

Fig. 1: Map of the Royal Reserves

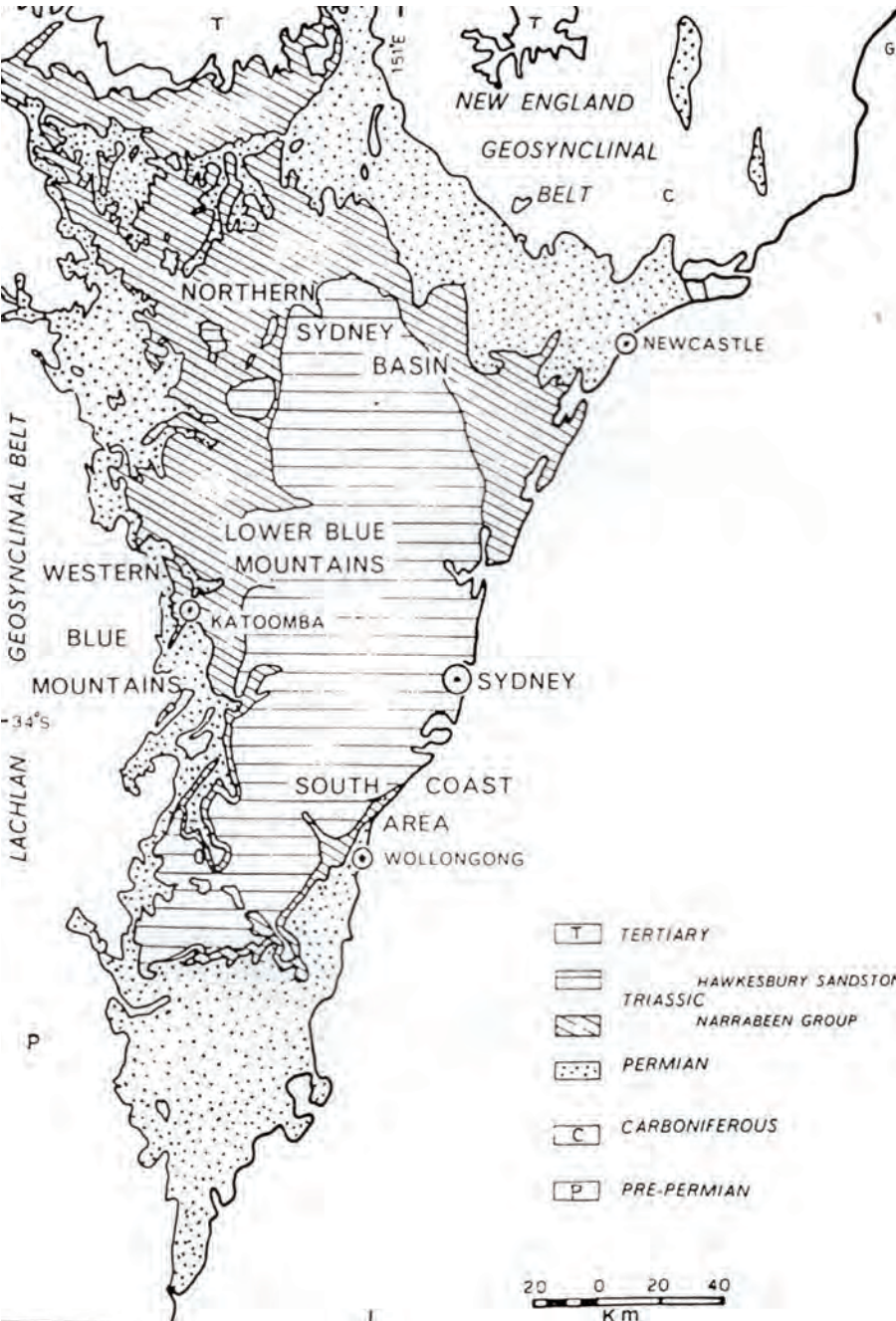


Fig. 2: General geology of the Sydney Basin



Aboriginal rock engraving at the Saddles, Royal National Park.

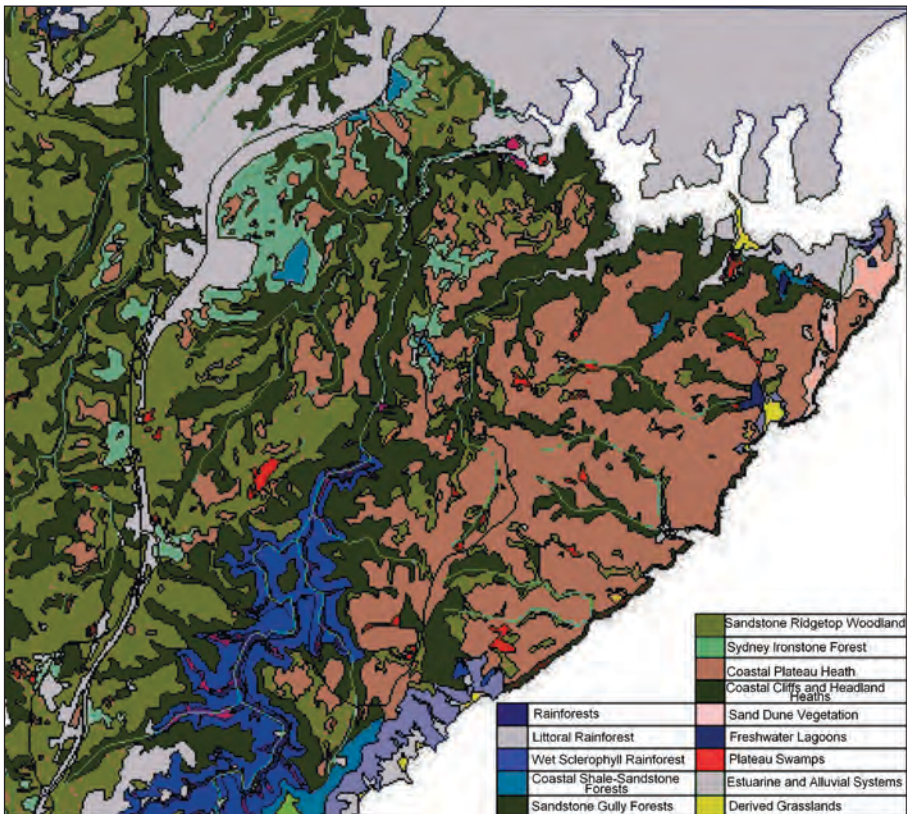


Fig. 3: Natural vegetation of the Royal Reserves  
Courtesy David Keith, presentation to Linnean Society Symposium, September 2011





Aboriginal midden at Little Garie, Royal National Park with shacks..

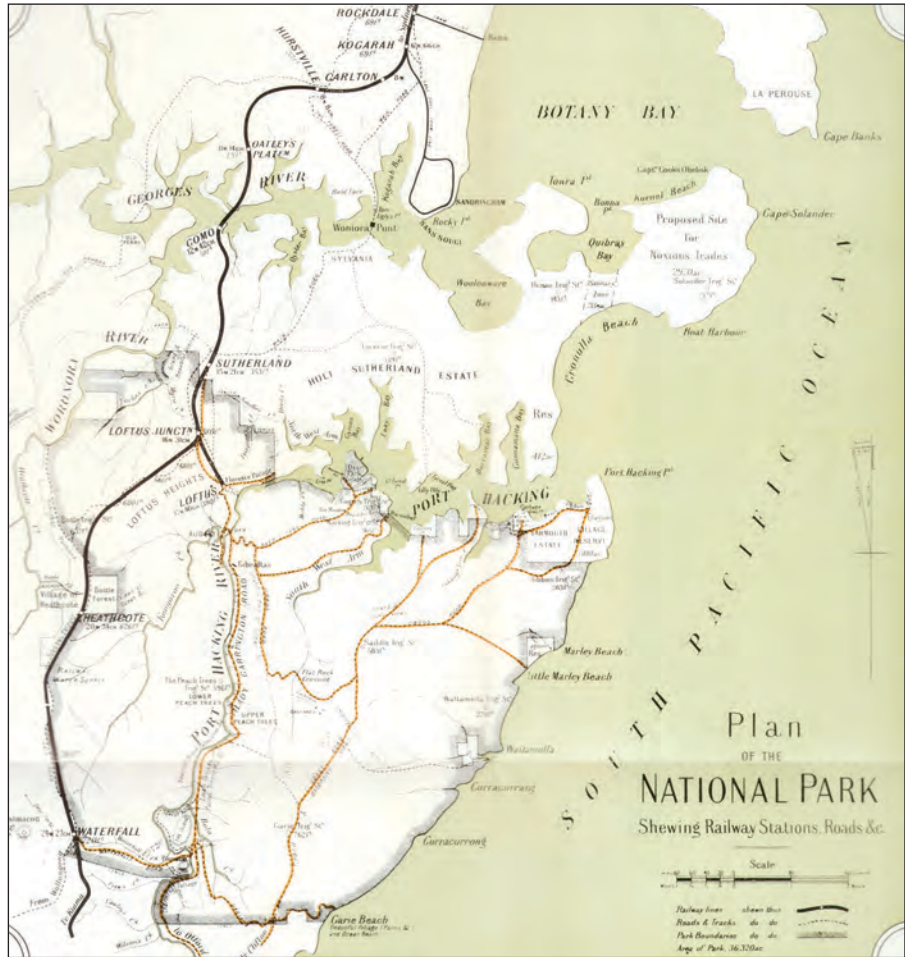


Fig. 4: Map of National Park in 1893



Fig. 5: Proposed Garawarra Primitive-Area Park 1933





Fig. 6: Proposed Blue Mountains National Park with Primitive Areas

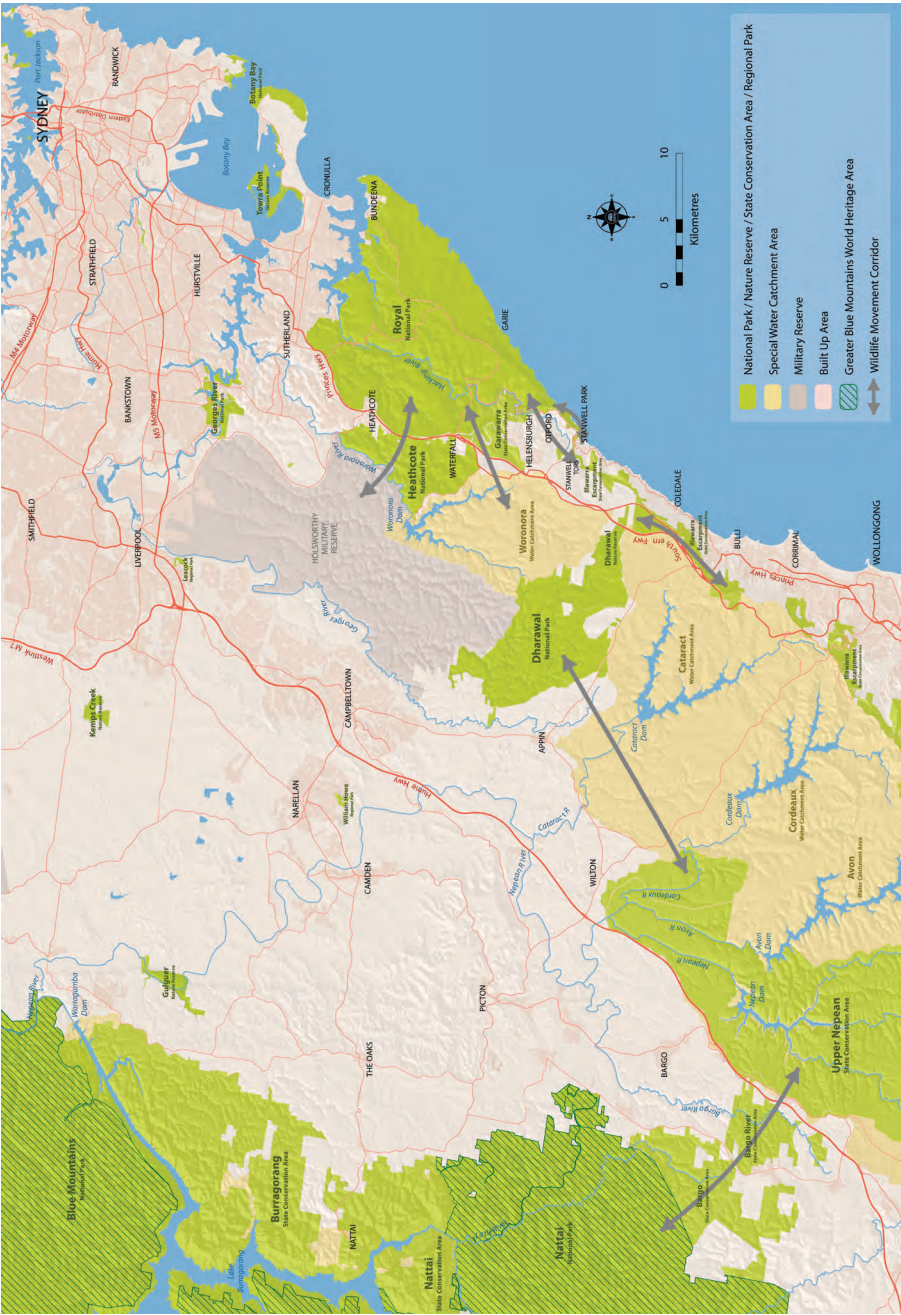


Fig. 7: The Royal Reserves showing important Wildlife Corridors and connections with public lands to the south (including the Greater Blue Mountains World Heritage Area)





North Era Beach in Royal National Park was an important place for Aboriginal people. A large midden can be seen on the sand dune behind the beach. This dune is on NSW Heritage List as an Aboriginal Burial Place.



Pygmy Possum *Cercartetus nanus* on a Grass Tree *Xanthorrhoea* sp. inflorescence. Small mammals such as possums, bushrats and antechinuses pollinate many species of plants in the Royal Reserves.



Young Brushtail Possum eating the flowers of a Crimson Bottle Brush *Callistemon citrinus*.





The Heath Monitor *Varanus rosenbergi* is one of the rarest reptiles in the Sydney Basin Bioregion and one of the largest growing to 1.4 m long. Largely a ground dwelling species, it can climb trees. They use sandstone outcrops and crevices for shelter.



The Goat Run at Wattamolla is the crevice formed from a rhyolitic dyke, which has intruded the Hawkesbury Sandstone beds and weathered to form white kaolin clay that erodes more readily than the surrounding rocks.



This bare bench on top of the 25 m cliffs on the northern shore of Curracurrang Cove has much evidence to suggest that it was stripped of its vegetation and soil by huge waves that have swept across it. Yet it is well above the level reached by even the most severe storm waves in this area. The most likely cause is a tsunami, coming onto the coast from the southeast, and sweeping across the bench. On average, there has been one tsunami every 200-300 years striking the New South Wales coast.



The well-known Figure Eight Pool in Royal National Park is one of a number of solution potholes on the coastal rock platform south of Burning Palms. They are formed in one of the sandstone beds in the Stanwell Park Claystone beds of the Narrabeen Series rocks.





The Bee Cave on the edge of the Moss Gardens in Royal National Park. A colony of stingless bees has formed a very large nest in the cave here.



The Tea Pot Cave at Flat Rock is an example of cavernous weathering in the Hawkesbury Sandstones.



Above and below: Hawkesbury sandstone outcrops can be beautifully coloured by iron as here on the coastal walking track near the Waterrun in Royal National Park.







The White Pointer rock formation at Wattamolla. It is named for its resembling a White Pointer or Great White Shark.



Sea cliffs at Little Marley.



Two types of coastal heathland; a narrow band of littoral heathland along the cliff edges and sand dune heath on the rise behind.



The Royal Reserves have many types of heath communities such as this.





Upland swamps are very diverse plant communities.



Bundeena woodland at the time of changing bark. Many of the gum trees shed their bark annually. The new bark can be very colourful.



A dry sclerophyll woodland on a ridge top at Robertsons Knoll in Royal National Park.



Sclerophyll woodland on laterite, Chinamans, Royal National Park.



Dry sclerophyll woodland at Flat Rock Pool.





Grassy Headland and Bangalow forest of Burning Palms and littoral rainforest at the start of Palm Jungle in the background.



Coastal warm temperate rainforest along Toonoum Brook in Royal National Park.



A topographic refugium at Flat Rock, Royal National Park.



Many plant species form underground stems called lignotubers. The lignotubers on these Bloodwoods *Corymbia gummifera* at Bundeena are gigantic covering many square metres. The stems in the picture may belong to one, or only a few, individuals.





Many species display scleromorphous features notably small, hard, pointed, and often incurved leaves and concerted flowering.



Phyllodes here on a Sydney Golden Wattle *Acacia longifolia* are modified petioles that replace the leaf blades on many species.



The Sundew *Drosera spathulata* is carnivorous feeding on small insects that it traps and digests with its specially modified leaves.



Beautiful sandstone rocks at Curracurrang Cove.



Head of navigation of the Kangaroo Creek Arm of Port Hacking now a freshwater pool formed by the dam at Audley.





Coastal cliffs traversed by the Coastal Walking Track between Bundeena and Marley Beach.



Little Marley Beach in Royal National Park.



The sea cliffs at Wattamolla.



Jumping off the waterfall at Wattamolla has developed as a rite of passage for young people and, although it is illegal, is a favourite activity.



Wattamolla Lagoon in Royal National Park is a favourite place for picnics all through the year.





Above and below: The Sydney Red Gum *Angophora costata* is very diverse in its habit from tall trees to mallees with its stem and branches beautifully twisted, contorted, and sculpted into beautiful forms so much so that it is often nicknamed 'Vangophora'.





Beautiful woodland along the Robertson's Roundabout walking track.

Opposite page, clockwise from top right:

1. The Small leaved Boronia *Boronia thujona* has sweetly scented flowers. It is easily recognised by its strong, some say unpleasant odour, of its crushed leaves.
2. The Fuchsia Heath *Epacris longiflora* is a striking small shrub with red and white tubular or bell shaped flowers.
3. The Christmas Bell *Blandfordia nobilis* was once a common sight in wet heaths, swamps and along roadsides. Indiscriminate and commercial picking has reduced its numbers considerably.
4. Eggs and Bacon *Dillwynia retorta* is very widespread and common turning the bush yellow in spring.
5. Hairpin Banksia *Banksia spinulosa* produces copious quantities of nectar. In the old days they were called honeysuckles.
6. Bossiaea *Bossiaea heterophylla* is a small shrub of woodlands and open forests often on sandstone ridgetops flowering abundantly in late winter and early spring.
7. Red Five-corners *Styphelia tubiflora* is one of the most striking flowers of the heaths.
8. Flannel Flower *Actinotus helianthi* is a conspicuous and well-known part of the Sydney flora. It is a short-lived perennial rarely living more than four years. Large numbers of seeds germinate after a fire and flower profusely one to two years later.
9. The Heathleaf Banksia *Banksia ericifolia* flowers through late autumn, winter and spring producing copious quantities of nectar that attracts large numbers of birds and insects. It is a keystone species with many species dependant on it.
10. Waratah *Telopea speciosissima* is one of the best-known plants and the floral emblem of the State of New South Wales.







View of North and South Era Beaches from Governor Game Lookout.



The Bus Stop Tree at Audley. In the old days passengers would get off the train at National Park Station and walk across to wait for the bus here to take them down the hill to the picnic grounds and guest house. The buses would turn around the tree.



The Royal Reserves are very rich in terrestrial orchids one of the most common being the Spotted Sun Orchid *Thelymitra ixioides* found in heaths and woodlands.





The Mowengully Mob, Aboriginal students from Moss Vale TAFE, learning about their culture and the environment in Royal National Park in 2012.



The first Environmental Education School in Australia was held in Royal National Park in 1975 for primary school teachers. A group of primary school teachers and educators Alan Strom (in grey hat), Alan Fox (standing with orange shirt), Bob Crombie (photographer) and Wendy Goldstein (standing on right with camera) at the Aboriginal Occupation Site at Curracurrang.



Historic shelter shed and dance hall now a visitor centre, function room and restaurant/cafe at Audley in 2012.



Historic boatshed at Audley in 2012.





Varney Bridge over the Hacking River Arm of Port Hacking at Audley in 2012.  
This is now a pool of freshwater due to the dam downstream.



The Coastal Walking Track, the premier walking track in Royal National Park,  
has many problems to rectify.



This large rock along the Wallumarra Track was completely covered with lithophyte orchids and elkhorn ferns during the construction of the track in 1975. Within 6 weeks of the track's opening it had been stripped bare. Theft of plants is a serious issue in the Royal Reserves.



The introduced fungus *Phytophthora cinnamomi*, evidenced here on the Uloola Track by the death of plants, is a serious pathogen that kills many plant species. It appears to be spread throughout the reserves by deer and walkers. It may have been introduced into the park in dumped garden refuse or from activities at Loftus.





One of the few large Turpentines *Syncarpia glomulifera* left after logging in the early 1920s. at Bola Creek and Forest Island.



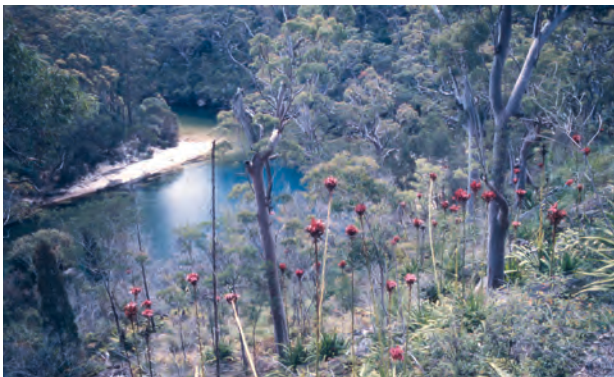
Volunteers are very active in the Royal Reserves. A pile of flotsam and jetsam collected and bagged from Marley Beach by volunteers.



Pool on Heathcote Creek, Heathcote National Park.



Artillery Pool, Heathcote National Park.



Gymea lilies in bloom at Lake Eckersley in Heathcote National Park. Gymea lilies produce a noxious substance in their nectar to deter non-pollinating organisms from visiting their flowers and robbing them of their nectar and pollen.