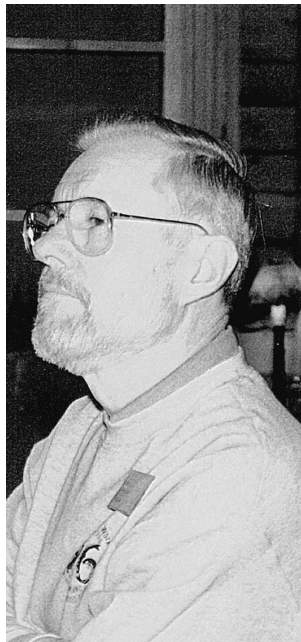


Special Issue

Salmonid Smoltification V

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Richard L. Saunders at the 5th International Workshop on Salmonid Smoltification, Muonio, Finland, 9–12/12/1996.

Dedication to Dr. Richard L. Saunders

Dr. Richard L. Saunders retired from the Department of Fisheries and Oceans, St. Andrews Biological Station in New Brunswick, Canada on December 20, 1996 after 36 years of service. Throughout his career Dick Saunders has conducted research on many aspects of fish biology, but especially the physiology, genetics and behavior of all life stages of Atlantic salmon. He is a biologist in the truest and best sense of the word. His work helped launch the salmon aquaculture industry in Canada and has been the basis for many of the innovations used in smolt rearing throughout the world.

Dick Saunders grew up in Massachusetts and earned a B.S. at the University of Massachusetts at Amherst. Upon graduating in 1951, his advisor Tom Andrews suggested graduate studies at Toronto. Dick had the good fortune to do his Masters and Ph.D. under F.E.J. Fry, who at the time was one of the few people thinking seriously of the environmental physiology of fish. Interrupted by 3 years in the U.S. Navy, Dick completed his Ph.D. on gill irrigation in fish in 1960 and was immediately hired by John L. Hart, Director of the St. Andrews Biological Station, as a salmon field biologist. In addition to the excellent rearing facilities in fresh and salt water, St. Andrews had (and still has) an outstanding scientific and technical staff widely recognized for their fisheries and aquaculture research.

In addition to his 36 years at the Biological Station, Dick was Director of the Salmon Genetics Research Program of the Atlantic Salmon Federation from 1975–1979. He was also an adjunct professor in the Biology Department of the University of New Brunswick, Fredericton. Dick had a highly productive research sabbatical at the University of Bergen and the Marine Institute in Norway in 1988, and has developed research collaborations around the world. His outstanding work on the environmental regulation of growth and smolting in Atlantic salmon is the basis for much of technology now used routinely in smolt production in Eastern Canada and around the world.

Dick Saunders has made many contributions to our understanding of the physiology of Atlantic salmon. Initially focusing on the role of temperature and salinity in growth regulation, he became interested in the effects of photoperiod. He found that increased daylength could dramatically increase growth rate and alter the timing of smolting. With the help of postdoctoral fellows Jim Duston and Steve McCormick, he furthered this work by examining endocrine responses to photoperiod and endogenous rhythms of smolting. With student Julius Kristiansson he explored the importance of the development of growth modes (bimodality) to subsequent smolting. His findings that parr sexual maturation does not necessarily preclude smolting the following spring has helped us understand the interaction of these two developmental events. He has not missed the 'new wave' of biological techniques, having recently used transgenic fish to examine the role of growth hormone in growth and development. Dick's research efforts over the years were aided and enhanced by his excellent research assistants and colleagues, Gene Henderson and Paul Harmon.

On a more personal note, Dick has had a profound influence on young scientists (and formerly young scientists). He is a great gentleman in all his actions: patient, generous with his time and ideas, a fatherly mentor and a good friend. Dick often shares his wisdom with a well-told story from his own vast experience. Always sharing informa-

tion as much as possible, Dick conducted his science and communicated on an international scale. The ease with which Dick gains the respect of even the most recent acquaintances is impressive. Dick set examples of openness, decency and ethical conduct which are a permanent guide for those of us who were fortunate enough to work with him.

Dick Saunders has been an important participant in all the International Smolt Symposia and Workshops, the first being held in La Jolla in 1981. He and Jim Duston organized the Fourth International Smolt Workshop held in St. Andrews in 1992, which was certainly one of the best. In addition to the wonderful setting and great science presented in St. Andrews, the lobster banquet, music and singing were unforgettable. In many ways the town of St. Andrews embodies the spirit of the workshops: small, collegial and spirited.

This Fifth International Smolt Workshop presents a natural opportunity (or given Dick's work with photoperiod, perhaps a 'simulated natural' opportunity under short day conditions) to honor Dick Saunders' many scientific contributions to salmon biology. The organizers, editors and participants have therefore dedicated the Fifth International Workshop on Salmon Smoltification held in Muonio, Finland, December 9–12, 1996, to Dr. Richard L. Saunders on the occasion of his retirement, with the sincere hope that his advice and experience will continue to be forthcoming, even if in a more leisurely fashion.

Stephen D. McCormick

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Smolt Symposia and Workshops:

1981 La Jolla, California, USA

1984 Stirling, Scotland, UK

1988 Trondheim, Norway

1992 St. Andrews, New Brunswick, Canada

1996 Muonio, Finland

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