

Bush Capital

the natural history
of the ACT

12 March — 26 June 2016

CANBERRA MUSEUM AND GALLERY



Acknowledgements

We have worked with so many people and organisations to bring this exhibition to you. We are grateful for the trust that so many have placed in us through lending works to the exhibition. This includes the National Library of Australia, the Museum of Applied Arts and Sciences, the National Gallery of Australia, the Australian National Insect Collection and the Australian National Wildlife Collection (CSIRO), the ACT Legislative Assembly, the Australian National University and the Australian National Botanic Gardens.

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For further information refer to the exhibition website: www.cmag.com.au/exhibitions/bush-capital-the-natural-history-of-the-act

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Outside cover:
Sharon FIELD, For posterity's record, Short Wallaby Grass (*Rytidosperma carphoides*), Golden Sun Moth (*Synemon plana*), 2014.
Photo: RLDI

Inside cover:
Chris HOLLY, Callum Brae Nature Reserve (detail), 2012

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Invertebrate specimens supplied by Australian National Insect Collection, CSIRO. Photos: RLDI



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Foreword

Dawn ... and I can hear something like a quiet hush from the wings before a concert. A moment's silence and then the sound swells ... a rabble of sparrows with loud chatter, exchanging stories ... what happened in the night and plans for the day ahead. A light rain means the grass seeds will be soft.

Now others start in: the soft tinkling of thornbills, the lower zitting of a wren, and the high psirrupps of silvereyes eating plums from the tree on the corner. All this a nearby treble to the deep double whoop of a koel, high in a plane tree a few streets away.

These songs quieten as the liquid piping of a magpie fills the moist morning air. The throbbing of a pigeon provides a steady bass.

It's summer and 6 am in Canberra's Ainslie. I have just moved house from a few suburbs away, and am surprised to discover different morning sounds. No more wattle bird, currawong or turtle dove, but there ... I can hear a chuckling friar bird. This one must be a late riser. I don't miss the plaintive early-morning cry of my neighbour's captive quail at all.

Each of us is enriched and enlivened by the natural world that surrounds us. In a different, wonderful way, every day. We take it for granted. It's our habitat.

This exhibition catalogue accompanies *Bush Capital: natural history of the ACT*, the inspiring exhibition at Canberra Museum and Gallery. It draws together objects, images and

sounds from each of the five habitat types in the ACT, including habitat from which I write, 'suburbia'.

Providing a rare opportunity to immerse ourselves in the diversity, beauty and curious nature of our natural world, it is also an opportunity to reflect on our own place in this environment.

Social History Curator, Rowan Henderson, has worked hand-in-glove with local naturalist Ian Fraser, and with the support of experts and enthusiasts across the ACT, to shape this intriguing exhibition. CMAG is also particularly grateful for the support it has received from ACT Parks and Conservation Service within the ACT Government's Territory and Municipal Services Directorate, and from the many institutional lenders to the exhibition.

We of the human species have been slow to recognise the limits and superb balance of the natural systems that surround us. We've been even slower to see our local commitments as part of the global community's responsibility to preserve the quality of life we enjoy today for future generations.

As a community, a jurisdiction, and a region, we in the ACT are stewards to some of the highest quality and most diverse ecosystems in the world. We also host some of the most threatened species and ecosystems. Community action, together with the work of the ACT Government, has blessed us with some protection and

improvement in the health of these ecosystems and the species they harbour. There is much to feel proud of. However the continued health of our environment now depends on our ability to act effectively in a broader regional and global context.

We know a better appreciation of our immediate environment can enrich our understanding of ourselves, but it is an urgent and relatively new necessity that we now understand how our local 'patch' interacts with the whole of our planet.

This exhibition is a fascinating introduction to the patches in our neighbourhood, some of which you may never have encountered before. We'd love to hear from you about how it inspires you to appreciate them, and to ask how we can better preserve their future. I encourage you to listen to the birds outside your window. What do they ask?

Shane Breynard

Director, ACT Museums and Galleries



Curatorial statement

When first developing the vision of an exhibition which would explore the natural wonder of our region, I knew that we would need to work with someone with a deep knowledge of our natural history in all its diversity, complexity and beauty. Luckily, local naturalist Ian Fraser responded to what I was aiming to achieve and wholeheartedly embraced the challenge of presenting this topic in a museum exhibition. Since then, Ian and I have worked together to define the core elements of our region's environment and to gather together the best visual and audiovisual material available to illustrate the natural diversity of plants and animals that live alongside us.

Ian and I decided that the first concept we wanted to present was that everything in nature stems from habitats. Without a healthy environment to sustain it life falters. As Ian explains in his catalogue essay, we are fortunate in the ACT that we are happily located at the junction of three major habitats. This accounts for the great diversity of life in our region. We have separated these habitats into six systems which are explored in detail in the exhibition: dry and wet eucalypt forests, subalpine, wetlands and rivers, woodlands and grasslands and the system we have ourselves created, suburbia.

Within these six sections of the exhibition you will encounter the diverse native grasses, trees, flowers, birds, fish, insects and mammals that thrive in these systems. They are represented through an equally diverse range of visual

materials including photographs, paintings, sculpture, natural history illustration and drawing as well as scientific specimens and audiovisual material. The work of local artists is represented alongside the work of those from farther afield. You will also find contemporary works of art, data visualisation and specimens, alongside historic examples.

I hope that you enjoy the opportunity to learn more about our environment and to be uplifted by its beauty. I encourage you to engage further with the excellent work that many members of our community are doing in caring for this land that is home to so much life, including ours. This has been a challenging exhibition to produce due to its hybrid nature; however I hope it brings you joy and wonder.

Rowan Henderson

Curator, Social History





Becoming the Bush Capital

The Australian Capital Territory, home of the Bush Capital, is a remarkable place. It is a tiny speck in the vastness of Australia, representing just 0.03% of the nation's land area. Yet within this speck we have recorded 35% of all the bird species ever seen in all of Australia and its far-flung ocean territories. We host nearly 10% of all Australia's orchid species; within a short walk of the city centre there are more native orchid species than can be found in the whole of Great Britain and Ireland.

One particular scene epitomises the Bush Capital for me. This is a view from one of the hides at Jerrabomberra Wetlands with a Latham's Snipe, recently arrived for summer from its northern Japanese breeding grounds, feeding on the mud with the national parliament in the background.

There was not always a Bush Capital. There was not even always bush. 430 million years ago what is now Canberra would have been covered with metres of sea water. In it swam strange jawless fish, among them the ancestors of all living vertebrates. But into the sea flowed streams from the raised Gondwanan mainland to the west and they brought silts, mud, sand and gravel which raised the level of the sea floor and in time – vast periods of time – these materials compressed into rock. By then the sandstones which form Black Mountain had already been laid down. Billions of tiny animals died and settled onto the bottom; their shells came to form the limestone outcrops for which the plains of Canberra would much later be named.

These were turbulent times and beneath the waves volcanoes brought to the surface molten material from deep in the earth's crust. Among the legacies are Mount Ainslie and Mount Majura, facing Black Mountain across the city. Sections of the earth's very crust were stretched and thinned, and into these troughs molten material poured. One of these, running south to north, provided the low-lying stretch of landscape which determined the Y-plan that shapes Canberra.¹

The Brindabella and Tidbinbilla ranges that overlook Canberra's activity combine older sea sediments with slightly more recent igneous rocks formed in subterranean furnaces – these form the great granite tors that define much of the high country.

In time, some 350 million years ago, the land emerged from the waves – and the bush was coming. Elsewhere plants had gained a foothold on land, emerging from estuaries and shallow bays. Inevitably small millipede-like grazing animals came from the sea to browse on them, and the hunters followed, ancestors of scorpions, spiders and ultimately insects. Eventually fish too found their way onto the shores, evolving legs and lungs and giving rise to amphibians. Labyrinthodonts, like three metre long tadpoles with tangled strips of teeth, reached their greatest size in eastern Australia and found their last stronghold here, surviving until just 110 million years ago, long after their overseas relatives had disappeared. By then the reptiles were undisputed rulers of the earth, and from

an obscure branch of them had arisen the mammals which lived in the dinosaurs’ shadows from about 300 million years ago.

The mighty dinosaur dynasty was finally brought low some 65 million years ago by a huge meteorite strike followed by a years-long winter with the sun blotted out by clouds of ash, smoke and dust. When it cleared the only surviving dinosaurs were the birds; the mammals diversified and grew to take over the world. By now ‘Australia’ was breaking free of Gondwana for the first time in 500 million years, and drifting off with a cargo of life including the newest and most rapidly evolving groups – mammals, birds and flowering plants. Isolated, they took their own evolutionary paths and Australia, including the Limestone Plains, was developing a unique character – the character that we came to know as ‘the bush’.

Tropical rainforest gave way to cooler temperate rainforest over much of the continent. Much more recently the land began to dry out and by five million years ago inland Australia became dominated by dry forests, woodlands, grasslands and dune fields. Fire became a significant part of the landscape. Giant kangaroos, rhino-sized grazing diprotodonts, huge flightless carnivorous birds, goannas seven metres long and weighing half a tonne, thylacines and predatory marsupials the size and general shape of a large leopard roamed the Limestone Plains and the ranges above them.

By 20,000 years ago people had arrived in the south-east highlands, having expanded and adapted steadily across the continent from the north-west coast for the previous 30,000 years.

As they came they employed fire very skilfully to change conditions to suit the grazing animals they hunted; in doing so they undoubtedly changed the landscape to some extent and may well have played some role in the extinction of the giant fauna. In time a new equilibrium was reached.

For millennia people travelled up into the Brindabellas in summer to harvest possums, plant tubers and Bogong Moths; in winter they came down to the plains and river valleys to hunt, fish and gather plants.

Then, just a few moments ago in the broad sweep of time, Europeans arrived, pushing south through the rich and fertile plains, having finally found their way west over the Blue Mountains. Their interest was only peripherally in the biological wealth of the land; they wanted grazing land for stock, soil to plough for crops, timber for their homes and fences, minerals to extract and sell. The deep soil that supported the great grassy woodlands represented the greatest value to them, and they exploited it. Riders travelled through swathes of Kangaroo Grass up to the horses’ bellies, with wildflowers to the horizons and quail and bettongs exploding from under the passing hooves.

The first Europeans to visit the site of the far-off future capital were naval surgeon and grazier Charles Throsby and the remarkable English-born unlettered convict Joseph Wild, who proved himself a natural bushman and explorer. Even before his ticket-of-leave and conditional pardon it seems he had guided Flinders’ botanist, the great Robert Brown, into the bush. In 1820 while accompanying Governor Macquarie to Lake George, Throsby, Wild and Constable Vaughan

pushed further south and probably crossed what is now Mulligans Flat Nature Reserve. Throsby heard from local Indigenous people of a mighty river they called Murrumbidgee; later that year he sent his nephew Charles Throsby Smith, with Wild and Vaughan, to investigate. Smith clearly did not believe the source and didn’t try very hard; after camping on the Molonglo and climbing Black Mountain he returned home to berate his uncle for wasting his time.² He didn’t report seeing any orchids on Black Mountain either. The following year the doubtless exasperated elder Throsby returned, passed through the length of what was to be Canberra, and reached the Murrumbidgee near modern Tuggeranong. He recorded very little of what he saw, beyond the country’s grazing potential – “extensive meadows of rich land”.³

In 1823 naval Captain Mark Currie and Major John Ovens accompanied Wild south along the Murrumbidgee past what we call Mount Tennent. Unlike Throsby, Currie recorded at least some of what he saw but it is very skimpy, with some elementary geology, mention of some pine trees and records of the emus and kangaroos they killed – he thought it worthy of record that he found the latter to be inferior both in taste and sporting pleasure to the emus.⁴

In 1824 the already highly regarded botanist-explorer Allan Cunningham became the first – and for some time the last – accredited scientific naturalist to pass through. He too crossed the Canberra plains, collecting plants but recording little beyond the abundance of emus, and fish in the river.

Then the settlers came, spearheaded by employees of Joshua John Moore who built the first rudimentary European buildings where the National Museum of Australia now stands. The land was indeed good for their purposes and many followed. It was not however a happy experience for the land. Within ten years all the central plains were occupied and settlers were spreading north and south. As the century advanced so did technology, bringing fencing and improved drainage and ploughing techniques; at the same time properties became smaller and the population grew.

By the late 1860s the flocks of emus reported by Cunningham had gone and the few survivors were being ruthlessly ridden down. Bustards had likewise been regarded as common, flocks of ‘scores’ being reported in the 1850s. By 1886 the *Queanbeyan Age* found it worthy of note that one had been seen on the Canberra plain. Brolgas were also present in large flocks when settlers arrived, and persisted for some time. They were seen however, not as thrillingly beautiful as we might see them today, but simply as another crop pest to be eliminated (though it was noted that, unfairly, their feathers made them hard to shoot except from behind). A mob of 80 fed in the paddock behind the post office at Ainslie in the 1870s – and were of course driven off with shots. Emus, Bustards and Brolgas were all extinct here as wild species well before the end of the 19th century. Bush Stone-curlews wailed evocatively at night in northern Canberra suburbs into the 1950s, but creeping suburbia, foxes and cats have eliminated them from our lives.



‘Rat kangaroos’ (bettongs, though the exact species is not recorded – not one specimen was preserved) were slaughtered in thousands with other wallabies and kangaroos, for sport and pest control. Eastern and Spotted-tailed Quolls were so common that they were held responsible for the failure of rabbits to establish in the 1860s and were severely punished for it. The introduction of strychnine in the 1880s sealed their fate. The big Spotted-tailed Quolls survive in very low numbers in the remote ranges of the ACT, but bettongs and Eastern Quolls have disappeared entirely from the bush capital.

The hills immediately around Canberra were mostly devoid of trees by the end of the 19th century. In the mountains things were less disturbed, though by the end of the century graziers had cleared most of the lower elevation valleys of the Brindabella and Tidbinbilla Ranges of the trees that fringed the grassy frost hollows. The ruggedness of the ranges and distance from sawmills minimised the impact of logging except for minor felling in the area below Bulls Head for a decade or so from the 1930s, though the potential for renewed forestry prevented inclusion of the northern Brindabellas into Namadgi National Park until 1991.

It was in the early years of the 20th century that the phrase ‘bush capital’ came into existence, as the fledgling Federal Parliament was charged with finding a site for a new city to be the capital of the young nation. Old inter-colonial rivalries ensured that it could not be located in either Sydney or Melbourne; after bruising debates the Constitution decreed that it would be in New South Wales but not less than 100 miles from Sydney. The story of the protracted and

often ill-tempered process has been told many times, but one aspect of it was the emergence of the term ‘bush capital’, nearly always used in a derogatory sense – usually but not always by city-based politicians and newspaper headline-writers.

The earliest reference I can find is from 29 August 1902 when Senator Edward Millen in the Senate complained of a tendency by Victorian newspapers to deride the idea of a “bush capital”.⁵ Within days the phrase was appearing in newspaper headlines throughout eastern Australia. Senator Millen doesn’t seem to have found the concept too distasteful but many others did. In August 1903 Senator Robert Reid from Victoria at a meeting in Camberwell expressed the hope that the Constitution would be altered sooner than build a “bush” capital.⁶ In July 1904 Dr Gratton Wilson, Member for Corangamite, wanted to “save the country from the extravagance of a Bush Capital. If they ever had a Federal Capital in the bush it would be a place of magnificent distances and solemn silence.”⁷ He was not attracted to this appealing concept.

The Bush Capital was nonetheless established and it grew, and the bush aspect was not entirely neglected. Thomas Charles Weston, a horticulturist, was appointed in 1913 as Officer-in-Charge of Afforestation, charged with creating a leafy urban landscape, including the regeneration of the denuded urban hills. Elsewhere in the Territory pioneering forester and surveyor Lindsay Pryor was establishing experimental arboretums of exotic trees, but these were planned for commercial purposes.

The Constitution stipulated that the Federal Capital Territory should cover at least a hundred square miles of country. In the event nearly ten times that area was ceded to the Commonwealth, to provide a water supply from the rugged Cotter River Catchment; the winding route of the western border follows the ridgeline of the Brindabellas, defining the catchment. The best way to protect that water supply was to leave it alone, and for the most part the forests of the mountains were left intact.

Proactive conservation by community organisations and government bodies did not gain pace until the latter half of the 20th century. In 1960 a small group of far-sighted and determined Canberrans, led by Nancy Burbidge, one of Australia’s leading botanists, formed the National Parks Association of the ACT to lobby for a national park in the ranges. The original aim was modest – a mere 9,000 hectares in the far south. In the end it took 19 years for the Gudgenby Nature Reserve to be gazetted, though it was much bigger than the original proposal. It wasn’t until 1984 that the 94,000 hectare Namadgi National Park was declared, then enlarged to its current size of 104,000 hectares in 1991. It is contiguous with Kosciuszko National Park in New South Wales and the Victorian Alps National Park, making it part of a thrilling and internationally significant parks system.

After self-government for the ACT in 1988 things moved faster. The concept of protecting a representative sample of habitats was becoming mainstream, and successive local governments were broadly supportive. Canberra Nature Park now protects 33 units of urban bushland, including all of the capital’s major hills;

although geographically disparate the units are managed in a coordinated fashion, a most unusual situation. They are a key defining part of Canberra and many of them have their own active community-based Park Care group. The entire 66 kilometre length of the Murrumbidgee River in the ACT, incorporating several reserves, is similarly managed as a unit for conservation purposes. Much of the Molonglo River Corridor is also protected.

From the late 1980s the focus turned increasingly to the hitherto largely neglected lowland grasslands and woodlands, among the most degraded and least preserved habitats in Australia. A game-changing event occurred in the mid-1990s when it was realised that the proposed Gungahlin Town Centre in expanding north Canberra would destroy significant primary grassland habitat, supporting several threatened species. The jokes about legless lizards, earless dragons and mouthless moths got a bit ho-hum, but in the end the government took the perhaps unprecedented and courageous step of finding another site for the centre. Now there are several grassland reserves in Gungahlin, among the most significant in southern Australia. Canberra’s grassy Yellow Box – Red Gum woodland reserves are also of major importance. The 1,500 hectares of the Mulligans Flat and Goorooyaroo Nature Reserve complex represent the largest protected area of this habitat anywhere in Australia. The ongoing research into woodland ecology in the fully-fenced Mulligans Flat Sanctuary, in partnership with the Australian National University, is also of national significance.



Indeed, science-based determination of which areas to preserve and how to manage them appropriately is now the norm. It has been applied to vegetation mapping, comprehensive environmental fire management and environmental legislation, in all of which the ACT has played nationally significant roles.

One might argue that all this is driven in part by the knowledge, by both community and government, that the values that we enjoy in our territory are indeed considerable. So what's the secret to the apparently remarkable biodiversity touched upon at the start of this essay?



The answer, as real estate agents are purportedly fond of saying, is in the location. We are placed superbly from a biological point of view, though the politicians who fought to a standstill before settling on the site were of course utterly oblivious to this.

Here, no less than three major habitat types come together, bringing and blending their rich and very different plants and animals. The great grassy woodlands sweep down from the north, continuing west and south, their south-eastern edge brushing the northern ACT. From the south the alpine system of bogs and heaths and Snow Gum woodlands finds its northern limits in the Brindabellas – I would argue that Mount Coree represents the northern-most peak in the alps. And from the coast come the great eucalypt forests, both wet and dry, in a series of parallel ranges. The dripping ferny wet gullies of the Brindabellas are almost as far inland as they occur.

In an hour's drive in a family car we can cross the woodland remnants, climb into the

mountains crossing wet forest gullies and drive along the high ridge of the Brindabellas through Snow Gum meadows; as we go the plants and animals are changing around us. This situation is not unique, but it is unusual and where it occurs – another example for instance is where there is rainforest near the coast and alongside dry forests – plant and animal diversity soars. It explains why Eastern Rosellas and Red-rumped Parrots can be found in our yards alongside Crimson Rosellas and Gang-gangs.

The Bush Capital aspect of Canberra is still, as it was 100 years ago, derided and even sometimes subtly feared by some. Nonetheless it is a key element to the definition of the city, its ethos and its culture. As the national capital, it thus helps to define the nation as well.

Ian Fraser

Naturalist, author and broadcaster

¹ Canberra's Y-plan was developed by the National Capital Development Commission in the 1960s to accommodate the need for new suburbs in response to the growing population. New towns – clusters of suburbs around a central hub – were planned for each of the main valleys in the area surrounding the city centre. Suburbs would expand linearly from the city in a large Y-shape.

² Fitzhardinge L.F. (1983) *Old Canberra and the Search for a Capital*. Canberra and District Historical Society.

³ Ibid.

⁴ Currie, Captain Mark John. (1825) *Journal of an Excursion to the Southward of Lake George*. In Field, Barron. *Geographical Memoirs on New South Wales*.

⁵ Ballarat Star 30 August 1902. Report on Senate Proceedings, Federal Parliament. Accessed via Trove, most recently 13 November 2015. <http://goo.gl/WRgQxd>

⁶ The Argus 17 August 1903. Federal Politics; interesting speeches. Accessed via Trove, most recently 13 November 2015. <http://goo.gl/x97GCc>

⁷ Colac Herald 22 July 1904. Federal Parliament; capital site. Accessed via Trove, most recently 13 November 2015. <http://goo.gl/PwgWKD>



Sally BLAKE
Seed baskets (Phragmites australis, Bogon Fen), (Poa, Smokers Flat),
(Sphagnum Moss, Snowy Flats), 2014. Photo: RLDI



Dry eucalypt forests

Every spring, parts of Canberra erupt with a flowering spectacle worthy of any local's or visitor's time. This has nothing to do with Canberra's garden beds however, but springs from the stony slopes of the dry eucalypt forests on the hills which dot the city's plains.

In this demanding environment, in Canberra Nature Park and the foothills of the ranges, trees rarely grow taller than 30 metres and are more closely spaced than those of the woodlands on the plains. There is still plenty of light though and the imperative is water. The soft-leaved

plants of the mountain gullies couldn't survive here and tough-leaved, often spiky, shrubs rule, along with scattered native grasses. On the cooler southern hillsides Red Stringybarks often predominate, while on the more exposed northern faces tough Scribbly Gums take over. Lower down massive rugged Apple Boxes grow just above the plains.

The flowers which make these forests such a spring drawcard are a mix of shrubs – wattles and peas are to the fore – and annual herbs among which orchids are arguably the stars.

On Black Mountain alone at least 60 species of orchids grow. Over 100 species of ants crawl around them; both of these counts represent considerably higher numbers than the whole of Great Britain can muster.

Birds are active and evident all year round, and large numbers of lizards and other hunters pursue even larger numbers of insects and other small animals. The dry forests teem.



top: Chris HOLLY
Black Mountain Reserve, Canberra, 2011

above: Tobias HAYASHI
Imperial Hairstreak Butterfly, *Jalmenus evagoras*, 2011



far left top: Tobias HAYASHI
Starfish Fungus, *Aseroe rubra*, 2014

far left bottom: Tobias HAYASHI
Peacock spider, *Maratus calitrans*, 2014

left: Tobias HAYASHI
Canberra Spider Orchid and pollinator,
Caladenia actensis, 2014



top: Tobias HAYASHI
Glossy Black-Cockatoo, *Calyptorhynchus lathami*, 2014

bottom: Julian ROBINSON
White-throated Treecreeper, *Climacteris leucophaea*, 2007



top: Nicola DICKSON
Bauer's Noisy Friarbird, 2011. Photo: RLDI

bottom: David WONG
Stone Gecko, *Diplodactylus vittatus*, 2010



Subalpine

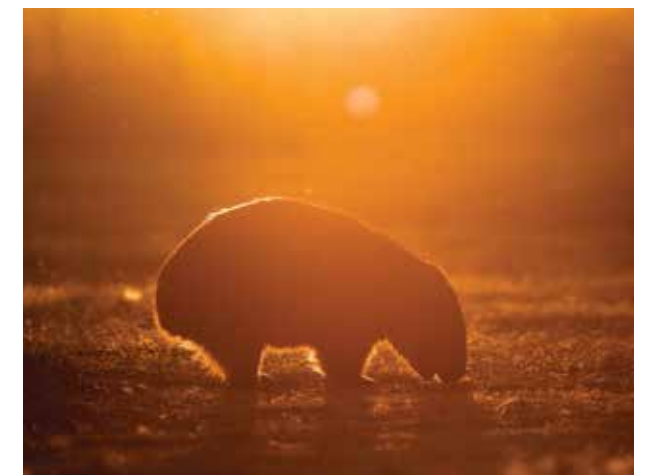
A thousand metres and more above Canberra, life is tough all year round. In winter the struggle is simply to survive; in summer there is the rush to grow, reproduce and establish offspring before the icy wetness closes in again, all too soon. Over the course of a year, the temperature may fluctuate by up to 50°C.

The snow country – that area over 1,200 metres above sea level where snow lies on the ground for at least part of most years – comprises barely 0.5% of mainland Australia, including the ridges of the high Brindabellas and Tidbinbillas.

The snow country is dominated by just one tree, the mighty Snow Gum, which may survive on the exposed wind-lashed peaks for centuries. In high flat valleys the treeless bogs act as vast sponges, with sphagnum moss absorbing up to 20 times its own mass of water and releasing it slowly all year round; Canberra's water supply is largely reliant on these mossy bogs.

In winter it is very quiet; animals have either moved downhill ahead of the snows, are surviving beneath the insulating white blanket, or have died, leaving frozen eggs or young to

emerge in spring. In summer it is frantically busy, the short warm season crowded with wildflowers competing for the myriad of insect pollinators while there is yet time. Corroboree Frogs bleat their love songs from sphagnum nooks. Reptiles which have survived winter frozen, now hunt the insects and frogs. But the frosts always return.





top: Collin WOOLCOCK,
Alpine Shaggy-Pea, *Podolobium* (= *Oxylobium*) *alpestre*, 1978.
Photo: Australian National Botanic Gardens

bottom: Julian ROBINSON,
Blotched Blue-tongued lizard, *Tiliqua nigrolutea*, 2010

top: David WONG,
Yellow Buttons, *Chrysocephalum apiculatum*, 2013

bottom: Peter MARSACK,
Northern Corroboree Frog, *Pseudophryne pengilleyi*, 2011



top: Julian ROBINSON,
Wedge-tailed Eagle, *Aquila audax*, 2009

middle: Brian JONES,
Macleay's Swallowtail, *Graphium macleayanum*, 2013

bottom: Julian ROBINSON,
Flame Robin, *Petroica phoenicea*, 2011



top: John GOULD, print after Henry Constantine RICHTER,
Gang-gang Cockatoo, *Callocephalon fimbriatum*, 1840-48.
Photo: RLDI

bottom: Tobias HAYASHI,
Mountain Katydid, *Acripeza reticulata*, 2015



Suburbia

Thousands of hectares of grassy woodland have vanished under roads and houses; that habitat is lost forever but the capital is far from bereft of wildlife. Nature finds a foothold almost anywhere, including the toughest cities, but even beyond that Canberra is special. From one of the hills in summer the scene below us seems dominated not by houses, but an urban forest of trees. Moreover hills still with their original vegetation are dotted throughout the suburbs, forming the unique reservoir of wildlife that is Canberra Nature Park.

Native plantings flourish in gardens throughout suburbia, providing important food and shelter. Many species have also adapted to some exotic plants; Gang-gangs utilise Roman cypress seed cones in place of those of related native *Callitris* pines, and currawongs, bowerbirds and many parrots switch from native berries to exotic ones when they're offered. Many birds which not long ago went into the mountains to nest now breed in Canberra.

Water in bird baths and garden ponds or from sprinklers makes summer much easier for a

range of animals from birds to kangaroos to lizards and insects. Even inside, spiders help keep silverfish and cockroach numbers down. In the garden big orbweb spiders spin their amazing edifices at night, dismantling them and eating the precious silk in the morning. In the vegie garden spiders, wasps, carnivorous beetles and birds hunt caterpillars and other garden pests. Birds are always overhead in the daytime, and bats at night.

Suburbia lives.





top left: Marianne Collinson CAMPBELL,
[*Papilio aegaeus aegaeus* (Orchard swallowtail butterfly)], [c.184-?].
Photo: National Library of Australia

middle left: Brian JONES,
Galahs, *Cacatua roseicapilla*, 2014



top right: Cathy FRANZI,
Canberra Bells #10, 2012. Photo: RLDI

above: Steven HOLLAND,
Australian Ravens, 2007. Photo: RLDI



top left: Julian ROBINSON,
Orbweb Spider, family Araneidae, 2009

middle: Delysia Jean DUNCKLEY,
Royal Bluebell, *Wahlenbergia gloriosa*, 1987. Photo: RLDI

bottom right: Jan BROWN,
Currawong, 1974. Photo: RLDI



top right: Julian ROBINSON,
Striated Pardalote, *Pardalotus striatus*, 2012

middle: Julian ROBINSON,
Common Brushtail Possum, *Trichosurus vulpecula*, 2010



Wet eucalypt forests

Green and lushly dripping, the tall forests of the wet gullies and sheltered slopes of the ranges form a cool contrast to the harsher and more open dry forests of the lower slopes and hills. Here moisture is rarely a problem so foliage is soft and often large. In the sheltered forest understorey leaves are also a noticeably deeper green, packed full of chlorophyll to assist in photosynthesis, making the most of the dim light.

The flowery bonanza of the open forests is largely absent here, so birds are more likely to be

hunting small animals in the rich dark humus soil. Lyrebirds fire silver bolts of sound through the drifting mists. These forests of towering Alpine Ash and bark-trailing Brown Barrel and Ribbon Gum support a rich fauna of arboreal mammals – especially possums and gliders – and a silent hunt takes place every night as huge owls pursue them.

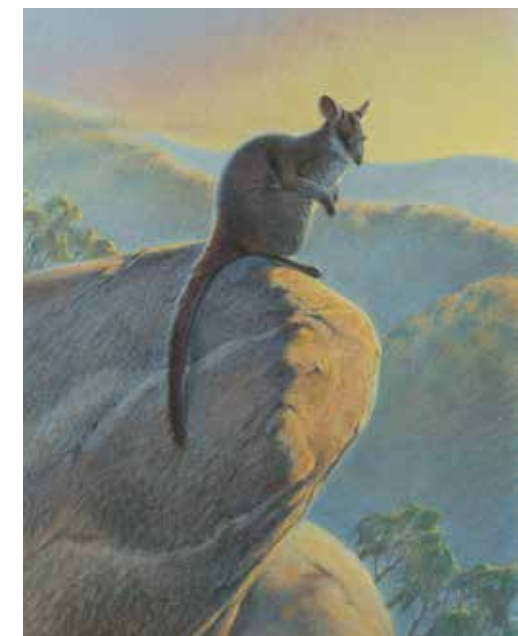
Below the trees flourish ferns, including great tree ferns, which have changed little since they dominated the world long before the dinosaurs arose. Soft mosses carpet the ground and in

autumn a wonderful array of fungi sprout colourful fruiting bodies on every surface.

In the natural fire cycle they burn ferociously every few hundred years. Unlike most eucalypts the Alpine Ash is killed by these fires, and regrows from seed which rains down after the ground has cooled, overwhelming the efforts of ants to carry it away. It sounds counter-intuitive, but these forests need occasional intense fire for long-term survival.

top: Chris HOLLY,
Tidbinbilla Nature Reserve, 2015

right: Peter MARSACK,
Brush-tailed Rock-Wallaby, *Petrogale penicillata*, 2011. Photo: RLDI





top: Brian JONES,
Eastern Yellow Robin, *Eopsaltria australis*, 2011

bottom: Collin WOOLCOCK,
Common Bird Orchid, *Chiloglottis gunnii*, 1969. Photo: Australian
National Botanic Gardens



top: Peter MARSACK,
Large Forest Bat, *Vespadelus darlingtoni*, 2011. Photo: RLDI

bottom: Julian ROBINSON,
Imperial Jezebel, *Delias harpalyce*, 2012



top: Julian ROBINSON,
Greater Glider, *Petauroides volans*, 2007

bottom: Neville William CAYLEY,
Superb lyrebirds, male (top) and female, ca.1933. Photo: National
Library of Australia



top: Julian ROBINSON,
Koala, *Phascolarctos cinereus*, 2013

bottom: Tobias HAYASHI,
Fungi, Tidbinbilla, 2014



Wetlands & rivers

Water in its natural state in the ACT occurs in many guises, from clear trickling mountain creeks to lowland ponds throbbing with frog calls, from crashing waterfalls to deep quiet cliff-side river pools. Water sustains not only us but countless other organisms too. Water defined the very shape of the Territory, ensuring a reliable water catchment for the new capital.

Every drop of rain that falls in the ACT eventually runs to the sea at the mouth of the Murray in South Australia. If it falls on the peaks the drop spends time in mossy bogs where

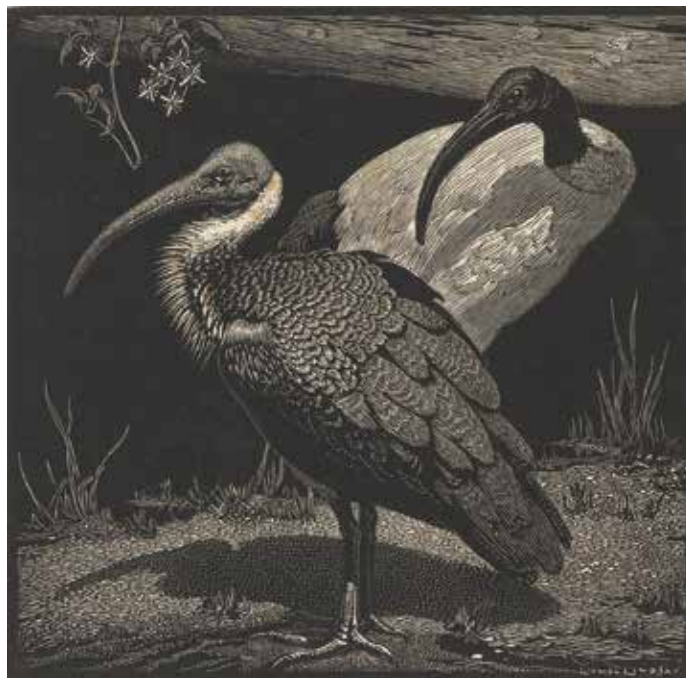
wildflowers glow in summer, before running down the slopes in streams under white Ribbon Gums and old tree ferns, over granite boulders carpeted with moss where wombats stoop to drink. Down the Cotter River it proceeds where platypus float and dive; it pauses in the cold depths of reservoirs before entering the mighty Murrumbidgee. Here, under dark whispering River Oaks the pace is sometimes quieter in pools where old Murray Cod and Murray Crayfish lurk, sometimes rushing through gorges below Peregrine Falcon nests on the cliffs.

Elsewhere in the Territory a trillion drops coalesce to form life-rich wetlands, now permanent, once ephemeral, from Jerrabomberra to Mulligans Flat, or they fill the urban lakes which support a wealth of fish, waterbirds and insects. Water rats, water dragons, frogs, turtles, cormorants and herons, dragonflies, reeds and cumbungi, floating ferns, bottlebrushes – so many living things rely on us recognising their needs, as well as our own.



top: Chris HOLLY,
View along Murrumbidgee River Corridor toward Red Rocks Gorge,
Kambah (detail), 2014

above: Peter MARSACK,
Platypus, *Ornithorhynchus anatinus*, 2011. Photo: RLDI



top: Steven HOLLAND,
all things known - all things sensed, 2013. Photo: Brenton McGeachie

bottom: Lionel LINDSAY,
Ibis, 1932. © National Library of Australia

above: Victoria CLUTTERBUCK,
Dragon fly fragment, 1997. Photo: RLDI



top: Joyce GITTOES,
Pacific black duck, 1975-1990
Photo: Sotha Bourn

middle: Joyce GITTOES,
Animal figure, tortoise, 1975-1990. Photo: Sotha Bourn

bottom: Tobias HAYASHI,
Eastern Water Dragon, Physignathus lesueurii, 2009



top: Tobias HAYASHI,
Eastern Great Egret, Ardea modesta, 2009

bottom: Tobias HAYASHI,
Australasian Grebe, Tachybaptus novaehollandiae, 2011



Woodlands & grasslands

The grassy woodland reserves of the northern ACT are the most extensive and significant in south-eastern Australia; they are to Canberra what the rainforests are to Cairns. The scattered trees of the woodlands are continuous with the treeless grasslands, where conditions don't favour tree establishment. This natural spacing of the trees, majestic old Yellow Boxes and Red Gums, gives them their characteristic deep spreading crowns and short trunks.

A great arc of this habitat once swept from southern Queensland to South Australia,

including the lowlands around the site of the future capital. Early accounts speak of riders passing through flowering grasslands, high as the horses' bellies, with quail and small marsupials including bettongs bursting from underfoot. Flocks of brolgas, bustards and emus abounded. But the rich deep soils attracted attention from the start of European settlement and vast herds and flocks of hard-hoofed stock spread over them, killing off sensitive grasses and other herb species. With them came weeds which were resistant to heavy grazing, feral hunters, and fundamental changes to the ancient fire regimes.

Ploughing was even more devastating and chemical fertilisers changed the nature of the soils.

It is no coincidence that most of the ACT's threatened plants and animals rely on these grassy habitats. Only tiny scattered scraps remain – Mulligans Flat and Goorooyarroo nature reserves being the largest – and last moment intervention in the ACT has been needed to save them from urban development.





top: Jacques ARAGO,
Voyage de l'Uranie, oiseaux, yellow and black bird of New Holland, [18--].
Photo: National Library of Australia

bottom: Delysia Jean DUNCKLEY,
Rutidosia leptorrhynchoides (Canberra Daisy), 1987. Photo: RLDI



above: Collin WOOLCOCK,
Thelymitra pauciflora, 1970. Photo: Australian
National Botanic Gardens



top: Tobias HAYASHI,
Little Eagle, *Hieraaetus morphnoides*, 2013

middle: Julian ROBINSON,
Shingleback Lizard, *Tiliqua rugosa*, 2014

bottom: David WONG,
Eastern brown snake, *Pseudonaja textilis*, 2010



top: Tobias HAYASHI,
Varied Sittella, *Daphoenositta chrysoptera*, 2011

bottom: Karen CROMWELL,
Kalaya (Emu), 2011. Photo: RLDI

List of works

Introduction

ACT Parks and Conservation

Map depicting habitat types prior to European settlement of the land now encompassed by the ACT, 2016

ACT Parks and Conservation Service

Dry Eucalypt Forests

ACT Parks and Conservation

Map depicting the locations of dry eucalypt forests within the ACT, 2016

ACT Parks and Conservation Service

Ferdinand BAUER (1760-1826)

Jewel Spiders (*Austracantha minax*), 1997 facsimile edition of natural history drawings taken from the zoological specimens collected on the first circumnavigation of Australia from 1801–1803 on the ship HMS *Investigator* under the command of Matthew Flinders

National Library of Australia

Elizabeth Vivienne CONABERE (1929-2009)

Glossodia major, c.1967 watercolour on paper

Australian National University Art Collection

Nicola DICKSON (b.1959)

Bauer's Noisy Friarbird, 2011 pencil and watercolour on paper

Canberra Museum and Gallery, purchased 2013

Delysia Jean DUNCKLEY

Narrow-leaf Bitter-Pea, *Daviesia mimosoides*, 1987 watercolour on paper

ACT Legislative Assembly Art Collection

Joyce GITTOES (1915-2011)

Bearded Dragon, 1975-90 earthenware

Museum of Applied Arts and Sciences, Sydney, donated through the Australian Government Cultural Gifts Program by Selena Griffith, 2012

Kookaburra, 1975-90 earthenware

Museum of Applied Arts and Sciences, Sydney, donated through the Australian Government Cultural Gifts Program by Selena Griffith, 2012

Rafael GOBIN (b.1969)

Southern Boobook, *Ninox novaeseelandiae*, 2005

stuffed animal, wood, grass

ACT Parks and Conservation Service collection

Tobias HAYASHI (b.1991)

Canberra Spider Orchid and pollinator, *Caladenia actensis*, 2014

digital print on photographic paper

Glossy Black-Cockatoo, *Calyptorhynchus lathamii*, 2014

digital print on photographic paper

Imperial Hairstreak Butterfly, *Jalmenus evagoras*, 2011

digital print on photographic paper

Laughing Kookaburra, *Dacelo novaeguineae*, 2012

digital print on photographic paper

Peacock spider, *Maratus calciatrans*, 2014

digital print on photographic paper

Scarlet Robin, *Petroica boodang*, 2009

digital print on photographic paper

Small Duck Orchid, *Caleana minor*, 2013

digital print on photographic paper

Starfish Fungus, *Aseroe rubra*, 2014

digital print on photographic paper

Velvet Worm, *Euperipatoides rowelli*, 2014

digital print on photographic paper

All works from the collection of the artist

Chris HOLLY (b.1968)

Black Mountain Reserve, Canberra, 2011

digital print on photographic paper

Collection of the artist

Peter MARSACK (b.1955)

Termites, *Nasutitermes exitiosus*, 2011 ink, watercolour and gouache on board

Collection of the artist

Julian ROBINSON (b.1950)

Brown Goshawk, *Accipiter fasciatus*, 2008

digital print on photographic paper

Bull ants, *Myrmecia* sp., 2013

digital print on photographic paper

Ring-tailed Possum, *Pseudocheirus peregrinus*, 2007

digital print on photographic paper

White-throated Treecreeper, *Climacteris leucophaea*, 2007

digital print on photographic paper

White-plumed Honeyeater, *Lichenostomus penicillatus* and Pallid Cuckoo chick *Cacomantis pallidus*, 2007

digital print on photographic paper

All works from the collection of the artist

Sarah STONE (1760-1844)

Superb Warbler [Superb Fairy-wren *Malurus cyaneus*], [1790]

watercolour on paper

National Library of Australia

David WONG (b.1977)

Jelly fungus, *Dacryonpinax* sp. or *Calocera* sp., 2012

digital print on photographic paper

Late Leopard Orchid, *Diuris semilunulata*, 2011

digital print on photographic paper

Musky Caps Orchid, *Caladenia moschata*, 2012

digital print on photographic paper

Nodding Blue Lily, *Stypandra glauca*, 2011

digital print on photographic paper

Stone Gecko, *Diplodactylus vittatus*, 2010

digital print on photographic paper

All works from the collection of the artist

Collin WOOLCOCK (1914-1990)

False Sarsparilla, *Hardenbergia violacea*, [198-?] colour pencil on paper

Australian National Botanic Gardens, donated by the family of Collin Woolcock

Showy Parrot-Pea, *Dillwynia sericea*, 1976 colour pencil on paper

Australian National Botanic Gardens, donated by the family of Collin Woolcock

Wildlife specimens

Antechinus flavipes, Yellow-footed Antechinus (skin), 1972

Corcorax melanorhamphos, White-winged Chough (skin), 2005

Diplodactylus vittatus, Stone Gecko (body in spirit), no date

Petaurus breviceps, Sugar Glider (skin), 1988

Rhipidura albiscapa, Grey Fantail nest, 2003

Varanus rosenbergi, Rosenberg's Goanna (body in spirit), 1989

All specimens from the Australian National Wildlife Collection, CSIRO

Subalpine

ACT Parks and Conservation

Map depicting the locations of subalpine areas within the ACT, 2016

ACT Parks and Conservation Service

Artist unknown

Mounted and stuffed Wedge-tailed Eagle, *Aquila audax*, date unknown stuffed bird, wood and metal

Collection of Penny Olsen, Canberra

Sally BLAKE (b.1966)

Seed basket (*Poa*, Smokers Flat), 2014 silver, silk, wool, plant dies

Canberra Museum and Gallery, purchased 2015

Seed basket (*Sphagnum* Moss, Snowy Flats), 2014

silver, silk, wool, plant dyes

Canberra Museum and Gallery, purchased 2015

Delysia Jean DUNCKLEY

Grevillea diminuta, 1987 watercolour on paper

Royal Bluebell, *Wahlenbergia gloriosa*, 1987

watercolour on paper

Snow Gum, *Eucalyptus pauciflora*, 1987 watercolour on paper

All works from the ACT Legislative Assembly Art Collection

John GOULD (1804-1881) print after Henry Constantine RICHTER (1821-1902) lithographer

Gang-gang Cockatoo, *Callocephalon fimbriatum*, 1840-48, lithograph in *The Birds of Australia*, plate 355

Canberra Museum and Gallery, purchased 1999

Tobias HAYASHI (b.1991)

Common Wombat, *Vombatus ursinus*, 2013

digital print on photographic paper

Collection of the artist

Mountain Katydid, *Acripeza reticulata*, 2015

digital print on photographic paper

Collection of the artist

Chris HOLLY (b.1968)

Orroral River, Orroral Valley, Namadgi National Park, 2011

digital print on photographic paper

Collection of the artist

Brian JONES (b.1948)

Macleay's Swallowtail, *Graphium macleayanum*, 2013

digital print on photographic paper

Collection of the artist

Peter MARSACK (b.1955)

Northern Corroboree Frog, *Pseudophryne pengilleyi*, 2011 ink, watercolour and gouache on board

Collection of Robert Palmer, Canberra

Julian ROBINSON (b.1950)

Blotched Blue-tongued lizard, *Tiliqua nigrolutea*, 2010

digital print on photographic paper

Flame Robin, *Petroica phoenicea*, 2011

digital print on photographic paper

Highland Copperhead, *Austrelaps ramsayi*, 2013

digital print on photographic paper

Red-necked Wallaby, *Macropus rufogriseus*, 2008

digital print on photographic paper

Wedge-tailed Eagle, *Aquila audax*, 2009

digital print on photographic paper

All works from the collection of the artist

Collin WOOLCOCK (1914-1990)

Alpine Shaggy-Pea, *Podolobium* (formerly *Oxylobium*) *alpestre*, 1978 colour pencil on paper

Australian National Botanic Gardens, donated by the family of Collin Woolcock

Leafy Bossiaea, *Bossiaea foliosa*, 1978 colour pencil on paper

Australian National Botanic Gardens, donated by the family of Collin Woolcock

David WONG (b.1977)

Yellow Buttons, *Chrysocephalum apiculatum*, 2013

digital print on photographic paper

Collection of the artist

Wildlife specimens

Antechinus swainsonii, Dusky Antechinus (skin), 1964

Eulamprus kosciuskoi, Alpine Water Skink (bodies in spirit), 1973

Hirundapus caudacutus, White-throated Needletail (skin), 2007

Pseudophryne pengilleyi, Northern Corroboree Frog (bodies in spirit), 1992

Vombatus ursinus, Common Wombat (skull), 1961

Vombatus ursinus, Common Wombat (skin), 1990

All specimens from the Australian National Wildlife Collection, CSIRO

Suburbia

ACT Parks and Conservation

Map depicting urban areas within the ACT, 2016

ACT Parks and Conservation Service

Jan BROWN (b.1922)

Currawong, 1974 ciment fondu

Canberra Museum and Gallery, gift of the artist 2008

Kangaroos, 1980

ciment fondu

maquette for life-size bronze sculpture in Commonwealth Park, Canberra, 1979-80. Commissioned by the National Capital Development Commission, and cast by Peter Morley, Meridian, Melbourne.

Canberra Museum and Gallery, gift of the artist 2008

Neville Henry CAYLEY (1854-1903)

Not titled [Sulphur-crested Cockatoo], date unknown watercolour on paper

Collection of Max and Isabel Brown, Canberra

Marrianne Collinson CAMPBELL (1827-1903)

[Papilio aegaeus aegaeus (Orchard swallowtail butterfly)], [ca.184-?] watercolour on paper

National Library of Australia

Delysia Jean DUNCKLEY

Wahlenbergia communis (Bluebell), 1987
watercolour on paper

ACT Legislative Assembly Art Collection

Cathy FRANZI (b.1963)

Canberra Bells #10, 2012
porcelain, wheel-thrown, engobe, sgraffito

Canberra Museum and Gallery, purchased with funds donated by Meredith Hinchliffe 2012

Denyse GIBBS (b.1949)

Black fly 1, 1973
from the *Insect world* series
screenprint

National Gallery of Australia, purchased 1975

Rafael GOBIN (b.1969)

Magpie, nest and eggs, 2005
stuffed animals, wood and shell

ACT Parks and Conservation Service collection

Tobias HAYASHI (b.1991)

Australian King-Parrot, *Alisterus scapularis*, 2008
digital print on photographic paper

Common Koel, *Eudynamys scolopacea*, 2012
digital print on photographic paper

Eastern Grey Kangaroo, *Macropus giganteus*, 2015

digital print on photographic paper

All works from the collection of the artist

Steven HOLLAND (b.1960)

Australian Ravens, 2007
black plastic bin liners, wire, mother of pearl

Canberra Museum and Gallery, purchased 2010

Chris HOLLY (b.1968)

Mount Ainslie Lookout, 2012
digital print on photographic paper

Courtesy of the artist

Brian JONES (b.1948)

Crimson Rosella, *Platycercus elegans*, 2013
digital print on photographic paper

Daddy Longlegs, *Pholcus phalangioides*, 2013

digital print on photographic paper

Galahs, *Cacatua roseicapilla*, 2014
digital print on photographic paper

Powerful Owl, *Ninox strenua*, 2015
digital print on photographic paper

Satin Bowerbird (*Ptilonorhynchus violaceus*) from the *Coming of Age* series, Dec 2010–Sept 2011

series of digital images on television monitor

Bowerbird Central, 2009–2012
video on television monitor [26 mins, 4 secs]

All works from the collection of the artist

John William LEWIN (1770-1819)

Crested pigeons (*Ocyphaps lophotes*), New South Wales, 1817
watercolour on paper

National Library of Australia

Peter MARSACK (b.1955)

Bogong moths, *Agrotis infusa*, 2011
watercolour and gouache on paper

Collection of the artist

Lilian M. MEDLAND (1880-1955)

Welcome swallow and Fairy martin, [1950?]
watercolour on paper

National Library of Australia

Julian ROBINSON (b.1950)

Australian Admiral, *Vanessa itea*, 2007
digital print on photographic paper

Australian Raven, *Corvus coronoides*, 2007
digital print on photographic paper

Common Brushtail Possum, *Trichosurus vulpecula*, 2010
digital print on photographic paper

Eastern Spinebill, *Acanthorhynchus tenuirostris*, 2010
digital print on photographic paper

Orbweb Spider, family *Araneidae*, 2009
digital print on photographic paper

Spotted Pardalote, *Pardalotus punctatus*, 2013

digital print on photographic paper

Striated Pardalote, *Pardalotus striatus*, 2012

digital print on photographic paper

Willie Wagtail, *Rhipidura leucophrys*, 2006
digital print on photographic paper

All works from the collection of the artist

Pamela TAWTON (b.1941)

Morning call, 1987
hand stitched, machine edged, cotton/ polycotton quilt

Museum of Applied Arts and Sciences, Sydney, gift of The Quilters' Guild Inc. (Australia), 1996

David WONG (b.1977)

Green-headed ant, *Rhytidoponera metallica*, 2011

digital print on photographic paper

Collection of the artist

Jumping Spider, family *Salticidae*, 2011
digital print on photographic paper

Collection of the artist

Wildlife specimens

Chalinolobus gouldii, Gould's Wattled Bat (skin), 1988

Lampropholis guichenoti, Garden Skink (body in spirit), 1966

Limnodynastes dumerilii, Banjo Frog (body in spirit), 1982

Psephotus haematonotus, Red-rumped Parrot (skin, female), 2008

Psephotus haematonotus, Red-rumped Parrot (skin, male), 1991

Pteropus poliocephalus, Grey-headed Flying-fox (skin/skull), 1972

All specimens from the Australian National Wildlife Collection, CSIRO

Wet Eucalypt Forests

ACT Parks and Conservation

Map depicting the locations of wet eucalypt forests within the ACT, 2016

ACT Parks and Conservation Service

Neville William CAYLEY (1886-1950)

Superb lyrebirds, male (top) and female, ca.1933

watercolour on board

National Library of Australia

Elizabeth Vivienne CONABERE (1929-2009)

Coprosma hirtella, ca.1967
watercolour on paper

Australian National University Art Collection

John GOULD (1804-1881) print after Henry Constantine RICHTER (1821-1902) lithographer

Calyptorhynchus xanthonotus, 1840-48, lithograph in *The Birds of Australia*, vol. V, plate 12

Australian National University Art Collection

Tobias HAYASHI (b.1991)

Dragonfly, Order Odonata, and *Diplodium aestivum*, Smokers Gap, 2015
digital print on photographic paper

Collection of the artist

Fungi, Tidbinbilla, 2014
digital print on photographic paper

Collection of the artist

Chris HOLLY (b.1968)

Tidbinbilla Nature Reserve, 2015
digital print on photographic paper

Collection of the artist

Brian JONES (b.1948)

Eastern Yellow Robin, *Eopsaltria australis*, 2011

digital print on photographic paper

Collection of the artist

Frank KNIGHT (b.1941)

Pygmy Possum (*Cercartetus nanus*), 1978
gouache on paper

Australian National University Art Collection

Charles Alexandre LESUEUR (1778-1846)

Native cats of Australia, ca.1802
watercolour, pencil on card

National Library of Australia

Peter MARSACK (b.1955)

Brush-tailed Rock-Wallaby, *Petrogale penicillata*, 2011

pastel and pastel pencil

Private collection, Canberra

Large Forest Bat, *Vespadelus darlingtoni*, 2011

watercolour and gouache on paper

Collection of the artist

Soft tree-fern, *Dicksonia antarctica*, 2011
watercolour and gouache on paper

Collection of the artist

Julian ROBINSON (b.1950)

Greater Glider, *Petauroides volans*, 2007
digital print on photographic paper

Imperial Jezebel, *Delias harpalyce*, 2012
digital print on photographic paper

Koala, *Phascolarctos cinereus*, 2013
digital print on photographic paper

Striated Thornbills, *Acanthiza lineata*, 2012
digital print on photographic paper

All works from the collection of the artist

David WONG (b.1977)

Red-browed finch, *Neochmia temporalis*, 2012

digital print on photographic paper

Collection of the artist

Collin WOOLCOCK (1914-1990)

Chiloglottis gunnii, Common Bird Orchid, 1969

colour pencil on paper

Australian National Botanic Gardens, donated by the family of Collin Woolcock

Spiculea [sic] *huntiana*, Elbow Orchid, 1969
colour pencil on paper

Australian National Botanic Gardens, donated by the family of Collin Woolcock

Wildlife specimens

Dasyurus maculatus, Spotted-tailed Quoll (skin), 1970

Eopsaltria australis, Eastern Yellow Robin nest, 2003

Nannoscincus maccoyi, MacCoy's Skink (body in spirit), 1977

Pycnoptilus floccosus, Pilotbird (skin), 2012

Rhipidura rufifrons, Rufous Fantail (skin), 1999

Saccolaimus flaviventris, Yellow-bellied Sheathtail-bat (skin), 1992

All specimens from the Australian National Wildlife Collection, CSIRO

Wetlands & rivers

ACT Parks and Conservation

Map depicting the locations of wetlands and rivers within the ACT, 2016

ACT Parks and Conservation Service

Sally BLAKE (b.1966)

Seed basket (*Phragmites australis*, Bogon Fen), 2014

silver, silk, wool, plant dyes

Canberra Museum and Gallery, purchased 2015

Victoria CLUTTERBUCK (b.1952)

Dragon fly fragment, 1997
watercolour and gouache on paper

Canberra Museum and Gallery, purchased 1997

Joyce GITTOES (1915-2011)

Pacific black duck, 1975-1990
earthenware

Museum of Applied Arts and Sciences, Sydney, donated through the Australian Government Cultural Gifts Program by Selena Griffith, 2012

Animal figure, tortoise, 1975-1990
earthenware

Museum of Applied Arts and Sciences, Sydney, donated through the Australian Government Cultural Gifts Program by Selena Griffith, 2012

Ebenezer Edward GOSTELOW (1866-1944)

The painted honey-eater, *Grantiella picta* on *Eucalyptus sideroxylon*, 1930
watercolour on paper

National Library of Australia

John GOULD (1804-1881) print after Henry Constantine RICHTER (1821-1902) lithographer

Hydromys chrysogaster, 1881
lithograph

Australian National University Art Collection

Pamela GRIFFITH (b.1943)

Pelicans in the shallows, 1981
etching, aquatint, mezzotint rocker and burnishing

National Gallery of Australia, Canberra, gift of Professor Ross Griffith 1993

Tobias HAYASHI (b.1991)

Australasian Grebe, *Tachybaptus novaehollandiae*, Cooleman Ridge, 2011
digital print on photographic paper

Eastern Great Egret, *Ardea modesta*, 2009
digital print on photographic paper

Red-bellied Black Snake, *Pseudechis porphyriacus*, Cooleman Ridge, 2008
digital print on photographic paper

Eastern Water Dragon, *Physignathus lesueurii*, Australian National Botanic Gardens, 2009

digital print on photographic paper

All works from the collection of the artist

Steven HOLLAND (b.1960)

all things known – all things sensed, 2013
bronze, oil paint, auto lacquer

Collection of the artist

Chris HOLLY (b.1968)

River Oak *Casuarina cunninghamiana*, Stony Creek Nature Reserve, Murrumbidgee River, 2015
digital print on photographic paper

Collection of the artist

View along Murrumbidgee River Corridor towards Red Rocks Gorge, Kambah, 2014
digital print on photographic paper

Collection of the artist

Brian JONES (b.1948)

Latham's Snipe, *Gallinago hardwickii*, 2013
digital print on photographic paper

Collection of the artist

Lionel LINDSAY (1874-1961)

Ibis, 1932

wood-engraving

National Gallery of Australia, Canberra, bequest of Alan Queale, 1982

The dancer, 1924

wood-engraving

National Gallery of Australia, Canberra, bequest of Alan Queale, 1982

Peter MARSACK (b.1955)

Platypus, *Ornithorhynchus anatinus*, 2011 oil on canvas

Collection of the artist

Julian ROBINSON (b.1950)

Australian Wood Duck, *Chenonetta jubata*, 2013

digital print on photographic paper

Peregrine Falcon, *Falco peregrinus*, 2011 digital print on photographic paper

Straw-necked Ibis, *Threskiornis spinicollis*, 2012 digital print on photographic paper

Royal Spoonbill, *Platalea regia*, 2014 digital print on photographic paper

Cunningham's Skink, *Egernia cunninghami*, 2014 digital print on photographic paper

All works from the collection of the artist

John RUIZ (taxidermist)

Murray Cod *Maccullochella peelii*, caught 1998

stuffed fish and wood

Collection of James Morgan, Canberra

Aquatic specimens

Cherax destructor, Yabby, 2016

Euastacus armatus, Murray Cray, 1990 *Maccullochella macquariensis*, Trout Cod, 2004

Macquaria australasica, Macquarie Perch, 2008

All specimens from the collection of Mark Lintermans, Institute for Applied Ecology, University of Canberra

Wildlife specimens

Chelodina longicollis, Eastern Snake-necked Turtle (dried body), 1972 *Hydromys chrysogaster*, Water Rat (skin), 1976

Litoria aurea, Green and Golden Bell Frog (body in spirit), 1976

Notechis scutatus, Tiger Snake (body in spirit), 1977

Ornithorhynchus anatinus, Platypus (skin/skull), 1967

Stictonetta naevosa, Freckled Duck (skin), 2003

All specimens from the Australian National Wildlife Collection, CSIRO

Woodlands & Grasslands

ACT Parks and Conservation

Map depicting the extent of woodlands and grasslands within the land now encompassed by the ACT prior to European settlement, 2016

ACT Parks and Conservation Service

ACT Parks and Conservation

Map depicting the current extent of woodlands and grasslands within the ACT, 2016

ACT Parks and Conservation Service

Jacques ARAGO (1790-1855)

Voyage de l'Uranie, oiseaux, yellow and black bird of New Holland, [18--] watercolour and pencil on paper

National Library of Australia

William Thomas COOPER (1934-2015)

Swift parrot (*Lathamus discolor*), 1971 watercolour on paper

National Library of Australia

Karen CROMWELL (b.1976)

Kalaya (Emu), 2011

wire, raffia, desert grass, emu feathers

Bull-Clark collection, Canberra

Linda DAVY (b.1963)

Is it too late? 2015 hand sculpted stoneware clay, engobe, sgraffito, underglaze, copper

Collection of the artist

Delysia Jean DUNCKLEY

Rutidosis leptorrhynchoides (Canberra Daisy), 1987

watercolour on paper

ACT Legislative Assembly Art Collection

Swainsona recta (Small Purple Pea), 1987 watercolour on paper

ACT Legislative Assembly Art Collection

Sharon FIELD (b.1952)

For posterity's record, *Rytidosperma carphoides* – Short Wallaby Grass, *Synemon plana* – Golden Sun Moth, 2014 watercolour on vellum

Collection of Elizabeth Lawson

Grasses have a fragile majesty, Kangaroo Grass (*Themeda australis*), 2013

graphite on paper

Collection of the artist

Helen FITZGERALD (b.1945)

Australian Bustard, *Ardeotis australis*, 2004

watercolour and gouache on paper

Private collection, Canberra

Cathy FRANZI (b.1963)

Ginninderra Peppercress #5, 2012 porcelain, wheel-thrown, engobe, sgraffito

Canberra Museum and Gallery, purchased with funds donated by Meredith Hinchliffe 2012

Pamela GRIFFITH (b.1943)

Echidna, 1980

etching and aquatint

National Gallery of Australia, Canberra, gift of Professor Ross Griffith 1994

Tobias HAYASHI (b.1991)

Black-shouldered Kite, *Elanus axillaris*, 2013

digital print on photographic paper

Golden Moths orchid, *Diuris chryseopsis*, Mulligan's Flat Nature Reserve, 2014 digital print on photographic paper

Little Eagle, *Hieraaetus morphnoides*, 2013

digital print on photographic paper

Stencilled Hairstreak Butterfly, *Jalmenus ictinus*, Mulligan's Flat Nature Reserve, 2012

digital print on photographic paper

Varied Sittella, *Daphoenositta chrysoptera*, 2011

digital print on photographic paper

All works from the collection of the artist

Chris HOLLY (b.1968)

Callum Brae Nature Reserve, 2012 digital print on photographic paper

Collection of the artist

Jon LEWIS (b.1950)

Echidna, 2011

digital print on photographic paper, from an edition of 7

Canberra Museum and Gallery, purchased 2012

Peter MARSACK (b.1955)

Mistletoe, Family Loranthaceae, 2011 watercolour and gouache on paper

Praying Mantis, Mantodea, 2011

watercolour and gouache on paper

Yellow-box, *Eucalyptus melliodora*, 2011 oil on canvas

All works from the collection of the artist

Julian ROBINSON (b.1950)

Brown Treecreeper, *Climacteris picumnus*, 2012

digital print on photographic paper

Eastern Rosella, *Platycercus eximius*, 2012

digital print on photographic paper

Hooded Robin, *Melanodryas cucullata*, 2007

digital print on photographic paper

Shingleback Lizard, *Tiliqua rugosa*, 2014 digital print on photographic paper

Superb Parrot, *Polytelis swainsonii*, 2006 digital print on photographic paper

All works from the collection of the artist

David WONG (b.1977)

Eastern brown snake, *Pseudonaja textilis*, 2010

digital print on photographic paper

Perunga Grasshopper, *Perunga ochracea*, 2011 digital print on photographic paper

Pink-tailed Worm Lizard, *Aprasia parapulchella*, 2010

digital print on photographic paper

Sticky Everlasting, *Xerochrysum viscosum* with native White-banded Bee, family Halictidae, 2013 digital print on photographic paper

Sugar ant, *Camponotus* sp., 2011 digital print on photographic paper

Tarengo Leek Orchid, *Prasophyllum petilum*, 2011 photographic print on paper

All works from the collection of the artist

Collin WOOLCOCK (1914-1990)

Thelymitra pauciflora, 1970

colour pencil on paper

Australian National Botanic Gardens, donated by the family of Collin Woolcock

Wildlife specimens

Bettongia gaimardi, Tasmanian Bettong (skin/skull), 1981

Delma impar, Striped Legless Lizard (bodies in spirit), 2011

Pseudophryne bibronii, Bibron's Toadlet (body in spirit), 1978

Sminthopsis murina, Common Dunnart (skin), 1983

Tachyglossus aculeatus, Short-beaked Echidna (skin), 1987

Tympanocryptis pinguicolla, Grassland Earless Dragon (body in spirit), 1993

All specimens from the Australian National Wildlife Collection, CSIRO

Invertebrate specimens

Acripeza reticulata, Mountain katydid (female), Subalpine

Acripeza reticulata, Mountain katydid (male), Subalpine

Agrotis infusa, Bogong moth (wings in repose), Subalpine, Suburbia

Agrotis infusa, Bogong moth (wings spread), Subalpine, Suburbia

Amegilla asserta, Bluebanded bee, Suburbia

Anoplognathus chloropyrus, Christmas beetle, Woodlands & grasslands

Anoplognathus hirsutus, Christmas beetle, Woodlands & grasslands

Anoplognathus montanus, Christmas beetle, Woodlands & grasslands

Anoplognathus pallidicollis, Christmas beetle, Woodlands & grasslands

Anoplognathus pindarus, Christmas beetle, Woodlands & grasslands

Anoplognathus porosus, Christmas beetle, Woodlands & grasslands

Anoplognathus suturalis, Christmas beetle, Woodlands & grasslands

Anoplognathus velutinus, Christmas beetle, Woodlands & grasslands

Aquarius antigone, Water strider, Wetlands & rivers

Archichauliodes guttiferus, Dobsonfly, Wetlands & rivers

Austropetalia tonyana, Alpine redspot dragonfly, Subalpine, Wetlands & rivers

Barea sphaeridias, Mallee moth, Wet eucalypt forests

Chelepteryx collesi, White-stemmed gum moth; Batwing moth (male), Dry eucalypt forests

Clytocosmus helmsi, Alpine crane fly, Subalpine

Coryphistes ruricola, Bark-mimic grasshopper, Dry eucalypt forests

Didymuria violescens, Spurlegged phasmid (female), Wet eucalypt forests

Didymuria violescens, Spurlegged phasmid (male), Wet eucalypt forests

Diplacodes haematodes, Scarlet percher dragonfly, Wetlands & rivers

Euprosopia maculipennis, Spotted signal fly, Wet eucalypt forests

Eurymela distincta, Gumtree hopper, Dry eucalypt forests

Eurymeloides pulchra, Gumtree hopper, Dry eucalypt forests

Eurymelops bicolour, Gumtree hopper, Dry eucalypt forests

Eurymelops rubrovittata, Gumtree hopper, Dry eucalypt forests

Gastrimargus musicus, Yellow-winged locust (one wing spread), Woodlands & grasslands

Glenoleon pulchellus, Ant lion lacewing, Dry eucalypt forests, Woodlands & grasslands

Goniaea australasiae, Gumleaf grasshopper, Dry eucalypt forests

Graphium macleayanum, Macleay's swallowtail, Subalpine

Hesthesis cingulata, Wasp-mimic longicorn beetle (female, wings closed), Subalpine

Hesthesis cingulata, Wasp-mimic longicorn beetle (male, wings spread), Subalpine

Heteronympha merope, Common
Brown (female),
Suburbia

Heteronympha merope, Common
Brown (male),
Suburbia

Iridomyrmex purpureus, Meat ant,
Suburbia, Woodlands & grasslands

Laccotrephes tristis, Water scorpion;
Toe biter,
Wetlands & rivers

Lamprima aenea, Golden stag beetle
(female),
Suburbia

Lamprima aenea, Golden stag beetle
(female),
Suburbia

Lamprima aenea, Golden stag beetle
(male),
Suburbia

Lamprogaster laeta, Metallic signal fly,
Wet eucalypt forests

Macrogyrus oblongatus, Whirligig beetle,
Wetlands & rivers

Myrmecia nigriceps, Bullant,
Dry eucalypt forests

Myrmecia pilosula, Jack jumper,
Dry eucalypt forests, Wet eucalypt forests

Neoaratus sp., Robberfly,
Woodlands & grasslands

Oecophoridae sp.1, Mallee moth,
Wet eucalypt forests

Oecophoridae sp.2, Mallee moth,
Wet eucalypt forests

Oreixenica lathoniella, Silver Xenica
(dorsal surface displayed),
Subalpine

Oreixenica lathoniella, Silver Xenica
(ventral surface displayed),
Subalpine

Papilio aegyus, Orchard swallowtail
(female),
Suburbia

Papilio aegyus, Orchard swallowtail (male),
Suburbia

Perga affinis, Steelblue sawfly (female,
wings in repose),
Dry eucalypt forests, Woodlands &
grasslands

Perga affinis, Steelblue sawfly (male,
wings spread),
Dry eucalypt forests, Woodlands &
grasslands

Polyzosteria viridissima, Green cockroach,
Subalpine

Psaltoda moerens, Red-eye cicada (adult),
Dry eucalypt forests, Suburbia

Psaltoda moerens, Red-eye cicada
(discarded 'shell' of nymph),
Dry eucalypt forests, Suburbia

Pseudalmenus chlorinda, Silky hairstreak,
Wet eucalypt forests

Repsimus aeneus, Green Christmas
beetle,
Dry eucalypt forests

Repsimus manicatus montanus,
Riverine Christmas beetle,
Wetlands & rivers

Rhyssonotus jugularis, Mountain stag
beetle,
Wet eucalypt forests

Rutilla imperialis, Giant bristle fly,
Dry eucalypt forests

Rutilla vivipara, Giant bristle fly,
Dry eucalypt forests, Wet eucalypt forests

Simosyrphus grandicornis, Hoverfly,
Suburbia

Sparassidae sp., Huntsman spider,
Dry eucalypt forests, Suburbia

Synemon plana, Golden sun moth
(female),
Woodlands & grasslands

Synemon plana, Golden sun moth (male),
Woodlands & grasslands

Teleogryllus sp., Field cricket (female),
Suburbia, Woodlands & grasslands

Temognatha suturalis, Jewel beetle,
Dry eucalypt forests

Tenodera australasiae, Purple-winged
mantid,
Woodlands & grasslands

Tettigarcta crinita, Hairy cicada,
Subalpine

Trichoptera sp., Caddisfly,
Wetlands & rivers

Urodacus manicatus, Black rock scorpion,
Dry eucalypt forests

Wingia lambertella, Mallee moth,
Wet eucalypt forests

Australian National Insect Collection, CSIRO

