



Fact Sheet — Biodiversity

Sydney Olympic Park's rich biodiversity includes over 400 native plant species and over 200 native vertebrate animal species. It includes three endangered ecological communities, protected marine vegetation, three threatened plant species, over 190 species of native bird, seven species of frog, 10 species of bats, 16 species of reptile, scores of native fish species, and many thousands of invertebrate species. This high biodiversity in the geographic centre of a large and modern city reflects the successful restoration and development of the Park, and contributes to Sydney Olympic Park's high ecological, aesthetic and educational values.

- Nearly half (300 hectares) of the Park provides habitat for diverse fauna and flora, many of which are of conservation concern at a local, regional, state, national or international level. The Park is a haven for species such as the Superb Fairy-wren and Blue-tongue Lizard that are disappearing from the urban environment. It also provides a stepping stone for nomadic and migratory animals moving between remnant habitats, and acts as a drought refuge for species from western New South Wales.
- Highlights include a breeding pair of White-bellied Sea-eagles, increases in the extent and condition of endangered ecological communities, and the preservation of the endangered Green and Golden Bell Frog population. Sydney Olympic Park has the largest remaining stand of Grey Mangrove, a protected marine vegetation, in the Parramatta river estuary. The Park also contains the largest remnant of Coastal Saltmarsh in the Parramatta river estuary, and a significant remnant of Sydney Turpentine Ironbark Forest, both endangered ecological communities, within the 47-hectare Newington Nature Reserve.

- The estuarine wetlands of Newington Nature Reserve and Badu Mangroves, totalling 100 hectares, are both listed on the Directory of Important Wetlands in Australia. (www.environment.gov.au)
- The habitats of the Park are a mix of:
 - recovering remnant estuarine and forest communities;
 - extensive areas of terrestrial plantings; and
 - constructed freshwater wetlands established on remediated landscapes built in the late 1990s.
- Planning, design and construction of these new landscapes incorporated principles relating to the conservation and enhancement of biodiversity, and some landscape and planting elements, such as swales for water retention and shrub layers for woodland birds, were constructed or established specifically to promote biodiversity.

Threats and pressures

- Sydney Olympic Park is located within the Parramatta River catchment of the Sydney Basin Bioregion. Its species and communities are part of the larger ecological systems of this region, and are subject to the threats and pressures operating at the regional scale and beyond, such as urbanisation, climate change, sea level rise, water quality changes, weeds, pests and diseases.
- In ecological terms, Sydney Olympic Park is virtually an island – it is physically disconnected from most other flora and fauna habitats by surrounding urban development, and subject to the same ecological threats to which island ecosystems are especially prone. These include edge effects, low or zero rates of external colonisation by many species, and subsequently, slow recovery from localised perturbations.
- Other pressures on the Park's biodiversity include the constructed and altered nature of the Park's habitats, their immaturity (most trees are around ten years old), the Park's many competing land use objectives, including residential and commercial uses, and the rising demand of the Park as a local and regional leisure destination.

Biodiversity management

- The nature of the Park's habitats, their small size, constructed and altered nature, and many competing management objectives, means that ongoing active and adaptive management is needed to retain their ecological values. Stringent conditions are applied to maintenance works and visitor programs within ecologically-sensitive areas of the Park to ensure continued conservation of the Park's biodiversity.
- Thirteen species and communities are identified as 'priority species' for conservation and are the focus of specific management programs. These are:
 - Sydney Turpentine-Ironbark Forest — a 'critically endangered' forest community;
 - Green and Golden Bell Frog — Sydney Olympic Park supports one of the largest remaining New South Wales populations of this endangered species;
 - The largest remaining stand of Coastal Saltmarsh on the Parramatta River. This endangered ecological community contains large stands of *Wilsonia backhousei* (a threatened saltmarsh plant);
 - The largest stand of Mangrove Forest (protected marine vegetation) on the Parramatta River;
 - Remnant Swamp Oak Floodplain Forest — an endangered ecological community of estuarine areas;
 - Migratory Shorebirds, protected under international treaties and Commonwealth and State legislation;
 - Latham's Snipe — a bird that migrates to Australia from Japan each year and is protected under international treaties;

- ‘Woodland Birds’ — a group of small, mostly passerine birds such as the Superb Fairy Wren. Bush birds are disappearing from urban habitats;
- Microchiropteran Bats, including the only maternity roost of the White-striped Free-tailed Bat recorded in Sydney. It is also the only maternity roost of this species recorded within a building;
- Horned Pondweed *Zannichellia palustris* — an endangered submerged aquatic plant protected under state legislation;
- Red-rumped Parrot — a ground feeding parrot on the eastern edge of its range;
- Raptors — Thirteen species of raptor or ‘birds of prey’ have been observed at Sydney Olympic Park since 2000. These include 11 diurnal raptors, including eagles, hawks, falcons, kestrel and harriers and 2 nocturnal owl species; and
- Black-winged Stilts — representative of the wetland birds at the Park, this species feeds and nests in the wetlands.

Biodiversity Objectives

- The *Sydney Olympic Park Authority Act 2001* requires the Authority to implement the principles of ecologically sustainable development in exercising its functions, and identifies protection and enhancement of the Park’s natural heritage as a key function of the Authority. Through implementation of the Environmental Guidelines, Sydney Olympic Park Authority is committed to the following objectives for biodiversity conservation:
 - protecting and enhancing the natural heritage and ecological integrity of Sydney Olympic Park — targeting priority species and communities, places of high biodiversity value, and biodiversity generally;
 - applying an adaptive management approach to stewardship of Sydney Olympic Park’s biodiversity assets;
 - ensuring conservation of biological diversity and ecological integrity is a fundamental consideration for all new developments, activities, levels or types of use, or management practices that affect the ecosystems of Sydney Olympic Park;
 - promoting the ecological, aesthetic and educational values of an urban site with high species diversity and abundance;
 - conserving and enhancing the remnant woodland and wetland habitats of Newington Nature Reserve in accordance with the Newington Nature Reserve Plan of Management, and managing adjoining lands in sympathy with the Reserve; and
 - maximising the habitat values of native plantings by promoting priority species and communities, providing structural complexity and plant species diversity, avoiding habitat fragmentation, promoting habitat linkages and large core areas, and prioritising the use of indigenous species in landscape planting schemes in the parklands.