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Symposium Dedication to Albert V. Tyler

This 24th Lowell Wakefield Fisheries Symposium on Resiliency of Gadid Stocks to Fishing and Climate Change is dedicated to the memory of Albert V. Tyler, who passed away unexpectedly in his sleep in September 2005. He had been enjoying his retirement on Salt Spring Island, British Columbia, with his wife, Nancy, since 2002.

After receiving his Ph.D. from the University of Toronto under F.E.J. Fry, Al’s career extended from St. Andrew’s Biological Station in New Brunswick, Canada, to Oregon State University in Newport and Corvallis, the Pacific Biological Station in Nanaimo, British Columbia, and the University of Alaska Fairbanks. His career focused primarily on groundfish, particularly Pacific cod and flatfishes, but also included Alaska crab species. His work on Pacific cod research addressed various aspects of reproductive biology, recruitment, stock dynamics, fishery oceanography, and interactions between cod and other species. While a member of the Scientific and Statistical Committee of the North Pacific Fishery Management Council, Al always took special interest in reviewing and commenting on the annual assessments for Pacific cod in the Gulf of Alaska and Bering Sea and Aleutian Islands regions. His insights, creative thinking, and research are well cited and highly relevant to current fisheries investigations.

Al was admired for his mentorship of graduate and undergraduate students. He received much joy from teaching and it showed. He always had time for thoughtful discussions, constructive critiques, and sound advice concerning student learning in the classroom, as well as graduate thesis research. While teaching popular and innovative fisheries courses, Al took a personal interest in the progress of all of his students. Certainly, I owe my fisheries career to the guidance and support of Al Tyler.

Throughout his successful career, “Big Al” maintained a balance between work, family, and personal pursuits. He was an excellent chef, specializing in Indian curries, an amateur painter, musician, and an all-around enjoyer of life.

It is fitting to dedicate this symposium and its proceedings to the career of Al Tyler. Al was a real champion of the Lowell Wakefield Symposium series. The goal of this symposium was to bring together scientists and managers from the Atlantic and Pacific oceans to synthesize the knowledge on the resiliency of gadid stocks to fishing and climate change. Al would have been right at home at this meeting, reveling in new scientific findings, stimulating discussions, and social camaraderie. Indeed, he was at home at this meeting in our hearts.

Gordon H. Kruse
President’s Professor of Fisheries
University of Alaska Fairbanks
About the Proceedings Book and the Symposium

This proceedings includes eighteen peer-reviewed research and review papers on gadids that were presented at the symposium Resiliency of Gadid Stocks to Fishing and Climate Change, held October 31–November 3, 2006, in Anchorage, Alaska. The family Gadidae (and gadid-like fish) includes about 30 species, nearly all marine. This group includes the cods, haddocks, pollocks, lings, whittings, and hakes that inhabit cold-water seas of the North Atlantic, North Pacific, and Arctic oceans.

The symposium was motivated by the high commercial importance of gadids, the long and colorful history of research and management of this group of fishes, and the remarkable disparities in their stock and fishery dynamics exhibited in different regions of the world. The intent was to develop a better understanding of the underlying causative mechanisms, by drawing contrasts between gadid stocks and fishery dynamics from different marine ecosystems. For instance, a large biomass of pollock sustains the world’s largest commercial fishery in the Bering Sea, and a Pacific hake stock supports a large fishery off the U.S. West Coast, both of which appear to remain healthy after decades of exploitation. In contrast, many cod stocks in both the northeast and northwest Atlantic Ocean experienced dramatic fishery collapses in the 1980s and 1990s, causing severe economic dislocation. Some of these fisheries have remained closed following stock collapse with no signs of stock recovery, whereas others have rebounded. Why do such differences exist?

Papers in this proceedings focus on gadid population and fishery dynamics and explore potential biological, ecological, and environmental mechanisms underlying these changes. Several key conclusions emerged from the symposium. First, conservative fishing restrictions help. For example, participants agreed that conservative catch limits and excellent catch monitoring programs are largely responsible for the generally healthy status of gadid stocks in the northeast Pacific Ocean. On the other hand, in the northeast and northwest Atlantic there are many clear cases of overfishing where the continuing inability to effectively control fishing mortality remains a major resource conservation issue to this day. In some of these areas, catch limits are consistently set above scientific advice and realized catches are higher still. Instances of illegal and unreported catches exacerbate these problems. Second, evidence has emerged that selective fishing practices are associated with shifts in biological attributes, such as growth and maturity schedules, which, in turn, affect stock productivity and the ability to recover, even if fishing mortality is later reduced to conservative levels. That is, the inherent ability of the stock to recover to previous levels has been compromised. Third, gadids are themselves members of dynamic
marine ecosystems, which are driven by complex changes in climate and oceanography, as well as changes in the abundance, distribution, and ecological relationships among species at all trophic levels. Periodic large climate regime shifts have major impacts on the productivity and ecosystem function of component species, including gadids. Even after many decades of research, it is clear that much more remains to be understood about gadids and their marine ecosystems. The convenors of this symposium believe that papers in the proceedings make a significant contribution toward this needed progress.

The symposium was coordinated by Sherri Pristash, University of Alaska Fairbanks, Alaska Sea Grant College Program, Fairbanks, Alaska. Organizing committee members are Gordon H. Kruse (chair), University of Alaska Fairbanks, School of Fisheries and Ocean Sciences, Juneau, Alaska; Ken Drinkwater, Institute of Marine Research, Bergen, Norway; Jim Ianelli, NOAA Fisheries, Alaska Fisheries Science Center, Seattle, Washington; George Lilly, Department of Fisheries and Oceans, Northwest Atlantic Fisheries Centre, Newfoundland, Canada; Jason Link, NOAA Fisheries, Northeast Fisheries Science Center, Woods Hole, Massachusetts; Mikhail Stepanenko, Pacific Fisheries Research Center (TINRO-Center), Vladivostok, Russia; Diana Stram, North Pacific Fishery Management Council, Anchorage, Alaska; Vidar Wespestad, Resource Analysts International, Lynnwood, Washington; and Doug Woodby, Alaska Department of Fish and Game, Division of Commercial Fisheries, Juneau, Alaska.

Symposium sponsors were Alaska Sea Grant College Program; Alaska Department of Fish and Game; NOAA Fisheries; NOAA Research; North Pacific Fishery Management Council; and Wakefield Endowment, University of Alaska Foundation.

Proceedings Acknowledgments

This publication presents sixteen symposium papers. Each paper was reviewed by two peers, and was revised according to recommendations by associate editors who generously donated their time and expertise: Gordon Kruse, Ken Drinkwater, James Ianelli, Jason Link, Diana Stram, Vidar Wespestad, and Douglas Woodby.

Many thanks to the following people who reviewed one or more manuscripts for this book: Kerim Aydin, Keith Brander, Jon Brodziak, Steve Cadrin, Dave Carlile, Dan Cooper, Martin Dorn, Hilaire Drouineau, Tim Essington, Susan Fudge, Kurt Gamperl, Sylvie Guenette, Owen Hamel, Ray Hilborn, Nicola Hillgruber, Anne Hollowed, Laurie Kell, James Kieffer, Dan Kimura, Neil Klaer, George Lilly, Brian MacKenzie, Steve Martell, Erlend Moksness, Franz Mueter, Janet Nye, Steve Ralston, Hajo Rätz, George Rose, David Sampson, Paul Spencer, Jennifer Stahl, Rick Stanley, Michelle Staudinger, Dick Thorne, Mark Willette, Chris Wilson, and David Witherell.
The Lowell Wakefield Symposium Series and Endowment

The Alaska Sea Grant College Program has been sponsoring and coordinating the Lowell Wakefield Fisheries Symposium series since 1982. These meetings are a forum for information exchange in biology, management, and economics of various fish species and complexes, as well as an opportunity for scientists from high-latitude countries to meet informally and discuss their work.

Lowell Wakefield was the founder of the Alaska king crab industry. He recognized two major ingredients necessary for the king crab fishery to survive—ensuring that a quality product be made available to the consumer, and that a viable fishery can be maintained only through sound management practices based on the best scientific data available. Lowell Wakefield and Wakefield Seafoods played an important role in the development and implementation of quality control legislation, in the preparation of fishing regulations for Alaska waters, and in drafting international agreements for the high seas. In his later years, as an adjunct professor of fisheries at the University of Alaska, Lowell Wakefield influenced the early directions of Alaska Sea Grant. The Wakefield Symposium series is named in honor of Lowell Wakefield and his many contributions to Alaska's fisheries. In 2000, Lowell's wife Frankie Wakefield made a gift to the University of Alaska Foundation to establish an endowment to continue this series.