference on Toxic Dinoflagellates in 1985 and was awarded with a plaque in recognition of his contribution in this field. Later in his life, Carl said, "The most important work I did as a scientist was on resolving many paralytic shellfish problems. In addition I was able to work on methods of producing reliable forecasts about the expectancy of one of the major poisonous agents."

Carl also had a vision for the future. As early as the 1950s he was promoting the concept of aquaculture in marine production and was actively working on developing the protocols for producing soft-shell clams. He gave several media (including television) interviews and lectures on this topic. In addition to clams, he also predicted the development of the mussel culture industry in the Maritimes and an industry for sea urchin roe; something that is only just developing 25 years later.

Because of his expertise in shellfish, Carl was seconded to the Colombo Plan for 2 years in 1953 and 1955 and worked in Sri Lanka, assisting with development of invertebrate and other fisheries there. In 1955, he went to Europe to tour the various shellfish industries for information exchange with colleagues and for technology transfer. In the late 1960s, he undertook a similar trip to Japan with a group of Canadian scientists.

Carl retired from the Fisheries Research Board of Canada in 1973 and then spent a year in Australia, where he worked as a consultant to the shellfish industry through the University of Southern Australia in New South Wales. One project he undertook there was an investigation of the introduction of organisms via ballast water in ships, a subject that has become of great interest recently internationally.

Carl received numerous awards, both scientific and nonscientific, for the contributions he made during his lifetime. He was a long-standing member of the National Shellfisheries Association and served on the Editorial Board for the Proceedings and the Journal for many years. He was made an Honorary Member of the Association in 1973. He received a Centennial Medal from the Canadian Federal government in 1967 for his contributions to the Fisheries Research Board of Canada.

During his retirement, he taught a course in Marine Ecology at the Huntsman Marine Science Centre in St. Andrews. The course involved a rich mixture of basic biology, natural ecology, and the geological and paleological history of the Charlotte County area of New Brunswick.

Carl had a multitude of other interests and on his retirement began another career, recording the history of Charlotte County, New Brunswick, an offshoot of his previous hobby. He had long had an interest in the history of the area and in 1961 was a co-founder of the Charlotte County Historical Society, serving as its first president. He encouraged people to record what information they possessed of the area, and it was through his efforts as editor over a period of 21 years that an 12-volume collection of papers was published as *Contributions From The Charlotte County Historical Society*. As a result of his work with the Historical Society, Carl was presented with an Award of Merit from the Canadian Museums Association in 1981.

He was a devoted citizen of St. Andrews and took an active part in the affairs of the town, contributing to it in many ways over the years. During his lifetime, he was a Scoutmaster, Chairman of the Board of School of Trustees, a member of the local Kiwanis Club, and served as president. He was a member of the St. Andrews Anglican Church and published a history of that church. He served as vestryman, was an honorary church warden, and with his joy of singing, was a member of the church choir for many years. In 1987, the local Kiwanis Club selected him as their Man of the Year in recognition of his numerous contributions to the town.

Carl was a kind, gentle, humanitarian who brought out the best in people. He enjoyed working quietly, smoking his pipe (although more matches were burned than tobacco!), and he always had a package of dulse in his pocket, which he chewed and offered to anyone he met; he was one of the few people in the world who actually enjoyed chewing dulse! Those of us who were privileged to work under his direction will always remember the kind, thoughtful guidance and encouragement he gave us in our careers and his kind advice not only to be good scientists but to be good citizens. It was a joy to work and go on field trips with him, where we could enjoy his companionship and take part in long philosophical discussions on a wide range of biological and other topics.

Carl is survived by his wife of 55 years, Bessie, their three children, Susan, John, and Ranby, by three grandchildren, and by a great many people whose lives have been made more meaningful through their association with him.

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