

**The last 50 years  
informing the next 50:  
Proceedings of the Black Mountain  
Symposium 24–25 August 2018**



**Rosemary W Purdie (Editor)**

**Friends of Black Mountain  
Canberra**

The last 50 years informing the next 50: Proceedings of the Black Mountain Symposium held in Canberra, 24–25 August 2018.

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Nick O'Leary



BLACK MOUNTAIN



Front cover: a view of Black Mountain from the Mount Ainslie summit lookout. Photo: RW Purdie.

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## Introduction and acknowledgements

### What if ...?

The idea for running a symposium about Black Mountain was sparked in 2015 by two things: my growing awareness of the enormous amount of scientific collecting and research that had been carried out in the area over the decades, and the realisation that July 2020 would be the 50th anniversary of Black Mountain being declared a reserve to protect its natural values. These prompted a further thought: wouldn't it be nice to have a book on the natural history of Black Mountain released in mid 2020 to help mark the 50th anniversary? The obvious next question—how to get all the information about Black Mountain 'flushed out' and written up in a way that would document what we know about the area and facilitate preparation of a natural history book—produced the somewhat ambitious answer: just hold a symposium! Turning this optimistic dream into a concrete possibility occurred in late 2015 when, after floating the symposium idea with the Friends of Black Mountain (FoBM) Coordinating Committee, without batting a collective eyelid they agreed to take on the event. The symposium date was set for 24–25 August 2018 and the long process of planning commenced.

### Planning and programming

A Planning Committee comprising FoBM members Linda Beveridge (convenor), Julie Hotchin, Chris Ikin, Joy McMahon, Rosemary Purdie and Libby Viccars, and Karen Williams, Molonglo Catchment Group (MCG) organised the symposium event, including venue, sponsors, publicity, registration, and budget. Tony Webster, MCG, set up and managed an MCG-hosted symposium web site, while Alison McLeod from the ACT Parks and Conservation Service provided periodic assistance to the Planning Committee and helped provide a conduit to the Parks and Conservation Service. A Program Committee managed the preparation of background papers, authors, symposium program, talks and themed walks. It comprised Rosemary Purdie (convenor) with Michael Doherty, Paul Fennel and Kim Pullen for the biophysical aspects, and Julie Hotchin and Mark Butz for the cultural aspects.

The symposium theme *The past 50 years informing the next 50* reflected the objectives defined for the event:

- to collate and synthesise known information about the cultural history and natural values of Black Mountain;
- to provide an up-to-date picture of Black Mountain's current biodiversity and ecology;
- if possible, to track changes in Black Mountain's biota and environment over the last 50 years and determine the management implications for the next 50; and
- to better understand the importance of the area and how to maintain its values into the future.

From the outset the aim was to get experts to write detailed background papers on particular topics covering both the natural and cultural environments and have those papers available on the web for symposium participants. For the purpose of the event, Black Mountain was defined as including the nature reserve and the northern and southern annexes of the Australian National Botanic Gardens (see Figure 1) as they form a contiguous block of natural vegetation. In preparing the biophysical papers, authors were encouraged to review published and unpublished research, tap into verifiable data sources and take account of research carried out in Bruce Ridge and Aranda Bushland (considered part of Black Mountain during Canberra's early development) that was relevant to management of the reserve. As less published research material was available for the cultural environment, preparation of the cultural background papers relied largely on primary research that involved trawling through large volumes of archival and other material and tapping into the personal knowledge of many local people.

## Black Mountain Symposium Area (green colours)



**Fig. 1.** Black Mountain area defined for the symposium, showing major roads and walking trails in the nature reserve.

The symposium ran over two days, with a full day of presentations on Friday 24 August (Table 1) at the CSIRO Discovery Theatre, located on the eastern foot-slopes of Black Mountain, and a series of themed walks in Black Mountain reserve the following morning (Table 2). Around 145 people attended the symposium, with 77 also participating in the walks.

**Table 1.** Black Mountain Symposium Program, 24 August 2018

<b>Time</b>	<b>Topic</b>	<b>Speaker</b>
<i>Morning Session Chair: Karen Williams</i>		
9:30 am	Announcements	Karen Williams
	Welcome to Country	Wally Bell
	Symposium opening	Mick Gentleman MLA, Minister for the Environment and Heritage
<i>Theme: people and place</i>		
10:00 am	History and uses from deep time to 1970	Mark Butz
10:30 am	Education, recreation and protest	Julie Hotchin
10:50 am	Morning Tea	
11:20 am	Scientific collecting, monitoring and research	Rosemary Purdie
11:40 pm	Reserve declaration and management	David Shorthouse
<i>Theme: Black Mountain, the biophysical place</i>		
12:00 pm	Geology	Doug Finlayson
12:10 pm	Landforms and soils	David Tongway
12:20 pm	Vegetation and plant ecology	Michael Doherty
12:35 pm	Lunch	
<i>Afternoon Session Chair: Linda Broadhurst</i>		
<i>Theme: biodiversity and natural history</i>		
1:35 pm	Plants	Rosemary Purdie
1:55 pm	Mammals	Murray Evans
2:10 pm	Birds	Paul Fennell
2:25 pm	Reptiles and amphibians	Anke Maria Hoefer
2:40 pm	Invertebrates	Kim Pullen
2:55 pm	Afternoon Tea	
3:25 pm	Fire history and ecology	Michael Doherty
3:40 pm	Synthesis	Sarah Ryan
	General comments and discussion	
4:25 pm	Thanks and announcements	Linda Beveridge
4:30-6:00 pm	Drinks & Nibbles	

**Table 2.** Themed walks, 9:30 am to noon, Saturday 25 August 2018

<b>Theme</b>	<b>Location</b>	<b>Leader (backup)</b>
Aboriginal values	Upper and lower Woodland Trail circuit on the south west side of Black Mountain.	Wally Bell (Karen Williams)
Colonial & national capital values	Black Mountain summit down the Summit Trail to the Forest Trail loop.	Mark Butz (Julie Hotchin)
Geological evolution and features	Selected sites including Black Mountain summit, northern parts of the reserve near Belconnen Way and south west parts of the reserve.	Doug Finlayson (Linda Beveridge)
Birds	Back of ANBG along the Summit Trail, anticlockwise along the Forest Trail and return down an informal walking track to the back to ANBG.	Geoffrey Dabb (Sandra Henderson)
Cryptogams	South west part of the reserve in the Lower Woodland Trail area.	Heino Lepp (Chris Cargill)

<b>Theme</b>	<b>Location</b>	<b>Leader (backup)</b>
Trees & shrubs	Carpark off Belconnen Way, along sections of the Link Trail and Callitris Trail, across to Finnerans Road, Orchid Trail and back to the car park.	Rosemary Purdie
Vegetation & fire	North-eastern part of the reserve in areas near the Powerline Track.	Michael Doherty (Kim Pullen)

### **What did the symposium achieve?**

At one level, the huge amount of information pulled together for the background papers and condensed into short presentations at the symposium eloquently told the current 'Black Mountain story'. At another level, the symposium was a tangible demonstration of the many Canberrans who have a very strong, personal attachment to Black Mountain and were able to celebrate and acknowledge this as well as learn there is far more to the area's story than most realised!

In terms of the original objectives for the symposium, three major outcomes were achieved. Collectively, the background papers:

- provide an up-to-date, detailed account of Black Mountain's natural features and its social and cultural history and, from colonial times onwards, the key events, organisations and people who have helped shape its management, document its values and articulate its place as an integral part of Canberra;
- give a comprehensive synthesis of Black Mountain's plant and animal diversity, an assessment of changes that have occurred in them since the area was declared a nature reserve, and provide a benchmark—in a level of detail rarely available for conservation areas—for better monitoring future biodiversity changes; and
- identify key management issues for maintaining Black Mountain's ecological integrity in coming decades.

These outcomes were covered in more detail by Sarah Ryan during her presentation at the end of the symposium (now documented as a paper *Black Mountain Symposium 2018: synthesis*) in which she provided a synthesis of all the background papers and talks. She emphasised Black Mountain's important existence values (biophysical and cultural), use values and its most significant characteristics, and highlighted the main management issues that need to be addressed in terms of past on-ground experience, current knowledge and the major drivers of future change—Canberra's projected population growth and predicted changes in the ACT's climate. Her synthesis, together with the body of material collated for the symposium, provide a strong evidence-based foundation for ongoing management of the area by the ACT Government in partnership with the Canberra community.

### **Symposium proceedings**

Following the symposium, Sarah Ryan and David Shorthouse converted their talks into papers for the proceedings, while minor modifications or additions were made to background paper numbers 1, 5, 10, 20 and 21. Julie Hotchin also added to paper number 20 (*Black Mountain as a place of protest*) an appendix that provides a summary of archival folios and their contents relating to construction of the Black Mountain tower. The proceedings can be accessed electronically through the Friends of Black Mountain website<sup>1</sup> or as hard copies lodged in the National Library of Australia, ACT Heritage Library, ANU Menzies Library, the Australian National Botanic Gardens library and at the CSIRO library collections at the Australian National Herbarium.

<sup>1</sup> <https://www.friendsofblackmountain.org.au> (November 2018).

## **Into the future ...**

To help increase accessibility to archival material about the declaration and management of Black Mountain reserve, David Shorthouse will lodge in the ACT Archives a document containing his notes on the contents of the archival files he examined together with copies of various maps found in them. The Symposium Planning Committee also intends to prepare a chronology of key events that have taken place on, or relate to, Black Mountain from the 1800s to the present, and make it publicly accessible.

In early 2019 the Friends of Black Mountain Coordinating Committee will start work on producing a book for the general reader about the natural history of Black Mountain, drawing on relevant symposium background papers, and aims to release it in July 2020 as part of the celebrations of the 50th anniversary of Black Mountain Nature Reserve. The natural history book will be complemented by a separate book about the people and cultural landscapes of the 'Greater Black Mountain' area. This is being developed by Mark Butz and is also due for publication in 2020 to mark the anniversary.

The Friends of Black Mountain will also use material from the symposium for its ongoing activities to help meet the organisation's aims to encourage interest in and develop knowledge and understanding of the natural, cultural, recreational, scientific, educational and aesthetic values of Black Mountain; build a record of the reserve's biodiversity and values; and promote its uniqueness within and beyond the ACT region. Hopefully this iconic area will continue to be a place of study, research, learning, inspiration, pleasure and recreation for students, academics, citizen scientists, Canberra citizens and visitors alike and inspire a community as willing to protect its integrity and scientific importance as energetically as those people in the past who are now an integral part of the Black Mountain story.

## **Acknowledgements**

Profound thanks to the many people who helped make the symposium happen. The Planning and Program committees (see page v) managed the myriad of organisational details; the authors and speakers (Table 1) trawled through often mountains of data, scientific papers, reports and other material, wrote it up rigorously for the background papers and condensed it into illuminating talks; the sessions chairs (Table 1) kept the symposium flowing and on time; and the walk leaders (Table 2) shared their knowledge for an absorbing morning despite the dry conditions in the field. Karen Williams, MCG President, provided for the use of several MCG management facilities, while Tony Webster, MCG, managed web material and assisted with financial matters. Peter Byron, General Manager of the Australian National Botanic Gardens, allowed the Symposium Planning Committee to use ANBG's meeting facilities and supported preparation of the symposium poster, designed by Siobhan Duffy. Mariana Rollgejser prepared the map of the Black Mountain study area. During the symposium Cathy and Chris Ikin and Libby Viccars, Friends of Black Mountain, helped out on the symposium registration desk, Cathy Ikin managed the sale of booklets and other material relating to Black Mountain, and Murray Fagg took photographs during the day. Daniel Iglesias, Director of the ACT Parks and Conservation Service, from the start enthusiastically supported the Friends of Black Mountain organising and running the symposium and provided brief comments prior to the general discussion at the end of it. Financial and other sponsorship was provided by the Centre for Australian National Biodiversity Research (CSIRO and ANBG); Australian National Botanic Gardens; Environment, Planning and Sustainable Development Directorate, ACT Government; ACT Parks and Conservation Service; Molonglo Catchment Group; Nick O'Leary; Four Winds Vineyard; and Black Mountain coffee.

Rosemary Purdie  
Friends of Black Mountain  
November 2018

## **Biographical notes on authors, session chairs, speakers and walk leaders**

### **Wally Bell**

Wally is a Ngunawal Elder and chair of the Buru Ngunawal Aboriginal Corporation (a Not For Profit body) where he is also a Cultural Heritage Officer. During his 33 years with the Corporation, he has been actively involved in the management and protection of Ngunawal Aboriginal cultural heritage as well as caring for country as a traditional custodian to maintain his Aboriginal sites of significance. He is also an Aboriginal Cultural Heritage Consultant and participates in landcare conservation and management on country, as well as engaging with the wider community to help them develop a better understanding of Ngunawal culture.

### **Linda Beveridge**

Linda was a senior officer in the Australian Public Service for more than 25 years in areas of information services, and education and professional development. This included research into qualitative and quantitative measurement of information services and being a representative on national professional bodies and international forums. Since retirement she has pursued her interest in conservation, particularly Australian native plants. She was invited to be Convenor of the Friends of Black Mountain and a member of the Council of Friends of Australian National Botanic Gardens. Linda hopes the Black Mountain Symposium will have an ongoing influence in the Friends' programs for protecting the integrity and uniqueness of Black Mountain Nature Reserve.

### **Dr Linda Broadhurst**

Linda is Director, Centre for Australian National Biodiversity Research (CANBR) and Director, Australian National Herbarium (ANH) at the CSIRO National Research Collection Australia, and has been working at CSIRO since 2001. Her early research assessed how remnant size, isolation and degradation associated with recent landscape fragmentation affected long-term plant population viability. Her most recent research is assisting NRM groups and NGOs to understand how these changes influence their seed sourcing and seed production to ensure that restored populations have the broad genetic base required to respond to changing environments.

### **Mark Butz**

Mark is an environmental science graduate with a particular interest in what we can learn from the past to enhance both our understanding of the present and our choices for the future. This reflects a lifelong interest in environmental and social history, community participation, and the power of story. He pursues these through his work as a freelance consultant, facilitator and writer, and through volunteer efforts. He has lived in Canberra since 1980, with Black Mountain looming in his backyard. However, for some years he has been writing history for Jerrabomberra Wetlands and participating in management advice for Mulligans Flat-Goorooyarroo, following his earlier work on natural and cultural landscapes of Blundells Flat and Shannons Flat in the Lower Cotter catchment.

### **Geoffrey Dabb**

Geoffrey began birdwatching around his home town of Geelong during his school-days, when he first came across bird photography. After qualifying as a lawyer, he spent many years in Papua New Guinea where he was a foundation member of the New Guinea Bird Society. He came to Canberra in 1980 and has been retired since 2002. He has acquired a huge library of bird books and is the current chair of the BirdLife Australia English Names Committee. He has given several talks on the birds of Black Mountain, using his extensive collection of photos.

### **Michael Doherty**

Michael is a plant ecologist based in Canberra. Born in southern Sydney, he spent much of his formative years botanising and bushwalking in the sandstone country of the Sydney Basin, and graduated with an honours degree in science from the University of Sydney in 1986. For over 30 years he has undertaken research and consulting in plant conservation and management both in Australia and overseas. Initially based in Sydney at the National Herbarium of NSW and then the NSW NPWS, he subsequently spent 25 years with CSIRO in Canberra, until leaving in 2016 to

pursue a career as a gentleman naturalist and occasional botanical consultant. Michael has a strong interest in vegetation disturbance dynamics and is currently writing up a long-standing part-time PhD at ANU, investigating the relationships between fire, plant species richness and plant community composition in montane ecosystems.

### **Dr Murray Evans**

Murray is an ecologist with the Conservation Research section of the ACT Government, where for the past 15 years he has been involved in the recovery of threatened fauna. Prior to moving to the ACT, he worked for universities and parks agencies in NSW and Queensland. Over his 30-year career in wildlife management and research he has been fortunate to study some fascinating animals in some amazing places in Australia and South America. He is currently involved in the conservation of endangered Corroboree Frogs, for which he has a particular soft-spot, and hopes that one day Corroboree Frogs will again be common and calling from the sphagnum moss bogs in the high areas of Namadgi National Park.

### **Paul Fennell**

Paul started his working life as a science teacher in secondary schools in Queensland in 1965. He finished his working life as an administrator in the ACT vocational education and training system in 2006. He is a past president of Canberra Ornithologists' Group (COG) and was for many years the manager of COG's database of bird sightings for the ACT and region. He has edited two editions of *The Birds of Canberra Gardens*, and is currently the editor of the COG Annual Bird Report.

### **Dr Doug Finlayson**

Doug is a graduate of the University of Edinburgh, BSc (Honours Physics, 1960) and subsequently graduated with MSc and DSc degrees in geophysics. His career began with the British Antarctic Survey before he joined the Bureau of Mineral Resources, Geology & Geophysics (now Geoscience Australia) in 1965. His professional interests were in determining the major structural features of the continent and in their tectonic evolution. Now retired, he is still an active member of Geological Society of Australia with continuing interests in geoheritage, geotourism and geoeducation. With a number of co-authors, in 2008 he published *A Geological Guide to Canberra Region and Namadgi National Park*.

### **Anke Maria Hoefler**

Anke Maria has been training volunteers how to eavesdrop on frogs since 2011. She is a great advocate for citizen science, stewardship and above and beyond all, frogs, and singlehandedly coordinates the ACT and Region Frogwatch Program. In her previous life she has been a physiologist, morphologist and a behavioural ecologist. Anke Maria has teamed up with numerous scientists to add to the list of publications based on Frogwatch data. Securing ongoing funding for Frogwatch would be the highlight of her career with the Ginninderra Catchment Group.

### **Dr David Hogg**

David is a retired environmental consultant with 40 years of work experience in the Canberra area, including several projects relevant to Black Mountain. He is a regular participant and organiser in orienteering events in Black Mountain Nature Reserve and has participated in various other competitive events in the area.

### **Julie Hotchin**

Julie is a historian with research interests in social memory, the role of place in creating identities and how people express these connections. She is particularly interested in how Black Mountain has been imagined over time and its place in the social and cultural history of Canberra. She loves being in the bush and walks regularly on Black Mountain, which always provides inspiration. Julie is currently a visiting scholar in the School of History at the Australian National University and a member of the Friends of Black Mountain.

### **Heino Lepp**

Heino is an honorary associate of the Australian National Botanic Gardens and helps with the fungal queries received by the botanic gardens. His major interest is in certain groups of non-lichenized

fungi. However, a long friendship with some bryologists and lichenologists has meant that he has also picked up a modicum of knowledge about bryophytes and lichens.

#### **Dr Michael Mulvaney**

For over thirty years Michael has spent at least a day a month regenerating his beloved Red Hill. This has given him a good practical knowledge of the complexity and value of the wildlife in our local reserves. He is currently employed by the ACT Government to provide wildlife advice into planning, development and management decisions. Over half of the advice given is based on information derived from fellow citizen scientists who partook in rare plant surveys or post sightings to Canberra Nature Map.

#### **Dr Will Osborne**

Will is an adjunct Associate Professor with the Institute for Applied Ecology at the University of Canberra. He previously taught ecology at the University (1994–2010) and before that worked as a wildlife ecologist in the ACT Parks and Conservation Service. He is a dedicated conservation biologist with a particular focus on threatened reptiles and amphibians, urban wildlife ecology and alpine wildlife. He and his post-graduate students have had a major focus on threatened wildlife in natural grassland remnants in the ACT. This research and survey work has resulted in major changes to planned urban infrastructure, the shaping of the urban edge and an improvement in wildlife management within urban reserves. Will is a co-author of the ACT Government report: *Lower Molonglo River Corridor and Reserves: Management guidelines for natural values*.

#### **Kimberi (Kim) Pullen**

Kim started collecting insects at a young age in Canberra and graduated to a career in entomology. He has worked in the areas of cytogenetics, pheromone-based control of crop pests, biological control of weeds, use of insects as indicators of environmental health, biodiversity survey and cataloguing, and collection management. He has collected insects in all states and territories of Australia, and in Mexico and Papua New Guinea. He is currently working in the Australian National Insect Collection, and is compiling a list of the insects of the ACT in his spare time.

#### **Dr Rosemary Purdie**

Rosemary is a plant ecologist with a particular interest in fire ecology, arid ecosystems and nature conservation. She has worked for the Queensland Herbarium, Bureau of Flora and Fauna, Australian Heritage Commission and Murray Darling Basin Commission, and was the ACT's second Commissioner for the Environment. She's been a member of government advisory bodies including the national Threatened Species Scientific Committee and the ACT's Flora and Fauna Committee and NRM Advisory Committee. Rosemary has been an Honorary Associate at the Australian National Herbarium since 2002 and has been studying Black Mountain's flora since 2009.

#### **Dr Sarah Ryan**

Sarah's career began in agriculture science with a PhD from the University of WA, a long time ago. Her interests developed into broader ones about the management and governance of whole landscapes, and she pursued these in many guises through her career in CSIRO and on various ACT Government advisory councils, including as Chair of the ACT NRM Council, and currently as Chair of the ACT Bushfire Council. She is recently retired as Deputy Chancellor, University of Canberra, and also on the Board of Capital Regions Landkeepers Trust. A love of bushwalking and landscape photography get her out into the bush.

#### **Dr David Shorthouse**

David has a long association with Black Mountain from his work on the ecological resources of the ACT (1979), biologist with the ACT Parks and Conservation Service (1981–1986), environmental planning for NCDC and National Capital Authority (1986–1992), and Manager, Wildlife Research Unit, Environment ACT (1995–2008). Since retirement he has been a member of the Mulligans Flat Sanctuary Management Committee and the Woodland and Wetlands Trust, and environmental consultant to the Ginninderry development in West Belconnen.

**Dr David Tongway**

David is a landscape ecologist and spent 48 years with CSIRO, working in rangelands, mined lands and agricultural lands with a special interest in restoration of disturbed landscapes. He has also worked in a dozen other countries implementing a 'soil health' field assessment procedure aimed at understanding management-induced soil problems and designing rehabilitation procedures.

**Dr Karen Williams**

Karen is President and a Managing Director of Molonglo Catchment Group. She works with people and environment to adapt and develop innovative ways of integrating natural resource management, social history, community history, community (cultural) development, and the visual arts. She uses specific skills—as author, scholar, researcher and artist—to initiate the creative interaction of environment, culture and social inclusion. Developing sustainability and education initiatives to strengthen the relationship between people and their environment in a holistic way, Karen integrates economic, socio-cultural and environmental considerations to bridge between Western and Indigenous knowledge.