

# **Review of Recreational Fisheries Survey Methods**

## **Committee**

### **Patrick J. Sullivan**

#### **Chair**

Patrick Sullivan is currently an Associate Professor in the Department of Natural Resources at Cornell University. Dr. Sullivan earned his M.S. in Fisheries Science and Ph.D. in Biostatistics from the University of Washington. His research interests include the assessment and management of fisheries resources and the statistical modeling of biological systems. Prior to joining the faculty at Cornell, he served for ten years as a fisheries scientist for the International Pacific Halibut Commission. Dr. Sullivan has served on two previous NRC committees: the Committee for Review of the National Marine Fisheries Service: Use of Science and Data in Management and Litigation and the Committee on Improving the Collection and Use of Fisheries Data, which he chaired.

### **F. J. Breidt**

#### **Member**

F. Jay Breidt is a Professor of Statistics at Colorado State University. He studied English Literature and Mathematics as an undergraduate at The College of Idaho before earning his Ph.D. in Statistics from Colorado State University. His research ranges from exploring uncertainties in mathematical models of the carbon cycle to applying statistical methodologies in aquatic resource surveys. Among the distinguishing awards bestowed upon Dr. Breidt are the Distinguished Achievement Award from the American Statistical Association Section on Statistics & the Environment (2004) and the election as a Fellow at the American Statistical Association (2004). Dr. Breidt is currently serving on the Panel on Enhancing the Data Infrastructure in Support of Food and Nutrition Programs, Research, and Decision-Making for the National Academies, Division of Behavioral and Social Sciences and Education.

## **Robert B. Ditton**

### **Member**

Robert B. Ditton is a professor of Wildlife and Fisheries Sciences at Texas A&M University with a joint appointment in the Department of Recreation, Park, and Tourism Sciences. He received his Ph.D. in Recreation and Park Administration in 1969 from the University of Illinois. His research focuses on the sociology of natural resources with special attention to the human dimensions of fisheries. He has studied various state, federal, and international jurisdiction fisheries. Previously, Dr. Ditton served as a member of the Science and Statistical Committee of the Gulf of Mexico Fishery Management Council, NRC Committees on Disposition of Offshore Platforms and Defining the Best Scientific Information Available for Fisheries Management, and the NOAA Marine Fisheries Advisory Committee. He is currently a member of the Ocean Studies Board.

## **Barbara A. Knuth**

### **Member**

Barbara A. Knuth is a Professor and Chair of the Department of Natural Resources at Cornell University. Dr. Knuth earned her Ph.D. in Fisheries and Wildlife Sciences at Virginia Tech University in 1986. Dr. Knuth also serves as the Co-leader of the Human Dimensions Research Unit, a program which seeks to improve the understanding of human attitudes and behaviors related to natural resources and the environment and to foster the integration of social and ecological information in natural resources and environmental management decision-making processes. Recent research projects examine risk perception, communication, and management focused on fisheries affected by chemical contaminants. Dr. Knuth previously contributed to the Ocean Studies Board as a member of the Committee on Improving the Collection and Use of Fisheries Data, and currently serves as President of the American Fisheries Society.

## **Bruce Leaman**

### **Member**

Dr. Bruce Leaman is the Executive Director of the International Pacific Halibut Commission (IPHC), a joint Canada-United States commission responsible for research, assessment and management of the Pacific halibut resource from California to the Bering Sea. Dr. Leaman received his B. Sc. degree from Simon Fraser University and a M.Sc. and Ph.D. from the University of British Columbia. His current research interests include reproductive and evolutionary biology of long-lived fishes; stock assessment methods; and fisheries governance, management, and harvest policies. Dr. Leaman is the author of over 100 scientific publications and reports and has been a technical consultant and reviewer on both international and bilateral issues concerning stock assessment and management of marine fisheries. He is also an Affiliate Professor in the School of Aquatic and Fishery Sciences at the University of Washington.

## **Victoria O'Connell**

### **Member**

Victoria O'Connell is the Groundfish Project Leader for the Southeast Region of the Alaska Department of Fish and Game, Commercial Fisheries Division. She received her B.S. in Fisheries from the University of Washington. She is responsible for research and management of southeast Alaska commercial groundfish fisheries including longline and pot fisheries for sablefish, longline fisheries for rockfish, and jig and troll fisheries for lingcod. For over 20 years she has worked directly with fishermen, agency personnel, and other scientists to develop and implement commercial groundfish port sampling programs, groundfish resource assessment surveys, studies of life histories of groundfish species, onboard observer programs, management plans, and evaluation of marine protected areas. Ms. O'Connell has also conducted numerous in situ surveys using SCUBA, occupied submersibles, and multibeam and sidescan sonar mapping and has published habitat-based rockfish stock assessments using line transect methods conducted from a submersible.

## **George R. Parsons**

### **Member**

George R. Parsons is a Professor in the Graduate College of Marine Studies and Department of Economics at the University of Delaware. He received his Ph.D. in Economics from University of Wisconsin at Madison in 1985. His recent research includes the application of random utility models to recreational fishing and hunting in Delaware; beach use on the Mid-Atlantic, Texas, and New England coasts; and diving in the Caribbean. He has also done work recently on the economics of beach erosion and on the economic effects of *pfisteria*. Beyond his numerous and varied positions at the University of Delaware, Dr. Parsons also worked as an Economist at the U.S. Environmental Protection Agency.

## **Kenneth H. Pollock**

### **Member**

Kenneth H. Pollock is a Professor of Zoology, Biomathematics, and Statistics at North Carolina State University. After completing his undergraduate studies in Australia, his country of birth, Dr. Pollock earned his Ph.D. from Cornell University in Biometry. Dr. Pollock is one of the leading researchers in the world on sampling animal populations. He has an active research program on the design and analysis of recreational angler surveys for many years and in 1994 was the senior author on an important AFS monograph on angler survey methodology that is widely used today. He was the winner of the Snedecor Award for the best paper in Biometry during 1991 for his monograph on capture-recapture models and is an elected Fellow of the American Statistical Association. Dr. Pollock accepted a Twentieth Century Distinguished Service Award in Environmental Statistics at the Ninth Lukacs Symposium in 1999.

## **Stephen J. Smith**

### **Member**

Stephen J. Smith is a Research Scientist with the Bedford Institute of Oceanography. He was educated at the University of Guelph in Ontario (B.S., Marine Biology; M.S., Statistics) and has spent his entire research career to date on the Atlantic coast of Canada. Mr. Smith's research interests include models for survival data, associations between fish distribution and habitat condition, and models for feeding behavior, growth, and spatial distributions for aquatic organisms. He has previously worked for the Department of Fisheries and Oceans in Newfoundland and has served as Chairperson of the Statistics, Sampling, and Surveys Subcommittee of the Canadian Atlantic Fisheries Scientific Advisory Committee. He was assistant editor for the ICES Journal of Marine Science (1992 to 1999) and is currently associate editor for the Canadian Journal of Fisheries and Aquatic Science. Mr. Smith's OSB service has included the Committee on Improving the Collection and Use of Fisheries Data and the Committee on Fish Stock Assessment Methods.

## **S. L. Stokes**

### **Member**

S. Lynne Stokes is a Professor of Statistical Science at Southern Methodist University in Dallas, Texas. She has her Ph.D. in Statistics from the University of North Carolina at Chapel Hill. Her current research interests are sampling methods, modeling of non-sampling errors in surveys, and disclosure limitation methods. Before working at Southern Methodist University, Dr. Stokes was a mathematical statistician at Patuxent Wildlife Research Center for the U.S. Fish and Wildlife Service, at the Center for Social Science Research at the U.S. Bureau of the Census, and as faculty at University of Texas at Austin. She is a Fellow of the American Statistical Association and is the past chair of the Survey Research Methods Section of the American Statistical Association. In addition, Dr. Stokes has served on the NRC Panel on Alternative Census Methodologies.