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Conservation and Attractions

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PROTECT YOUR PARK

For the safety of visitors, and to protect the high conservation values of the Port Kennedy Scientific Park, vehicles and trail bikes are not permitted within the reserve. Vehicles and trail bikes threaten plants and animals, increase erosion of the fragile dune systems and present a fire risk. Visitors are welcome to explore the Scientific Park on foot, using existing tracks.

Reservation of the Port Kennedy Scientific Park is an exciting initiative which will safeguard the unique values of this area for the future. It reflects the great potential of the region for education and research in the natural sciences, and provides the opportunity to increase appreciation of coastal ecosystems and land management practices.



This brochure is a State Government initiative to conserve the State's biodiversity and is funded through the Department of Conservation and Land Management's Wetland Conservation Program and the Bankwest LANDSCOPE Conservation Visa Card.

CARING FOR PORT KENNEDY SCIENTIFIC PARK

BE CAREFUL: Your safety is our concern but your responsibility.

BE RESPONSIBLE: Fires, vehicles and bikes are not allowed in the Park. Disturbing plants and animals can destroy the fragile swale wetlands and dune systems.

BE CARING: Protect your pets and leave them at home. They are not permitted in the Scientific Park as they disturb wildlife. Baits containing 1080 poison will be laid in the Park.



FURTHER INFORMATION

The Department of Conservation and Land Management protects and manages native plants and animals throughout Western Australia.

Please approach departmental staff with any questions you may have.

For further information contact:

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Visit NatureBase at www.calm.wa.gov.au

Photographs by Terry Goodlich unless otherwise stated

PORT KENNEDY SCIENTIFIC PARK



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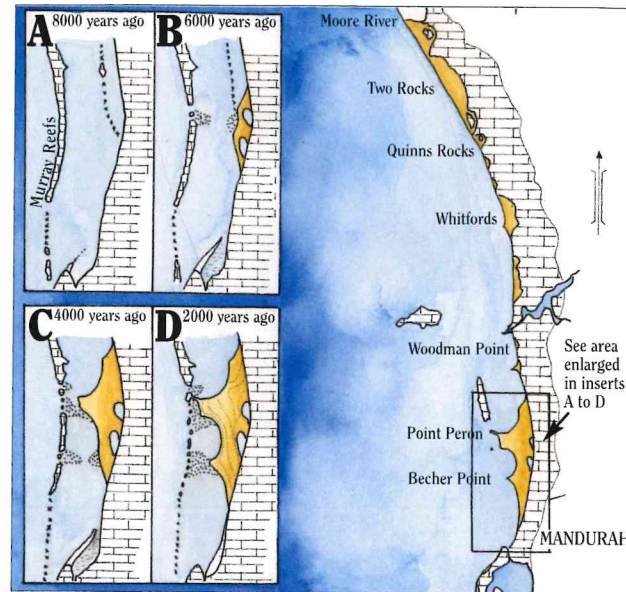
The Port Kennedy Scientific Park, nine kilometres south of Rockingham, is an A-class nature reserve that forms part of Rockingham Lakes Regional Park. This attractive coastal area covers internationally important dune systems. Each dune system forms part of an evolutionary time sequence, and supports examples of a threatened plant community. It is envisaged that the Scientific Park will become a 'living laboratory' for students of nature-based science.



Foredune and swale

DUNES AND SWALES

The Quindalup Dunes of the Scientific Park have formed by wind and waves tossing sand ashore over the last 6,000 years. Successive dune formations are roughly parallel to the present coastline and are separated by shallow depressions (swales). The age sequence of the swales and dunes has increased the complexity of habitats for wildflowers and other wildlife.



Above: Formation of the Rockingham Coast .
Source – Rippey and Rowland, 1995, *Plants of the Perth Coast and Islands*.

Fresh groundwater flows through the sandy soils of the Scientific Park. Seasonally waterlogged damplands and sumplands have formed in areas of greater soil moisture, particularly in the swales of the dunes. Damplands are waterlogged in winter and retain relatively high moisture near the soil surface in the summer, while sumplands have shallow surface water for less than two months of the year.

The dunes and swales provide a relatively undisturbed record of soil development, from the older inland soils to the younger and newly formed soils on the coast. Thus, they give an insight into changes in the sea level, shoreline and climate that have occurred during the last 10,000 years (the Holocene period). Preservation and study of this area may provide useful knowledge in understanding climatic changes and the evolution of wetlands, and contribute to improved planning and management of coastal regions.

THREATENED WETLANDS

During 1996, the 'Sedgeland in the Holocene Dune Swales' community was classified as critically endangered by the Department of Conservation and Land Management, because the community covers only 20 per cent of the area on which it grew and continues to decline. What remains is threatened by clearing, weed invasion and frequent fires. A recovery plan has been prepared with the aim of protecting this important scientific community, which has also been listed on the Ramsar List of Wetlands of International Importance.

Dampland and sumpland areas at Port Kennedy are generally narrow and linear, or circular, with mosaics of sedgeland vegetation that reflect localised soil moisture and soil types. Sedges, such as knotted club-rush (*Isolepis nodosa*), coastal sword-sedge (*Lepidosperma gladiatum*), bare twig-rush (*Baumea juncea*), searush (*Juncus kraussii*) and jointed twig-rush (*Baumea articulata*), typify these wetlands. Dense and attractive stands of balga (*Xanthorrhoea preissii*) or swamp paperbark (*Melaleuca raphiophylla*) may fringe the sedgelands.



Sedgeland fringed by balgas.

PLANTS

Forming unique vegetation associations within the dune system, the flora of the Port Kennedy Scientific Park has high conservation values. It contains many species typical of coastal areas including heathlands, acacia thickets, paperbark swamps and balga belts. The greatest number of species and density of growth occurs within the swales between the dunes.



Above: Snake Bush (*Hemiandra pungens*).

ANIMALS

The reserve is also a haven for several native mammal species, at least four species of amphibian and 21 species of reptile.

Native mammals in the Scientific Park include the quenda (*Isoodon obesulus fusciventer*), which is classified as Priority Four Fauna. This means that quenda populations need monitoring to ensure that their numbers do not decline. Their distribution range has been reduced by loss of habitat due to urbanisation, and predation by foxes, dogs and cats

Two reptiles found in the area, the Perth lined lerista (*Lerista lineata*) and the black-striped snake (*Neelaps calonotus*), are almost entirely restricted to the Swan Coastal Plain between Mandurah and Lancelin. Their habitat is also under threat from increasing urbanisation.

Other snakes include the tiger snake (*Notechis scutatus occidentalis*), dugite (*Pseudonaja affinis*), carpet python (*Morelia spilota imbricata*) and Gould's snake (*Rhinoplocephalus gouldii*). The carpet python has special protection in Western Australia. This snake can survive only in large areas of undisturbed bushland.

The roseate tern, black-shouldered kite, Australian kestrel, cormorants, yellow-throated minor and the pied oystercatcher are among the large diversity of birds that visit or reside in the Park.



Top left: Western black-striped snake (*Neelaps calonotus*).

Top right: Australian kestrel.

Above: Quenda (*Isoodon obesulus fusciventer*).

Photos: Rob and Bert Walls/Department of Conservation and Land Management

FERAL PREDATORS

Foxes, dogs, cats, and rabbits have a devastating impact on native wildlife. To control feral predators, meat baits (foxes, dogs, cats) and wild oats (rabbits) injected with 1080 will be regularly laid. 1080 is a chemical that occurs naturally in native poison pea plants (*Gastrolobium* species). Our native animals have developed a high tolerance to 1080, but minute amounts of it are deadly to introduced predators. Studies have shown that reducing numbers of feral predators through the use of 1080 baits has resulted in dramatic increases in native wildlife populations.



A feral animal proof fence has been constructed around the reserve. The fence surrounds the Scientific Park on three sides. The Park is open along the coastline, where the ever-changing environment makes a permanent fence line impractical. Higher density baiting will be carried out along this opening. The fence includes features to prevent animals climbing over or burrowing beneath it. Special gates allow people to enter on foot while preventing feral predators from entering.

PROTECT YOUR PETS

Baiting is necessary to create a safe haven for native animal populations. The 1080 baits are poisonous to domestic pets and there is no antidote to the poison. To keep your pets safe, ensure your animals are kept out of the Scientific Park at all times.

