

CENSUS OF MARINE LIFE
NEWS CONFERENCE
and PANEL PRESENTATIONS

The Royal Institution of Great Britain
London, United Kingdom
4 October 2010

A DECADE OF DISCOVERY
CENSUS OF MARINE LIFE **2010**

In partnership with





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School of bigeye trevally, *Caranx sexfasciatus*,
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PROGRAM

Please turn off mobile phones and kindly refrain from flash photography.

13:30-14:30	News Conference and Q&A <i>Moderator:</i> Enric Sala <i>Panelists:</i> Ian Poiner, Paul Snelgrove, Patricia Miloslavich, and Jesse Ausubel
14:30-15:00	Break
15:00-15:20	Panel Presentations <i>Moderator:</i> Enric Sala Panel A—Diversity, Distribution, & Abundance—Past, Present & Future <i>Panelists:</i> Geoff Boxshall, Poul Holm, and Boris Worm
15:20-15:50	Panel B—Tools & Techniques and the People Who Use Them <i>Panelists:</i> Ronald O’Dor, Myriam Sibuet, Ann Bucklin, and Lúcia Campos
15:50-16:20	Panel C—The Census Legacy <i>Panelists:</i> Olav Rune Godø, Nancy Knowlton, Shubha Sathyendranath, and Kristina Gjerde

16:20-16:30	Q&A and Closing Remarks Enric Sala
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16:30-17:00	Remarks by Dignitaries Wendy Watson-Wright, <i>Intergovernmental Oceanographic Commission</i> Jacques Perrin, <i>Galatée Films</i> Paul Joskow, <i>Alfred P. Sloan Foundation</i>
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17:00-19:00	Reception <i>Toast to the Census of Marine Life</i> Sylvia Earle, <i>National Geographic Explorer-in-Residence</i>
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Videos co-produced with National Geographic Television/Digital Studio.

Panelists and Census Spokespersons are available for media interviews following the News Conference through 19:00.

A book bag for each attendee is available at the exit at the conclusion of the Reception.

For on-demand viewing of the Videos, News Conference, Panel Presentations, and other Census of Marine Life resources, visit www.coml.org.

PARTICIPANT BIOGRAPHIES

Enric Sala

Enric Sala is a marine ecologist who dedicates his career to understanding human impacts on marine life and finding ways to reduce them. His research includes an important exploration component, searching for the last healthy marine ecosystems that can give us an understanding of the past and the present that can be used to inform the future. One of his current goals is to help protect the last pristine marine ecosystems worldwide. He obtained a Ph.D. from the University of Aix-Marseille, France, and spent 10 years as a professor at Scripps Institution of Oceanography. As the National Geographic Society's Ocean Fellow, Dr. Sala is currently leading a global marine conservation initiative. He is also affiliated with Spain's National Council for Scientific Research. He is member of the Census of Marine Life Scientific Steering Committee and has participated in the History of Marine Animal Populations project. Dr. Sala is a 2005 Aldo Leopold Leadership Fellow, 2006 Pew Fellow in Marine Conservation, and 2008 Young Global Leader at the World Economic Forum. His experience and scientific expertise contribute to his service on scientific advisory boards of international environmental organizations.



Ian Poiner

Ian Poiner is the Chief Executive Officer of the Australian Institute of Marine Science and a Fellow of the Australian Academy of Technological Sciences and Engineering. Dr. Poiner is a tropical marine ecologist with significant experience in strategic development and planning of science, both as a practicing scientist and at the organizational level. This experience is reflected in his successful large-scale, multidisciplinary research projects and his establishment of national and international research programs to support the sustainable use, conservation, and management of tropical marine ecosystems. He has more than 25 years of research experience in marine ecology, undertaken in tropical Australia, Jamaica, Papua New Guinea, and Southeast Asia. His research has focused on questions that span disciplinary boundaries, including the ecological effects of trawling; traditional, artisanal, and commercial fisheries; and coastal and continental shelf ecology. In 2002, Dr. Poiner was invited to join the Census of Marine Life Scientific Steering Committee, the international governing body of the Census, and since 2008 has chaired the committee.



Paul Snelgrove

Paul Snelgrove is a professor at Memorial University of Newfoundland's Ocean Sciences Centre and Biology Department and holds the Canada Research Chair in Boreal and Cold Ocean Systems. He earned a bachelor's degree from Memorial, a master's from McGill University, and a doctorate in biological oceanography from Woods Hole Oceanographic Institution/Massachusetts Institute of Technology. He completed postdoctoral fellowships at Rutgers University and Dalhousie University. He is currently the director of the Natural Sciences and Engineering Research Council Canadian Healthy Oceans Network, a research collaboration of 65 marine scientists from coast to coast in Canada. This network grew out of his involvement with the international Census of Marine Life, where he chaired a group charged with bringing together a synthesis of elements from the Census projects. His research focuses on the links between fish and invertebrate larval behavior and transport, and how they contribute to recruitment success, population connectivity, and spatial patterns of species and biodiversity in coastal and deep-sea environments. He has co-authored more than 100 scientific papers and book chapters on ocean life and has recently written the book *Discoveries of the Census of Marine Life: Making Ocean Life Count*.



Patricia Miloslavich

Patricia Miloslavich is a professor of marine biology at the University Simon Bolivar (USB) in Caracas, Venezuela and is affiliated with the Department of Environmental Studies and the Center of Marine Biodiversity. At USB, she coordinates undergraduate, master's, and doctoral programs in biological sciences. Dr. Miloslavich has taught courses related to marine biology, reproduction of marine invertebrates, environment and conservation, and zoology, among others. She earned a Licenciado degree from USB and a doctorate in oceanography from the University of Quebec at Rimouski, Canada. She focuses her research on tropical marine biology, particularly gastropod diversity and reproductive strategies and has worked on projects in Venezuela, the United States, Canada, Spain, Japan, and Argentina. Her research has been presented in more than 100 scientific conferences and published in more than 40 papers. She also edited the book *Caribbean Marine Biodiversity: The Known and the Unknown* and leads the Caribbean Committee of the Census of Marine Life. Dr. Miloslavich coordinated efforts to produce the first global synthesis of marine biodiversity from 25 regions around the world and has coordinated the Census of Marine Life nearshore project in South America, which studied the diversity, distribution, and abundance of marine life in rocky shores and seagrass beds.



Jesse Ausubel

Jesse Ausubel is Vice President for Programs at the Alfred P. Sloan Foundation in New York City, where he also directs the Rockefeller University's Program for the Human Environment. He aims to elaborate the technical vision of a large, prosperous society that emits little harm and spares large amounts of land and sea for nature. From 1977 to 1988, Mr. Ausubel worked for the National Academies in Washington, D.C., with the Board on Atmospheric Sciences and Climate and the program office of the National Academy of Engineering. Mr. Ausubel helped organize the first UN World Climate Conference (1979), which lifted the global warming issue on scientific and political agendas, and formulate the World Climate Program. He has authored and edited over 150 articles, reports, and books, including *Changing Climate* (1983), the first comprehensive review of the greenhouse effect, and *Toward an International Geosphere-Biosphere Program* (1983), which originated the U.S. Global Change Research Program. In 1996, with Fred Grassle, he conceived the Census of Marine Life. In 2002, Mr. Ausubel helped create the Barcode of Life initiative to provide short DNA identifiers for many forms of life and in 2006 the Encyclopedia of Life, to provide a Web page for every species. He served as lead editor for *Census of Marine Life 2010: Highlights of a Decade of Discovery*.



Goeff Boxshall

Geoff Boxshall is a researcher in the Department of Zoology at the Natural History Museum in London, where his studies focus on the systematics, functional morphology, and evolution of copepods and related crustaceans, extending across the whole range of life styles from parasites to plankton. He earned his bachelor's degree in zoology and his doctorate, on the biology and population dynamics of a caligid sea louse, from the University of Leeds. He has described more than 200 species and established the Tantulocarida as a subclass of the Crustacea. He was elected Fellow of the Royal Society in 1994 and his research has been recognized in a series of awards. He has published over 200 scientific papers and has co-authored several books, including two dictionaries. He was vice-chair of MarBEF, the European Union network of excellence in Marine Biodiversity and Ecosystem Functioning, and serves on the steering committee of the World Register of Marine Species, which has received support from the Census of Marine Life.



Poul Holm

Poul Holm is Professor of Environmental History and Academic Director of the Trinity Long Room Hub, the research institute for the arts and humanities at Trinity College Dublin, Ireland. He is a member of the Census of Marine Life Scientific Steering Committee. He has served as president of the European Society for Environmental History and has chaired the Danish Research Council for the Humanities. He chairs the History of Marine Animal Populations component of the Census of Marine Life. Dr. Holm founded a research training school devoted to training a new generation of historians and marine scientists to promote the study of global marine environmental history. His research interest is to enhance understanding of changes in the biodiversity, distribution, and abundance of marine life of the world's oceans by linking studies of marine history and archaeology with marine ecology and paleoecology. He graduated in history from the University of Aalborg, Denmark, and earned his doctorate from the University of Aarhus, where he examined the impact of war on everyday life in Norway, Sweden, and Denmark between 1550 and 1914. He has published on fisheries history and marine environmental history, coastal communities and culture, and the Viking settlements in Ireland.



Boris Worm

Boris Worm is a marine biologist and associate professor of biology at Dalhousie University in Halifax, Nova Scotia. He received his Ph.D. in biological oceanography from the University of Kiel. Since 2005 he has been co-leading the Future of Marine Animal Populations project of the Census of Marine Life. His research currently focuses on the ecosystem effects of fishing, associated changes in marine biodiversity, and the conservation of marine ecosystems on a regional and global scale. Large predators are of particular interest to him, particularly tuna, billfish, and sharks, which support valuable fisheries and play an important role in the functioning of marine ecosystems. Dr. Worm has authored or co-authored more than 50 research papers on these subjects and has received numerous national and international awards. His research has been featured in media outlets worldwide, including CNN, the *New York Times*, and *Time Magazine*, and he has been invited on numerous occasions to present these findings to policy makers in the United States and Canada.



Ronald O'Dor

Ronald O'Dor is at the Consortium for Ocean Leadership in Washington, D.C. and is a senior scientist for the Census of Marine Life. He is also based at Dalhousie University, Canada, where he has served as director of the Aquatron Laboratory and Chair of Biology. He earned a B.A. degree in biochemistry from the University of California, Berkeley, and a Ph.D. in medical physiology from the University of British Columbia. He completed postdoctoral fellowships in marine biology at Cambridge University and Stazione Zoologica, Naples, Italy. He uses telemetry to study cephalopod behavior, bioenergetics, and physiology in nature around the world, and he was a principal investigator for the Aquatic Research Facility on Shuttle Mission 77. He founded the Web site CephBase, has edited volumes on cephalopod biology, and has published more than 150 articles, including recent Census "big picture" articles: the *One Ocean Model* and the *Big Wet Secret*. He has served on many granting councils internationally, as president of the Cephalopod International Advisory Council, as a consultant to the Food and Agriculture Organization, and as a convener for national and international scientific organizations. Dr. O'Dor also serves as Global Scientific Director for the Ocean Tracking Network.



Myriam Sibuet

Myriam Sibuet is a senior scientist at the Oceanographic Institute of Paris, following her career as a deep-sea biologist at the French Research Institute for Exploration of the Sea (Ifremer) in France. She was director of the Deep-Sea Environment Department at the Ifremer center at Brest and Science and Technology Adviser to the president of Ifremer in Paris. She earned her doctorate from the University Pierre and Marie Curie and pursued deep-sea research interests including diversity and biomass of benthic communities living in deep oceanic basins and continental margins. She has studied natural variability of deep-sea benthic communities and ecosystems in a variety of habitats in response to the flux of organic matter and thermogenic fluids. She participated in 35 deep-sea cruises mainly as chief scientist and initiated the use of French manned and unmanned submersibles in biological research. She has led oceanographic research projects in the Atlantic and Mediterranean in international and European Union programs. She developed in 2000, in partnership with the oil industry, benthic ecosystems studies in the Gulf of Guinea. She is vice-chair of the Census of Marine Life Scientific Steering Committee and a co-leader of the Census project Continental Margin Ecosystems on a Worldwide Scale.



Ann Bucklin

Ann Bucklin is a professor and head of the Department of Marine Sciences and director of the Marine Sciences and Technology Center at the University of Connecticut. During 1992–2005, she was a professor in the Department of Zoology and a member of the Institute for the Study of Earth, Oceans, and Space at the University of New Hampshire. She was a Fulbright Senior Scholar in Norway (1992–1993) and was elected Fellow of the American Association for the Advancement of Science in 1995. Since 2004, Dr. Bucklin has served as the principal investigator and co-leader for a Census of Marine Life ocean realm field project, the Census of Marine Zooplankton. Dr. Bucklin received her bachelor's degree in biology from Oberlin College and her doctorate in zoology from the University of California, Berkeley. She was a postdoctoral scholar at the Woods Hole Oceanographic Institution and a NATO postdoctoral fellow at the Marine Biological Association of the United Kingdom. The theme underlying her research interest—molecular ecology and evolution of marine organisms—developed from her early studies of sea anemones. Her current focus is the molecular ecology, phylogeography, and phylogeny of marine crustacean zooplankton.



Lúcia Campos

Lúcia Campos, a deep-sea biologist specializing in echinoderms, has worked in the Antarctic region for the past eight years. She explores how marine biodiversity may be affected by environmental changes and coordinated the South American Consortium on Marine Biodiversity for the Census of Antarctic Marine Life. Dr. Campos is a lecturer at the Institute of Biology at the Federal University of Rio de Janeiro and a member of the Brazilian National Committee on Antarctic Research associated with their Ministry of Science and Technology, which represents Brazil in the Life Sciences Scientific Standing Group of the Scientific Committee on Antarctic Research (SCAR). She is a member of the SCAR program Evolution and Biodiversity in Antarctica. Dr. Campos has dedicated much of her research effort to deep-sea studies off the Brazilian continental margin in association with the Energy Company Petrobras. She led MABIREH (Marine Antarctic Biodiversity in Relation to Environmental Heterogeneity), a project of the Brazilian International Polar Year. She currently serves as international adviser for the Brazilian National Science and Technology Institute on Antarctic Environmental Research, which is based in Rio de Janeiro. She holds a Ph.D. in oceanography from the University of Southampton, United Kingdom.



Olav Rune Godø

Olav Rune Godø is a senior scientist at the Institute of Marine Research, Bergen, Norway, where he also has acted as program and research group leader. He earned a degree in fisheries biology from the University of Bergen and a doctorate from the same university. Dr. Godø's research interests span new sampling technologies and the evolutionary effects of fishing and currently focus on methodological development of acoustics for quantification of ecosystem components and processes. He has been involved in the Census of Marine Life as member of its Scientific Steering Committee (1999–2004) and through participation in the Mid-Atlantic Ridge Ecosystems project. Dr. Godø has been member and chair of several committees under the Research Council of Norway. He has visited the Rockefeller Foundation Bellagio Center and International Institute for Applied Systems Analysis (Vienna) as a scholar. He currently chairs a new international Centre of Marine Ecosystem Acoustics, which is administratively associated with the Institute of Marine Research.



Nancy Knowlton

Nancy Knowlton, co-director of the Census of Coral Reefs field project of the Census of Marine Life, holds the Sant Chair in Marine Science at the Smithsonian's National Museum of Natural History in Washington, D.C. She has worked on the ecology, evolution, and conservation of coral reef organisms for over 35 years. Dr. Knowlton received her undergraduate degree at Harvard University and her doctorate at the University of California, Berkeley, and was a professor at Yale University before moving to the Smithsonian Tropical Research Institute in Panama. Later, she joined the Scripps Institution of Oceanography at the University of California, San Diego, where she was the founding director of the Center for Marine Biodiversity and Conservation. She is a member of the Board of Directors and elected Fellow of the American Association for the Advancement of Science and an Aldo Leopold Leadership Fellow. She currently serves on the National Geographic Society's Committee on Research and Exploration, chairs the World Bank's Targeted Research Program for Coral Reefs, and is a member of the editorial board of the *Annual Review of Marine Science*. In 2009, she received the Peter Benchley Award for science in the service of marine conservation. Dr. Knowlton is author of *Citizens of the Sea: Wondrous Creatures from the Census of Marine Life*.



Shubha Sathyendranath

Shubha Sathyendranath is a scientist at the Plymouth Marine Laboratory, Plymouth, England. She received a bachelor's degree in physics from Kerala University (India), a master's in oceanography from Cochin University (India), and a doctorate from the University Pierre and Marie Curie (France). She is an adjunct professor at Dalhousie University (Canada) and an honorary research scientist at the Bedford Institute of Oceanography (Canada). She has published extensively in marine optics, remote sensing of ocean color, marine primary production, and the role of the oceans in the global carbon cycle. She is a member of the Census of Marine Life 2020 Science Council. As the former executive director of the Partnership for Observation of the Global Oceans (POGO), she facilitated establishment of the Census of Marine Life in developing countries, notably in South America and in the Indian Ocean rim countries. She also helped establish links between the Census and other elements of ocean observations, notably through POGO, the Global Ocean Observation System, and the intergovernmental Group on Earth Observations (GEO). Census activities are now embedded in the GEO Biodiversity Observation Network.



Kristina Gjerde

Kristina Gjerde, a recognized expert in the legal aspects of ocean conservation, is High Seas Policy Advisor for the International Union for Conservation of Nature. In 2008, with the support of the Census of Marine Life and the participation of many Census scientists, she co-founded the Global Ocean Biodiversity Initiative, a global partnership now applying the fruits of Census discoveries to identify priority places to protect in the open ocean and deep sea. She currently serves as a member of the World Economic Forum's Ocean Agenda Council, National Geographic Society's Ocean Restoration Advisory Council and GLOBE International's Marine Advisory Task Force. In 2003, she received a three-year Pew Fellowship in Marine Conservation to promote an improved legal regime for the high seas and seabed beyond the zones of national jurisdiction. A graduate of New York University School of Law and a member of the New York State Bar Association, she first practiced maritime law in New York before becoming a Marine Policy Fellow at the Woods Hole Oceanographic Institution.



CENSUS SPOKESPERSONS

Projects

Abyssal Plains (CeDAMar): Craig Smith
Arctic (ArcOD): Russ Hopcroft
Continental Margins (COMARGE): Bob Carney
Antarctic (CAML): Victoria Wadley
Continental Shelves (POST): Jim Bolger
Coral Reefs (CReefs): Nancy Knowlton
Global Marine Life Database (OBIS): Edward Vanden Berghe
Oceans Future (FMAP): Boris Worm
Oceans Past (HMAP): Poul Holm
Marine Microbes (ICoMM): Linda Amaral-Zettler
Mid-Ocean Ridges (MAR-ECO): Odd Aksel Bergstad
Nearshore (NaGISA): Gerhard Pohle
Regional Ecosystems (GoMA): Lew Incze
Seamounts (CenSeam): Malcolm Clark
Top Predators (TOPP): Barbara Block
Vents & Seeps (ChEss): Paul Tyler
Zooplankton (CMarZ): Ann Bucklin

Affiliated Projects

Encyclopedia of Life: Jennifer Hammock
Great Barrier Reef: C. Roland Pitcher
Gulf of Mexico: Wes Tunnell
Marine Barcoding: Dirk Steinke
Technology Panel: Alex Rogers
World Register of Marine Species: Ward Appeltans

National & Regional Committees

Arabian Sea: Nick D'Adamo
Australia: Nic Bax
Canada: Philippe Archambault
Caribbean: Patricia Miloslavich
China: Chaolun Li
Europe: Bhavani Narayanaswamy
Japan: Katsunori Fujikura
Indian Ocean: Mohideen Wafar
Indonesia: Tonny Wagey
Korea: Youn-Ho Lee
South America: Diego Rodriguez
Sub-Saharan Africa: Charles Griffiths
United States: Wes Tunnell

Panelists and Census Spokespersons are available for media interviews following the News Conference through 19:00.





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Cover photo: Tentacles of siphonophore *Rosacea*
from the Sargasso Sea by Laurence P. Madin.