



# Biodiversity of the Georges River Catchment

## Terrestrial biodiversity

November 2004

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Approved by .....

Date .....

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# Foreword

The biodiversity of the Georges River catchment is a unique assemblage of ecological communities, populations and species. This assemblage of habitats and species supports native plants and animals that are endemic to this region or rarely found elsewhere. In addition to these species there are many others that are also represented elsewhere and still more that are occasional or regular visitors to the catchment.

The biodiversity of the Georges River catchment, like most biodiversity in the Sydney metropolitan area, is under pressure from a range of impacts. The pressure exerted through expansion and intensification of development to accommodate the increasing population of metropolitan Sydney is a notable process in the decline of biodiversity in this region, manifest in a range of direct (e.g. habitat loss) and indirect (e.g. reduced water quality) measurable effects. Direct losses are usually readily identified and therefore more easily controlled and managed. Indirect losses are less readily attributable to direct cause–effect processes, often being the cumulative effect of a number of remote circumstances and impacts. In both cases effective management of biodiversity relies on targeting the causes of loss and managing them at their source rather than using approaches that manage the symptoms (though it should also be said that in some cases, particularly for significantly threatened species or areas, that the symptoms, including population decline, must also be managed).

Local and regional land use planning that is well-informed about extant biodiversity values can limit both direct and indirect impacts on these resources. Thus, the ambit of this report on the biodiversity of the Georges River catchment is fourfold:

- Over recent years the need for biodiversity conservation has taken increasingly high prominence at international, national, state and local levels, and the importance of understanding biodiversity values has emerged as critical to achieving the aims and objectives of international, national and state biodiversity conservation agreements and strategies.
- Information about regional biodiversity resources is essential to support resource managers, decision-makers and proponents of development, providing a basis for understanding natural values and constraints, and better management of biodiversity and other natural resources.
- The documentation of biodiversity values at a regional scale provides baseline data to measure the success of biodiversity conservation at regional scale, and feeds into monitoring and reporting at larger and smaller management scales.
- A regional biodiversity management framework for the Georges River catchment is an important first step in achieving biodiversity management goals and empowers local government to better incorporate biodiversity conservation measures into day-to-day decision-making processes.

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# List of abbreviations

ALBERO	Habitat analysis software package (see Keith & Bedward 1999)
ANOSIM	Analysis of similarities
ANOVA	Analysis of variance
DA	Development application
DCP	Development control plan
DEC	NSW Department of Environment and Conservation (formerly NPWS and EPA)
DEST	Australian Government Department of Environment Sports and Territories (now DEH)
DIPNR	NSW Department of Infrastructure, Planning and Natural Resources (formerly DLWC & PlanningNSW)
EPA	NSW Environmental Protection Authority (now DEC)
EP&BC Act	<i>Environment Protection and Biodiversity Conservation Act (1999)</i> (Commonwealth)
ESOCLIM	Climate data analysis software package (see Hutchinson 1989)
FM Act	<i>Fisheries Management Act (1994)</i> (NSW)
GAM	Generalised additive modelling
GIS	Geographic information system
GLM	Generalised linear modelling
GPS	Geographic positioning system
LGA	Local government area
LIC	NSW Land Information Centre
MU	Map Unit
NP&W Act	<i>National Parks and Wildlife Act (1974)</i> (NSW)
NPWS	NSW National Parks and Wildlife Service (now DEC)
PATN	Species population data analysis software package (see Belbin 1991)
REP	Regional environmental plan
RMA	Regional management area
sp.	Species
spp.	Species (plural)
SRA	State Recreation Area (see NP&W Act)
TSC Act	<i>Threatened Species Conservation Act (1995)</i> (NSW)

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