

Developing a Booklet on Biodiversity for the Public and Policy Makers

Committee

Ann M. Bartuska

Chair

Dr. Ann Bartuska served as the U.S. Department of Agriculture's (USDA) Deputy Under Secretary for Research, Education, and Economics as well as chief scientist before retiring in 2017. Prior to that position, she was deputy chief for research and development at the USDA Forest Service. She also served as acting USDA Deputy Under Secretary for natural resources and environment and was the executive director of the Invasive Species Initiative at the Nature Conservancy. She was elected President of the Ecological Society of America (2003) and has served on the Board of the Council of Science Society Presidents. She co-chaired the National Academies' Roundtable on Science and Technology for Sustainability and the Ecological Systems subcommittee of the Committee on Environment and Natural Resources of the White House National Science and Technology Council. Dr. Bartuska has served on the board of the Council of Science Society Presidents and is a member of the American Association for the Advancement of Science and of the Society of American Foresters. She currently also holds a position as Senior Advisor at Resources for the Future. She is an ecosystem ecologist with a Ph.D. from West Virginia University.

Kamalijit S. Bawa

Member

Dr. Kamal Bawa is Distinguished Professor of Biology at the University of Massachusetts, Boston, and Founder-President of the Bangalore India-based Ashoka Trust for Research in Ecology and the Environment (ATREE) that has been ranked among the world's top 20 environment think tanks. The overarching theme of his research is to generate knowledge about the impact of land use and land cover change, climate change, and human use of natural resources on biodiversity. He has published more than 200 scientific papers and 11 authored or edited books and monographs. Among the many awards he has received are: Giorgio Ruffolo Fellowship at Harvard University's Kennedy School of Government (2009), Charles Bullard (twice 1972, 2010) and Maria Moor Cabot Fellowships (1973) at Harvard University, Guggenheim Fellowship (1987), Pew Scholar in Conservation and the Environment (1992), the world's first prize in sustainability--the Gunnerus Award in Sustainability Science from the Royal Norwegian Society of Letters and Sciences (2012), and the international MIDORI Prize in Biodiversity (2014) from the Aeon Foundation in Japan at the United Nations Conference of Parties to the Convention on Biological Diversity. The two professional societies in his field, the Association for Tropical Biology and Conservation and Society for Conservation Biology, have bestowed on him their highest awards. The Association for Tropical Biology and Conservation elected him as its President and then as an Honorary Fellow and he received the Distinguished Service Award from the Society for Conservation Biology. The University of Massachusetts, Boston has honoured him twice: he has received the Chancellor's Award for distinction in scholarship as well as the Chancellor's Award for distinction in professional service. Dr. Bawa is an elected member of the American Academy of Arts and Sciences, the Royal Norwegian Society of Letters and Sciences, the Royal Society, and the American Philosophical Society. He has headed or served on a number scientific panels, and he currently serves on the governing boards of several national and international organizations. His second coffee-table book, *Himalaya: Mountains of Life*, a sequel to *Sahyadris: India's Western Ghats*, was published in January 2013.

Lee Berger

Member

Associate Professor Lee Berger is a Principal Research Fellow in Wildlife Health and Conservation at the Faculty of Veterinary and Agricultural Sciences at the University of Melbourne. Dr. Berger is trained as a veterinarian and her research focuses on emerging wildlife diseases, with attention to the invasive chytrid fungus (*Batrachochytrium dendrobatidis*), the cause of chytridiomycosis. In 2018 she received Australia's Frank Fenner Prize for Life Scientist of the Year for her discovery of the fungus. Previous positions she has held include serving as Associate Dean of Research and Senior Research Fellow within the College of Public Health, Medical and Veterinary Sciences at James Cook University. She is a member of the Australian Academy of Sciences. She received her Ph.D. from James Cook University of North Queensland.

Julio C. Bicca-Marques

Member

Dr. Júlio César Bicca-Marques is Professor and Head of the Undergraduate Research Office at the Pontifical Catholic University of Rio Grande do Sul in Porto Alegre, state of Rio Grande do Sul, Brazil. He is also a Research Associate at the Department of Anthropology/University of Illinois at Urbana-Champaign. His areas of expertise are conservation biology, ecology, animal behavior, primatology, and scientific writing. He has field and professional experience working in most Brazilian terrestrial biomes: Atlantic Forest, Pampas, Amazon, Cerrado and Caatinga. He is a Research Fellow of the Brazilian National Research Council, Secretary General of the International Primatological Society, Member of the Consulting Council of the Brazilian Society of Zoology, Member of the International Union for Conservation of Nature Primate Specialist Group, Founding Member of the International Biodiversity and Primate Conservation Centre (Yunnan, China), Member of the Working Group on Primates of the International Society of Zoological Sciences, Editor of Neotropical Primates, Associate Editor of International Journal of Primatology, Primates, and Tropical Conservation Science, Member of the Editorial Board of American Journal of Primatology and Studies on Neotropical Fauna and Environment, and Member of the Consulting Board of the Lami Biological Reserve/Porto Alegre/Brazil. He is also an ad-hoc reviewer for many international and national scientific journals and granting agencies. Dr. Bicca-Marques holds a MSc in Ecology from the Universidade de Brasília/Brazil and PhD in Anthropology from the University of Illinois at Urbana-Champaign.

Suchana Chavanich

Member

Dr. Suchana Apple Chavanich is an associate professor at the Department of Marine Science, Faculty of Science, Chulalongkorn University, Thailand. She has a broad base of ecological research interests that involve the study of nearshore species from tropical to polar regions. In addition, her research focuses on conservation and restoration of marine ecosystems, in particular on coral reefs. In Thailand, her research works include developing techniques for the mass culture of corals using sexual propagation for coral restoration and Arctic-Antarctic research expeditions. She was Thailand's first female scientist to travel to Antarctica with the Japanese Antarctic Research Expedition in 2009. In 2014, she became Thailand's first female scientist to go diving in Antarctica with the Chinese Antarctic Research Expedition. Her research work on the Arctic and Antarctica has inspired Thais and young people to understand the value of polar ecosystems and the importance of international collaborations between Thailand and other Asian countries. She has actively promoted marine conservation knowledge by teaching local children, dive shop operators, and diving instructors in coastal areas. She is also the author of many articles and several books, including marine conservation, Antarctica, coral reefs, and scuba diving. Currently, Chavanich is the Project Leader of Coastal Marine Biodiversity and Conservation (later named Coral Reef Conservation) in the Western Pacific under the United Nations Educational, Science, and Cultural Organization/Intergovernmental Oceanographic Commission Sub-Commission (UNESCO/IOC) for the Western Pacific, and serves as a Thailand Reef Check Coordinator (headquartered in California, USA) that teaches and stimulates local communities to protect and monitor coral reef health using ecologically sound and economically sustainable solutions.

Sandra M. Diaz

Member

Professor Sandra Díaz (NAS), is a Professor of Community and Ecosystem Ecology at Córdoba National University, and a senior member of the National Research Council of Argentina. She is interested in plant functional traits and general patterns of functional specialization, their effects on ecosystem properties and their interactions with global change drivers. She constructed the first global quantitative picture of essential functional diversity of vascular plants –the global spectrum of plant form and function- providing a backdrop for evolutionary, ecological and biogeochemical modelling studies. She has advanced theory and practical implementation of the concept of functional diversity and its effects on ecosystem properties and benefits. Prof. Diaz combines her plant ecology studies with interdisciplinary work on how different societies value and reconfigure biological communities and ecosystems. She has authored or co-authored more than 170 peer-reviewed articles, some of them in the leading journals of biology and ecology, and has been for several years among the most cited scientists in her field. She founded Núcleo DiverSus on Diversity and Sustainability, and co-founded the Global Communal Plant Trait Initiative (TRY). Prof. Diaz co-chaired the Global Assessment of the Intergovernmental Platform on Biodiversity and Ecosystem Services (IPBES). She is a member of the Academies of Science of Argentina, the USA, France, Norway, and the Developing World, and a Foreign Fellow of the British Royal Society. She has been awarded the Cozzarelli Prize (2008), the Margalef Prize in Ecology (2017), the Senckenberg Award for Nature Research (2019), the Gunnerus Award in Sustainability Science (2019), the Princess of Asturias Award for Science (2019), and the Key International Medal (2020). She has served on several high-level panels, committees and assessments at the international biodiversity science-policy interface, including the Intergovernmental Panel on Climate Change, the Millennium Ecosystem Assessment, Diversitas, IPBES, and the Earth Commission.

Edson Gandiwa

Member

Dr. Edson Gandiwa is Dean in the School of Wildlife, Ecology and Conservation at Chinhoyi University of Technology, Zimbabwe. Previously, he served as an ecologist in the Zimbabwe Parks and Wildlife Management Authority. He has expertise in biodiversity conservation with special interest in wildlife conservation and management. He is a recipient of the International Council for Game and Wildlife Conservation Working Group Young Opinion Thesis Award (2015) and a research award in the Natural Sciences and Environmental sector from the Research Council of Zimbabwe (2017). He is a Member of the Environment Management Board (Zimbabwe), an Affiliate of the African Academy of Sciences, and a Mandela Washington Fellow. He holds a Master of Science in Tropical Resource Ecology from the University of Zimbabwe and a Ph.D. in Wildlife Conservation and Management from Wageningen University and Research, the Netherlands.

Virginia Gewin

Member

Virginia Gewin is a science journalist who focuses on environmental science. For the last 20 years, she has written about biodiversity loss, climate change, food security, and ecosystem services for a variety of publications including *Nature*, *Scientific American*, *Discover*, *The Atlantic*, *Washington Post*, *Bloomberg*, *Popular Science*, and many others. She realized she preferred writing about the wide range of environmental science topics while pursuing a Ph.D. at Oregon State University. Ms. Gewin had received a National Aeronautics and Space Administration (NASA) Earth System Science fellowship to study how soil microbes would sequester carbon under different climate change scenarios. During her studies she received an American Association for the Advancement of Science (AAAS) Mass Media Fellowship, which placed her at *The Oregonian* newspaper for a summer. She followed that up with an internship at *Nature* magazine. Since, she has received numerous journalism grants and fellowships to report on stories in Malaysia, Peru, Iceland, Scotland and across the United States. Ms. Gewin received a BS in environmental science from Auburn University and a MS studying soil microbiology from Washington State University.

Rosemary Gillespie

Member

Dr. Rosemary Gillespie is a professor in the Department of Environmental Science, Policy, and Management and holds the Schlinger Chair in Systematic Entomology at the University of California, Berkeley. She also serves as Director of the Essig Museum of Entomology. Dr. Gillespie uses islands of known age and isolation to assess the combined temporal and spatial dimension of biogeography and determine patterns of diversification, adaptive radiation, and associated community assembly with a focus on spiders and insects. Much of her work has focused on the islands of Hawaii and elsewhere in the Pacific and she is known for her work on the evolution of communities on hotspot archipelagoes. Dr. Gillespie was the President of the American Genetics Association in 2018, and was previously President of the International Biogeography Society. She has also served previously as the President of the American Arachnological Society and the Treasurer of the International Society of Arachnology. From 2003-2016, Dr. Gillespie led "Exploring California Biodiversity", a National Science Foundation-funded museum and field-based outreach program focused on graduate fellows and high-school/middle-school students in minority-dominated urban schools in the Bay Area. She is a member of the American Academy of Arts and Sciences. She received her Ph.D. in Zoology from the University of Tennessee-Knoxville.

Yadvinder Malhi

Member

Dr. Yadvinder Malhi is Professor of Ecosystem Science in the School of Geography and the Environment at the University of Oxford, and Jackson Senior Research Fellow at Oriel College, Oxford. He directs the Oxford Centre for Tropical Forests, a network of university departments, non-government organizations, and local businesses that seeks to address the major issues facing the future of tropical forests in the 21st century. His research interests focus on the impact of global change on the ecology, structure and composition of terrestrial ecosystems, and in particular tropical forests, and how management and restoration of ecosystems can be used as a tool to tackle climate change. His field studies span Amazonia, the Andes, Africa and Southeast Asia. This research addresses fundamental questions about ecosystem function, diversity and dynamics, whilst at the same time aiming to provide outputs of direct relevance for conservation and adaptation to climate change. He is a Fellow of the Royal Society, former President of the Association for Tropical Biology and Conservation, a Trustee of the Natural History Museum of London, and was awarded the Patrons' Gold Medal of the Royal Geographical Society in 2018. Dr. Malhi received a Master of Arts degree in Natural Sciences at Queen's College, University of Cambridge and his Ph.D. in Meteorology from the University of Reading.

Nyawira Muthiga

Member

Dr. Nyawira Muthiga is Director of the Wildlife Conservation Society's (WCS) Marine Program in Kenya. She coordinates a portfolio of work that includes research on marine protected areas and their effectiveness, sustainable small-scale fisheries, coral reefs and climate change as well as capacity building for community conservation areas. Dr. Muthiga has spent more than 30 years dedicated to the management and conservation of marine ecosystems in the Western Indian Ocean (WIO) through research, training and conservation. Her work has appeared in numerous peer-reviewed publications and she has also contributed to building marine science capacity in East Africa through supervision of students and as President of the Western Indian Ocean Marine Science Association (WIOMSA). Dr. Muthiga has also coordinated and participated in other regional and professional initiatives and has received several awards including the National Geographic/Bufet award for achievements in Conservation, the Award for Conservation Excellence, the Kenyan Presidential award, and the Order of the Grand Warrior.