

Chapter 2

independent Scientific Committee

member profiles

Lorraine Cairnes



Lorraine Cairnes is executive director of Fathom Consulting, which consults in planning, natural resources and heritage management. She has over 30 years experience in management of natural resources, and natural and cultural heritage in Australia. Lorraine has held senior executive positions in both the public and private sectors, including New South Wales (NSW) Fisheries, the National Parks and Wildlife Service (NPWS), Sydney Water, the NSW Department of Planning and the NSW Heritage Council.

Her first employment was at Kosciuszko National Park - Lorraine was Australia's first female ranger. Her extensive practical field experience includes original investigations for new national parks and nature reserves throughout NSW, including the extensive Wollemi National Park. Her longstanding association with Kosciuszko National Park includes studies related to sustainable uses. She has chaired independent high-level reviews and committees, including the Premier's Review of the *Native Vegetation Conservation Act* (NSW), and the NSW Water Conservation Task Force (which produced the NSW Water Conservation Strategy) and the NSW Advisory Panel for the Register of the National Estate (for which she was joint chairperson).

Lorraine is author of the Australian Natural Heritage Charter, Australia's voluntary standard for natural heritage conservation; she is also a member of the Environment Institute of Australia and its NSW Division Committee. Her role in the Independent Scientific Committee (ISC) included coordination and collation of inputs, and overview analysis.

Dr Alec Costin AM



Alec Costin has more than 40 years experience in research and management of natural resources, especially in high-mountain catchments, through his work with the Commonwealth Scientific and Industrial Organisation (CSIRO), universities and state conservation agencies. Alec was a Senior Research Scientist and Chief Research Scientist at the Division of Plant Industry, CSIRO from 1955 until 1974, and is a fellow of the Australian Academy of Science. He is an international authority on the ecology of high-mountain and high-latitude ecosystems, and is widely acclaimed for his research into alpine vegetation, soils and hydrology.

Alec is a former member of the Kosciuszko National Park Advisory Committee and has published extensively on the flora, soils and ecosystem functions of Kosciuszko National Park, including the definitive *Kosciusko Alpine Flora* (2000) and *A Study of the Ecosystems of the Monaro* (1954).

"Independent and objective expertise from a range of disciplines was needed, given the diverse range of values that Kosciuszko National Park possesses."

Dr Robert Galloway



Born and educated in Scotland, Robert Galloway researched 'Periglacial phenomena in Scotland' for his doctorate. After graduation he conducted postgraduate studies in France, Germany, Arctic Norway and Greenland. From 1958 until 1987, Robert was a research scientist based in Canberra with CSIRO Division of Land Research, and he conducted extensive regional surveys in Queensland and the Northern Territory. He also worked on the Quaternary, focusing on glaciation in the Kosciuszko area, the United States and Argentina. This led to related studies into snow falls and palaeoclimatics in the Snowy Mountains in relation to climate change.

Robert has produced over 62 scientific publications, as well as more than 20 conference papers, and is considered one of Australia's leading experts in the field of glaciation.

Prof Elery Hamilton-Smith AM



Elery Hamilton-Smith has been a consultant in social research, policy and planning since 1967, with work experience across some 35 countries and with both the United Nations and the Commonwealth Secretariat. Current academic posts in the social sciences include honorary professorships at the International Centre of Excellence, University of Wageningen, Netherlands; Lincoln Gerontology Centre, Faculty of Health Sciences, La Trobe University, Bundoora; and the School of Information and Environmental Sciences, Charles Sturt University, Albury. Elery is also a visiting professor at some 15 overseas universities with over 1000 books, reports, professional papers and other publications to his name.

Elery is a member of the World Conservation Union (IUCN), a member of the steering committee for the World Commission on Protected Areas, chair of the Task Force on Cave and Karst Protection, and a member of the Working Group on Collaborative Management.

Dr Marc Hockings



Marc Hockings is a senior lecturer in the School of Natural and Rural Systems Management at the University of Queensland. Following undergraduate and postgraduate degrees in zoology, Marc worked for the Queensland National Parks Service for 15 years, where he gained experience in diverse aspects of conservation and protected area management. His doctorate was on the evaluation of management effectiveness in protected areas and his current research interests focus on issues of monitoring and evaluation in conservation management. Marc is a vice-chair of the IUCN World Commission on Protected Areas, a World Heritage advisor to the IUCN and a member of the Commission's Global and Australian Steering Committees. He is a member of the Fraser Island World Heritage Area Scientific Advisory Committee.

Marc was the principal author of the IUCN's best-practice guidelines on evaluation of management effectiveness in protected areas. He is currently managing a joint United Nations Educational, Scientific and Cultural Organization (UNESCO)/IUCN project that is applying these guidelines in ten World Heritage sites in Africa, South Asia and Latin America.

Prof Jamie Kirkpatrick AM



Jamie Kirkpatrick is Professor of Geography and Environmental Studies at the Hobart campus of the University of Tasmania. His research is focused on the maintenance of natural values, particularly those relating to vegetation and wilderness, and extends from work on the politics of environment to work on the ecology of natural vegetation. He has had considerable experience in building cases for, and assessing, natural world heritage values in Australia.

Jamie is currently chair of the scientific advisory committee set up under the *Threatened Species Protection Act 1995* (Tasmania), vice-president of the Institute of Australian Geographers, and a member of the Tasmanian Wilderness World Heritage Area Advisory Council and the University of Tasmania Council.

Bruce Leaver



Bruce Leaver is currently first assistant secretary in charge of the Heritage Division within Environment Australia. As well as filling the role of executive director of the Australian Heritage Commission, Bruce is responsible for the Commonwealth's role in World Heritage Areas, the *Aboriginal and Torres Strait Heritage Protection Act* and the *Historic Shipwrecks Act*. Bruce joined the Commonwealth Government in August 1999. Before that he spent 30 years in heritage management in three states. He was a regional director in the NSW NPWS, director of the South Australia NPWS, and more recently, the Commissioner of Resource Planning and Development in Tasmania.

Bruce's specific contribution to the ISC's report was to co-author the fire management paper. Bruce is a professional forester with extensive experience in bushfire management at all levels of protection and fire suppression, including in Kosciuszko National Park. He has served as a member of the Australian Capital Territory (ACT) Bushfire Council and the South Australia Bushfire Prevention Council, and has developed bushfire protection planning measures for state planning systems.

Dr Ian Mansergh



Ian Mansergh is currently the manager of the Flora and Fauna Directorate for the Department of Natural Resources and Environment in Victoria. He has published more than 60 scientific publications, has conducted innovative research and is an acknowledged expert in alpine ecology, environmental management, threatened species, wildlife modelling, greenhouse issues and Aboriginal knowledge of fauna. Ian has more than 20 years of experience in scientific investigations in the alps, dealing mainly with fauna. This strong zoological base is complemented by his expertise in broader policy development, land use planning and management,

particularly in the context of improved biodiversity conservation - evidenced by Ian's contribution as a major author to *Victoria's Biodiversity*. Ian also has experience in overseas alpine and subarctic environments.

Dr Richard Marchant



Richard Marchant is a freshwater ecologist and has worked for the past 20 years on the ecology of invertebrate communities in streams and rivers in Victoria. He is currently Senior Curator of Terrestrial Invertebrates at the Museum of Victoria. He has 30 years of research experience, starting with his PhD studies on salt lakes in western Victoria and continuing since on river ecosystems, including tropical rivers in the Northern Territory, temperate rivers in Canada and streams on subantarctic Macquarie Island. His major interests centre on the ecology of the aquatic insects that form the majority of species in these running-water

ecosystems. Much of Richard's work has been concerned with the effects of various human-caused disturbances (eg. dam building, and discharge of heated water and various other pollutants) on stream invertebrate communities.

He has conducted surveys of these communities in both disturbed and undisturbed rivers; investigated those that live deep within the gravel of the riverbed (the Hyporheic zone); and carried out quantitative studies on the life histories, growth rates and population dynamics of a range of aquatic insects and freshwater crustaceans. Richard has been involved both as a consultant and as a member of various committees in setting minimum flows for regulated rivers and has been an adviser to the federal government for its Monitoring River Health Initiative.

Richard's recent work has been funded and carried out with colleagues from the Cooperative Research Centre for Freshwater Ecology, of which he is an associate member.

Prof Trevor Mules



Trevor Mules is currently the Professor of Tourism at the University of Canberra and a coordinator for the Cooperative Research Centre for Sustainable Tourism, having had previous experience as an associate professor at the Graduate School of Management (Adelaide) and as a senior lecturer in economics at Griffith and Adelaide universities. Trevor's research has focused on tourism, particularly special events, the economics of tourism, tourism expenditure, tourism impact, and economic modelling, especially in relation to input-output models. Trevor is also a member of the ACT Heritage Council and is on the board of the Centre for Australian Cultural Studies.

Dr Alan Newsome



Alan Newsome was educated in zoology, botany and geology at the University of Queensland. He gained early field experience in the Northern Territory, assessing the impacts of pest species on the cattle and sheep industries, describing the distribution and abundance of key species of fauna, and indicating important sites for creating national parks. He was awarded a master's degree from the University of Adelaide for his subsequent studies on the red kangaroo. Alan's study at Adelaide University focused on the causes of mouse plagues, the topic for his doctorate. On joining the CSIRO,

Alan studied dingoes as pests of cattle and sheep in Central Australia and south-east NSW; this included a Fulbright Fellowship for one year at the University of Berkeley, California, where he studied interactions between predators and their prey in the wild. This led to further research in Australia into links between predation by dingoes and the availability of kangaroos, rabbits, foxes and feral cats. Most recently, Alan has worked with the Pest Animal Control Cooperative Research Centre, based within CSIRO Sustainable Ecosystems in Canberra, understanding the likely responses of pest species to immunocontraceptive techniques and diseases such as rabbit calici virus disease and rabbit haemorrhagic disease.

These studies have led to a PhD from the University of Queensland. Alan has been a member of several state, national and international committees: Australian Vertebrate Pest Committee; Cane Toad Advisory Committee; Threat Abatement Plan for Rabbit, Fox, Feral Cat, Feral Goat and Pig; ACT Vertebrate Pest Management Committee; Advisory Committee to Minister, NPWS; Coordinator, Mouse Plague Research, South Australia; Endangered Species Advisory Committee; Marsupial Specialist Group; IUCN Species Survival Commission; IUCN Commission on Ecology; and the Northern Territory Wildlife Advisory Council.

Dr Catherine Pickering



Catherine Pickering leads the Mountain Tourism Subprogram for the Cooperative Research Centre for Sustainable Tourism. This interdisciplinary research team examines issues in the sustainability of mountain tourism.

Catherine has had a long interest in research in the Australian Alps, from theoretical ecology through to tourism and environmental management. Currently, she is a senior lecturer in the School of Environmental and Applied Sciences at Griffith University. Previously, she was a postgraduate fellow on a National Science Foundation project in the United States. Catherine has a PhD and a BSc (Honours) from the Australian National University.

Dr David Shorthouse



David Shorthouse has a PhD from the Australian National University, a master's degree in conservation from University College, London and a science degree from the University of Newcastle (UK). He taught ecology and conservation planning at the Canberra College of Advance Education from 1971 to 1980, and has extensive experience in Environmental planning and management in the ACT and elsewhere through employment with the (former) National Capital Planning Authority, the Commonwealth Department of Environment (World Heritage Unit), and the ACT Parks and Conservation Service.

David currently manages the Wildlife Research and Monitoring Unit of Environment ACT and is responsible for biodiversity survey and monitoring programs in the ACT, including identification and protection of threatened species, wildlife research and conservation planning. He was closely involved with the establishment of Namadgi National Park in 1986 and with the preparation of its first plan of management.

Andy Spate



Andy Spate was employed for over 20 years by the NPWS as Natural Heritage Officer, Karst and as Senior Project Officer, Water Reforms. His professional career has been largely with the CSIRO Division of Land and Water Research and at NPWS. At CSIRO he was involved in research into dryland salinity, catchment dynamics, groundwater systems, plant-soil-water relationships and landscape rehabilitation.

Andy's appointment to the NPWS was as the first professional karst specialist in Australasia, with responsibilities for cave and karst management, and for research into karstic terrains. He has been involved in many other aspects of land management and land-use planning, representing the service in many forums and community involvement activities. Andy's main interest, when he gets the time, is in hydrologic processes in karst terrains and in the development and management of karst landscapes, including caves. A more recent research interest has been in the field of groundwater-dependent ecosystems - particularly their fauna.

Andy has published or written more than 150 environmental and consultant reports, environmental impact statements, major in-house reports and peer-reviewed scientific papers in the field of cave and karst management and processes, including groundwater issues, and on land management generally. He has lectured at a number of universities and has presented many courses on karst geomorphology and hydrology. Andy now runs his own environmental consultancy business - Optimal Karst Management - which is undertaking projects in Australia and Asia.

Prof Sharon Sullivan



Sharon Sullivan has an MA (Hons) and a BA (Hons) in history, with over 30 years experience in heritage place and land management. She is deeply involved in the development of cultural heritage management systems in Australia. Sharon was previously the deputy executive director of NSW NPWS; then executive director, Australian Heritage Commission and first assistant secretary, Australian and World Heritage Group for the Commonwealth Department of Environment and Heritage, and Australian Government Leader of Delegation, World Heritage Committee. She is also a fellow of Australian Academy of the Humanities, a member of the Australian Institute of Aboriginal and Torres Strait Islander Studies, and a member of the National Executive Committee of Australia, International Council on Monuments and Sites.

Sharon is an adjunct professor, School of Anthropology, Archaeology and Sociology at James Cook University of North Queensland, and adjunct professor, School of Natural and Rural Systems Management, at the University of Queensland. She has been a consultant the Getty Conservation Institute, the World Monument Fund, the World Bank, and the World Heritage Committee on various aspects of cultural heritage management. Sharon is the author of a range of publications including, jointly with Michael Pearson, *Looking After Heritage Places* - a university textbook on heritage place conservation and management. She has done extensive planning and teaching work with site managers in Australia, the United States, Cambodia, Africa and China on cultural heritage assessment and management issues. In her spare time, Sharon and her partner run a cattle farm on the Nymboida River in northern NSW.

Dane Wimbush



Dane Wimbush MSc (Sydney), now retired, worked as an alpine ecologist with CSIRO Division of Plant Industry from 1957 to 1986, based first at Island Bend, then Waste Point, and for the last six years in Canberra.

Together with Alec Costin, he conducted research in a number of fields, including the measurement of vegetation on permanent reference areas over long periods; studies on the hydrology of *Sphagnum* bogs, various aspects of snow accumulation, soil erosion and run-off, and the effects of sheep grazing; and a seven-year study of the effects of feral rabbit populations in a subalpine frost hollow. His interests extend to bird-banding, sailing and flying. He is a co-author of *Kosciuszko Alpine Flora*, recently in its second edition.

Since his retirement, Dane has worked as a consultant with NPWS, carrying out broad-scale vegetation mapping from Landsat Thematic Mapper imagery of southern NSW with his wife, Robyn, for the Murray-Darling Basin Commission, which involved extensive field work. He followed this up by conducting a search for rare and endangered species along the Alpine Way and, more recently, has looked at riparian vegetation for the Snowy River Inquiry.

Graeme Worboys



Graeme Worboys (M.App.Sci.) is chief executive officer of Green Globe Asia Pacific, and principal consultant to the Cooperative Research Centre for Sustainable Tourism. He is the Deputy Vice Chair, Mountains for the World Conservation Union's World Commission on Protected Areas. He has contributed to environmental management for 30 years and was previously an executive director with the NSW NPWS. Graeme has a long history of involvement in tourism and recreation planning and management, particularly in Kosciuszko National Park. He is the author of the NSW NPWS 1997 Draft Nature Tourism and Recreation Strategy and principal author of *Protected Area Management Principles and Practice*, a university text published by Oxford University Press in 2000.

Graeme's work for the past three years has focused on applications for environmentally sustainable tourism for companies and communities throughout the Asia-Pacific region, including establishing environmentally and socially sustainable performance levels.

Doug Young



Doug Young leads the Natural Resource Economics team in Rural Solutions South Australia (formerly PIRSA Rural Solutions), where he commenced in January 1999. He previously worked for the South Australian Centre for Economic Studies and the Australian Bureau of Agricultural and Resource Economics. Much of his recent research has been directed towards the economic evaluation of projects and policies, particularly those involving interactions between irrigated agriculture and changes to environmental attributes and regional communities.

Doug holds a master's degree in economics from the University of Adelaide and an honours degree in biological sciences from the Flinders University of South Australia. He is also a former president of the South Australia Branch of the Australian Agricultural and Resource Economics Society.

Mark Adams



Mark Adams was executive officer for the Independent Scientific Committee (ISC). In his role as Planner with the Kosciuszko Plan of Management team, Mark designed, created, facilitated and coordinated the ISC assessment. Mark's assistance to the ISC was invaluable, with his extensive knowledge and experience of the park's values, management issues, previous research and community perceptions of the Park and the Service. His impartiality and project management skills were important in successfully completing this report within demanding timeframes.