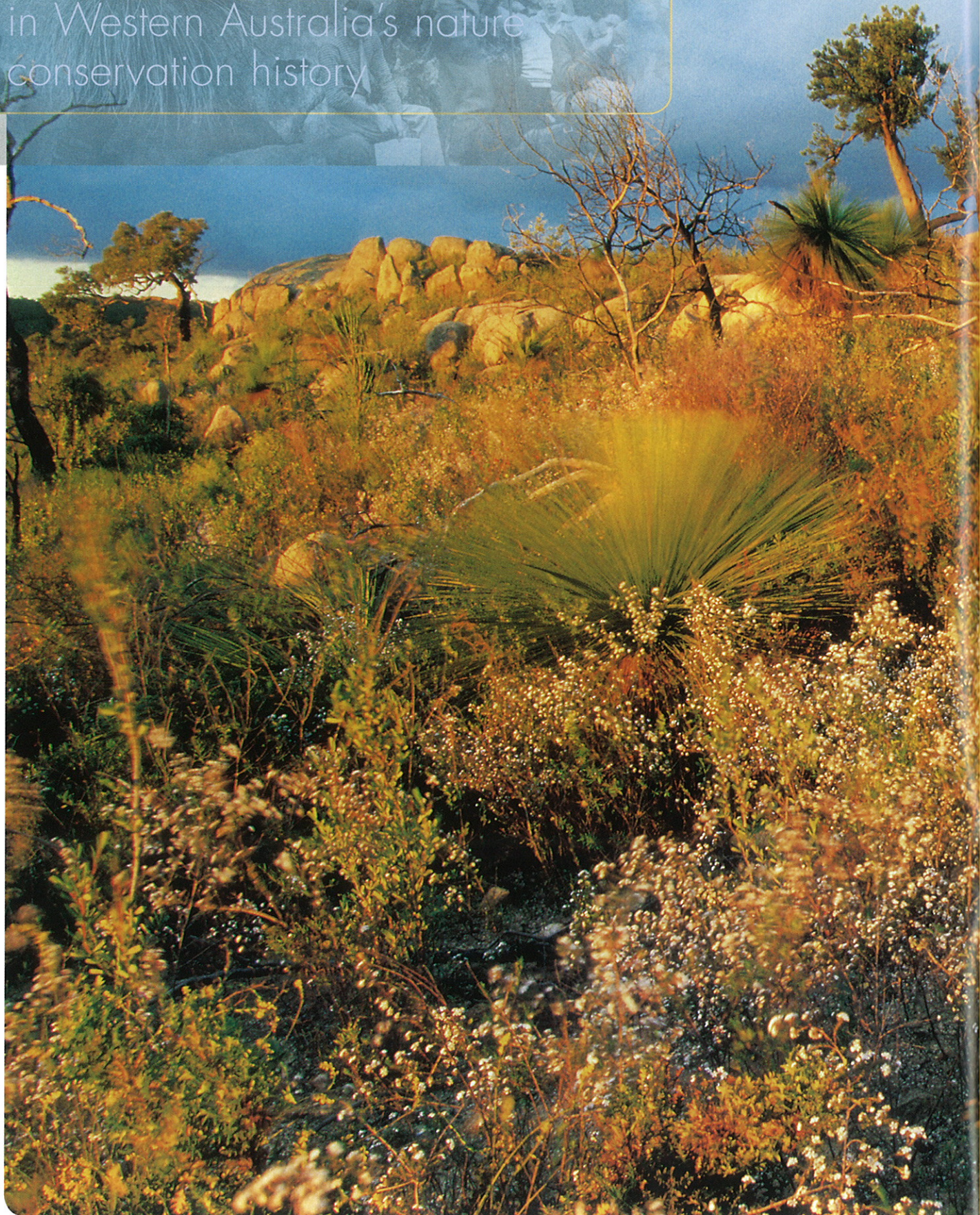




# Milestones and stepping stones

in Western Australia's nature conservation history





Conserving biodiversity and protecting our environment is widely regarded as a priority today. This attitude has developed over many decades of conservation history.

by Andrew Burbidge

The early Europeans settled a land that had been occupied by Indigenous people for perhaps 60,000 years and was a living museum of plants and animals that had evolved and persisted in virtual isolation from other continents. Life for the early pioneers was difficult. In order to survive they had to do battle with the bush—the Australian fauna and flora became the enemy. Early European settlers identified with their former country and many came to denigrate things Australian: the plants were useless for fodder (in fact many were poisonous) and the few large animals could not

be domesticated. People who have to work hard clearing the bush in order to live are rarely able to relate to the environment they are destroying and homesick pioneers tried to ‘Europeanise’ the countryside, an attitude that led to the introduction of the mammals and birds that have had a devastating effect on the Australian environment. In a place where the indigenous flora and fauna were considered an impediment to development, and land in its virgin state seemed unlimited, preservation of nature was far from people’s minds.

Development of Western Australia was slow for most of the first 100 years of European settlement and clearing did not become extensive until well into the twentieth century when war service land settlement schemes and the ‘million acres a year’ land release

and clearing catchcry of the 1950s and 1960s opened up vast tracts of land. Nevertheless, long before this many people realised that once-common animals were disappearing and moves towards nature conservation began. More and more people are now becoming concerned about biodiversity loss and carrying out or demanding conservation actions.

Biodiversity loss is due to four main processes: habitat destruction, habitat degradation, invasive species and climate change. To respond to these major threats, governments, non-government organisations, businesses and the community need to implement multifaceted conservation programs. In a democratic nation that is based on the rule of law, good legislation and its implementation is an absolute necessity. Other responses must include the development of a comprehensive, adequate and representative protected area system, conservation programs on privately owned land, invasive species eradication and control and climate change mitigation and adaptation.

### Legislation to protect animals

Laws relating to animal conservation came into being fairly early, but were related to control of exploitation and made no reference to habitat. The first law was the Kangaroo Ordinance of 1853, which was aimed at meeting the food and sporting needs of settlers while preventing the wholesale killing of kangaroos, which would have



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**Main** Western Australia’s first national park, John Forrest National Park.

*Photo – Brett Dennis/Lochman*

*Transparencies*

**Inset** Picnic group at John Forrest National Park, 1930.

*Photo – Courtesy Battye Library (004526)*

**Above far left** Common prickly pear, an introduced species.

*Photo – Len Stewart/Lochman*

*Transparencies*

**Above left** Rabbits were introduced to Australia by European settlers.

*Photo – Jiri Lochman*

**Left** Aboriginal kangaroo hunters.

*Photo – Courtesy Battye Library (5988B)*



**Above** The red and green kangaroo paw—the State's flora emblem—was among the first protected flora species in WA.

Photo – Willi Laufmann/Sallyanne Cousans Photography

deprived Aboriginal people of food. The Kangaroo Ordinance was followed by a series of acts that provided some protection to introduced 'game', such as deer and pheasants, as well as those indigenous species that were hunted, such as wallabies and ducks. The *Game Act 1874* protected introduced animals and listed several indigenous animals, including malleefowl, bustard and ducks, which were protected during the 'breeding season'. The *Game Act 1892* also allowed for the declaration of game reserves, a large number of which were declared over Crown land, private property and land under the control of various government departments. Although game reserves had little security of tenure and were primarily to protect animals for sporting purposes, most of those declared over Crown land eventually became Land Act reserves and remain today.

The *Fauna Protection Act 1950* took a new approach to the protection of animals. Legislation designed primarily to preserve certain animals for sport and food was replaced by legislation protecting all indigenous terrestrial vertebrate animals unless they were deemed harmful to people, their stock or their crops. The passing of this pioneering Act was due in large part to the work of the Fauna Advisory Committee, which was set up in 1944 to advise the Minister for Fisheries,

**Right** Curator of the Western Australian Herbarium, Mr R D Royce, examines a specimen of *Verticordia plumosa* in the 1970s that was collected by James Drummond, WA's first Government Botanist, in 1840.

Photo – DEC



who was also responsible for the Game Act. With the passing of the new Act, the Fisheries Department became the Department of Fisheries and Fauna and the Fauna Advisory Committee became the Fauna Protection Advisory Committee (FPAC), which was a statutory body allowing Land Act reserves to be vested in it.

The Fauna Protection Act has remained the basis of indigenous animal conservation in WA until the present day. It has been amended several times and its name changed in 1975 to the Wildlife Conservation Act. In 1967, the FPAC became the Western Australian Wildlife Authority, which was modified in 1975 to become the Western Australian Wildlife Authority, which existed until the proclamation of the Conservation and Land Management Act in 1985. The proposed Biodiversity Conservation

Act, if passed by the WA Parliament, will update and replace the Wildlife Conservation Act.

### Biological collections

Early plant collections (which are central to the study and conservation of biodiversity) were mostly sent to European herbaria, but by the 1890s local plant collections were being developed. In 1928, a decision was made to merge several growing collections at the WA Museum, the Bureau (later Department) of Agriculture and the Forests Department, to form the State Herbarium located within the Department of Agriculture, a decision that was not fully implemented until 1957. It was renamed the Western



**Left** Wattles in Stirling Range National Park.

Photo – Rob Oliver

**Below left** An old-growth forest section containing many types of eucalypt at Carter State forest (near Donnelly Mill), now protected under the *Protecting our old growth forests* policy.

Photo – Tom Chvojka



Australian Herbarium in 1970. Reflecting its increasing concentration on the conservation of native flora, it was transferred to the Department of Conservation and Land Management (CALM) in 1988. The Western Australian Museum, the repository of the State's animal collections, was established in 1891 as the Perth Museum. It is a statutory authority, governed by a Board of Trustees, within the Culture and the Arts portfolio.

### Legally protecting plants

Native plants did not receive legislative attention until the *Native Flora Protection Act 1912* was passed. As was the case with animals, this Act was not concerned with habitat destruction but protected certain species on Crown land. Protection was limited to wattles (*Acacia*), kangaroo paws (*Anigozanthos*), myrtles, scarlet runner and coral vine (*Kennedia*), *Lechenaultia* and the WA Christmas tree (*Nuytsia*). In 1939, the 1938 amendments to the Native Flora Protection Act came into force, allowing for the protection of all or any wildflowers on specified Crown lands. In reality, only a few species were protected until 1963, when all wildflowers in the South West and Eucla land divisions became protected on Crown land.

The Native Flora Protection Act was administered by the Forests Department and remained in force until 1980, when amendments to the Wildlife Conservation Act were proclaimed. Responsibility for the conservation of flora passed to the newly named Department of Fisheries and Wildlife. The amendments had several major provisions: all species of native plants could be (and were) protected on Crown land throughout the State, the taking of flora from Crown land for commercial or other

purposes was controlled by licences, the taking of flora on private land was restricted to the owner or a person the owner had authorised, the sale of flora taken from private land was controlled by licences and species declared as being threatened with extinction could not be taken anywhere except by written authorisation of the Minister. Provisions for compensating private land owners who could not clear land on which threatened plants occurred were included in the legislation.

### The CALM Act

In 1985 the State Government amalgamated the Forests Department, the National Parks Authority and the wildlife part of Fisheries and Wildlife into a new agency—CALM. The Forests Act and National Parks Authority Act, plus sections of the Wildlife Conservation Act relating to land, were repealed and replaced with the *Conservation and Land Management Act 1983* (CALM Act). A new authority, the National Parks and Nature Conservation Authority (NPNCA), was created to hold the vesting orders for national parks, nature reserves, State forests, marine parks and other conservation areas and to advise the State Government on nature conservation issues.

A major amendment to the CALM Act in 2000 removed CALM's timber production responsibilities and passed them to a new organisation, the Forest Products Commission. CALM became an organisation focused on biodiversity conservation. The NPNCA became the Conservation Commission of Western Australia, with responsibilities for developing and monitoring

management plans for national parks, nature reserves, State forests, and other areas vested in it. As a consequence, the commission also sets the sustained yield of forest production in State forest and timber reserves via management plans.

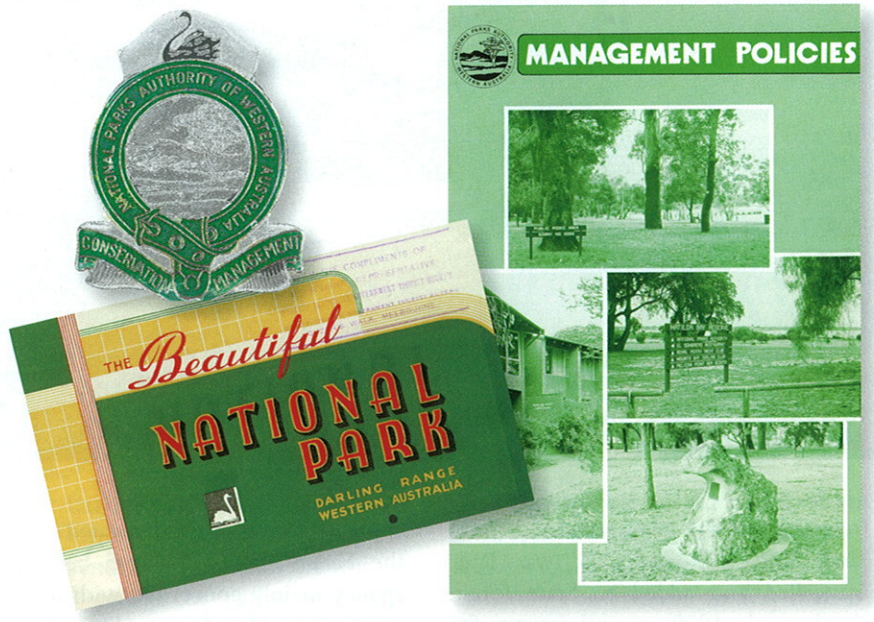
On 1 July 2006, CALM and the Department of Environment were amalgamated to form a new agency, the Department of Environment and Conservation (DEC).

### Protected areas

WA's first national park was declared in 1895. Located in the Perth hills and known for some time simply as 'national park', it is known today as John Forrest National Park. In the early years some national parks, like those near Pemberton, were managed by local

boards established under the *Parks and Reserves Act 1895*. In 1953, the National Parks Board was established, also under the Parks and Reserves Act, growing from the State Gardens Board, which, after being set up in 1920, gradually became responsible for several national parks. In 1976, the first legislation designed specifically for national parks established the National Parks Authority at a time when the number and extent of national parks was increasing. In June 2007, there were 97 national parks totalling 5,595,741 hectares.

Nature reserves, protected for conservation and scientific research, were first declared in the nineteenth century. In 1894, an area in the Darling Range of about 65,000 hectares was



**Top right** Badge of the first professional officers employed to work in national parks.

**Top far right** Cover of first National Parks Authority management plan, released in 1977.

**Above right** 1930s visitor guide to the 'national park', now known as John Forrest National Park.

**Right** Picnic group at John Forrest National Park, 1930.

*Photo – Courtesy Battye Library (004526)*



**Above** Rare pendulite cave formation, Leeuwin-Naturaliste National Park.  
Photo – Brett Dennis/Lochman  
*Transparencies*

**Left** Coast near mouth of Biggada Creek, west coast of Barrow Island Nature Reserve, which was declared in 1908.  
Photo – Jiri Lochman

reserved for the 'preservation of flora and fauna'. However, it was later cancelled and added to State forest. In the early 1900s, several reserves for 'protection of caves and flora, for health and pleasure resort' were declared in the south-west. Many of them have survived until the present day and are included in the Leeuwin-Naturaliste National Park. Barrow Island, one of the world's most valuable island conservation reserves, was declared in 1908. From these small beginnings, the number and area of nature reserves gradually increased so that by 1970 there were 315 with a total area of 2.1 million hectares. Growth in the 1970s was significant and by 1980 there were 1036 nature reserves totalling 8.8 million hectares. In June 2007, there were 1271 nature reserves totalling 10,872,183 hectares.

State forests were dedicated under the *Forests Act 1917*. From being an agency mainly concerned with timber production, the Forests Department gradually developed a multiple-purpose approach to forest management and recognised a responsibility to conserve natural areas under its control. In the 1970s it developed a network of areas, known then as Special Management Priority Areas, with the priority for many being nature conservation. The selection of these areas was based on ecological surveys and on consideration of factors threatening the survival of intact ecosystems, especially the distribution of *Phytophthora cinnamomi*, the water mould that causes the plant disease known as *Phytophthora* dieback. Most of these areas have been or are being converted to national parks or other conservation reserves.

Many species and ecosystems cannot be conserved adequately within the formal conservation reserve system. While numerous landholders have quietly conserved parts of their land for a long time, formal private conservation programs are a relatively recent phenomenon. Now there are several government and private programs aimed at encouraging and assisting people to conserve biodiversity on their land; programs such as DEC's *Land for Wildlife* and WWF-Australia's *Woodland Watch* are good examples. And recent moves by organisations to purchase and protect land complement the publicly owned conservation reserves system. The Australian Wildlife Conservancy, Bush Heritage Australia and the multi-organisation 'Gondwana Link' project are making major contributions to nature conservation.

### Conserving marine areas

Although the Land Act allowed areas of ground covered by tidal waters to be leased, it did not allow such areas to be reserved for public purposes. This anomaly was remedied in 1974 when the Fisheries Act was remodelled from an Act aimed at controlling the exploitation of commercial fish

stocks to one of conserving aquatic biological resources. For the first time, the Act allowed the declaration of aquatic reserves from high-water mark to the State territorial limit of three nautical miles. Declaration of reserves was, however, slow, partly because of the need to consult widely before an aquatic reserve could be declared.

The CALM Act included provisions for marine conservation areas, including marine parks and marine nature reserves. Initially, the NPNCA was responsible for marine as well as terrestrial reserves. In 1997, the Marine Parks and Reserves Authority was established and all marine reserves were vested in it. It advises on the creation of new marine reserves, develops management plans for marine reserves and monitors the implementation of management plans by the department. At 30 June 2007, there were 10 marine parks comprising 1,261,166 hectares, one marine nature reserve of 132,000 hectares and two marine management areas totalling 143,385 hectares (see 'Making waves: marine park awareness' on page 24).

### Institutional development

Nowadays, biodiversity conservation is a major activity of the State Government. But until the 1970s, very few people were employed specifically for that purpose. Before then, nature conservation was mainly a part-time activity of people employed primarily to do other work. Professional forestry graduates had been employed by the Forests Department for many years, but were primarily concerned with timber harvesting. In the late 1960s just two scientists were researching and advising on fauna conservation State-wide, but by the time that the Western Australian Wildlife Research Centre was opened in 1974, there were several scientists and support staff. Only in 1976 was the first professional officer employed to work in national parks. In WA, we have, more so than any other State, maintained a strong scientific basis for conservation management and developed and preserved a significant scientific research output. Growth in scientific and other staff since the 1970s has been significant and, while there will never be 'enough' resources



**Above** DEC and Tiwest volunteers preparing to release tamar wallabies in Nambung National Park as part of the *Western Shield* program.  
Photo – Steve Buitenhuis

**Right** The spectacular karri forest of the southern forests region draws many visitors.  
Photo – Dennis Sarson/Lochman Transparencies



to manage biodiversity and protected areas in such a large place as WA, there have been many achievements. One such achievement is the growth in protected areas described earlier. Another is *Western Shield*—the State's major feral predator control and fauna conservation program, which grew from scientific research into the reasons for the decline of native mammals. Most recently the State Government committed \$15 million towards strategic biodiversity conservation projects through the *Saving our Species* initiative (see 'Saving our Species, Saving our State', *LANDSCOPE*, Winter 2007). There are many others.

It's not long ago that most on-ground nature conservation activity was by government. Now there are other organisations involved: large organisations such as WWF-Australia, Australian Wildlife Conservancy, Bush Heritage Australia, Greening Australia, The Nature Conservancy and many smaller local groups. Many businesses now have significant conservation programs. And lots of individuals contribute their land and their time.

### Building on the best from the past

To paraphrase an old saying, 'from small seeds do mighty karri trees grow'. A closer examination of the long history of nature conservation in WA than is possible here shows that, in many cases, a single person or a few individuals have made a big difference. We should acknowledge their contribution. We still need 'champions' to ensure that important actions occur, but it will be the increasing groundswell of public opinion that will force many of the necessary future legislative and other actions necessary to conserve our amazing, valuable biodiversity.

Dr Andrew Burbidge is a Research Fellow with DEC. He joined the Department of Fisheries and Fauna in 1968 and retired from CALM in 2002. He can be contacted by email ([andrew.burbidge@dec.wa.gov.au](mailto:andrew.burbidge@dec.wa.gov.au)).



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