NSW GOVERNMENT

In partnership with CSIRO

# Measuring our amazing biodiversity

**A method to assess biodiversity and ecological integrity across New South Wales**

Michael Van Ewijk/OEH

The Biodiversity Baseline Assessment is a method and program for assessing and reporting on the status and trends in biodiversity and ecological integrity in New South Wales, as required by the *Biodiversity Conservation Act 2016*.

## Introduction

New South Wales is home to an amazing diversity of plants, animals and ecosystems – collectively known as **biological diversity** or **biodiversity**. We need to manage and protect this biodiversity to support the health of the environment and of our communities.

The NSW Government has introduced new legislation for biodiversity conservation and native vegetation management, including the *Biodiversity Conservation Act 2016*. One of the main goals of the Act is to conserve biodiversity. To help assess the performance of the new legislation, Office of Environment and Heritage (OEH) will establish a monitoring program and assess the status of biodiversity in New South Wales at the beginning of the Act – the baseline – and then at recommended intervals, including contributing to the five-year review of the Act.

## What is biodiversity?

**Biodiversity** is the variety of living animal and plant life from all sources, and includes diversity within and between species, and diversity of ecosystems. It includes all plants, animals, insects, fungi and micro-organisms. The idea of **ecological integrity** is central to the maintenance of biodiversity**.** Ecological integrity is the ability and capacity of natural areas to maintain biodiversity now and in the future.

## Indicators of biodiversity

Biodiversity indicators are statistical measures which help scientists, managers and policy-makers understand the current status of biodiversity and how likely it is to change in the future.

We use scientifically sound and cost-effective methods to gather the information we need to create a snapshot of the status of all plants and animals across New South Wales. This includes the analysis of satellite images to assess the size and condition of natural areas in New South Wales where different types of plants and animals occur. In some cases, we can also use existing long-term data sets for particular areas or species to tell us how the numbers of species or their habitats have been changing over time.

The method identifies key indicators for biodiversity in New South Wales. These indicators measure different aspects of biodiversity, including:

- how well our efforts at protecting and restoring threatened species are working
- how many species we expect to survive in the future
- how previous loss of habitat has affected biodiversity
- the condition of existing natural areas and how well-connected these are to each other
- the level of pressures and threats to biodiversity.

These statewide assessments will be complemented by case studies using data from on-ground monitoring programs in important areas for biodiversity or for important species or ecosystems.

## How were indicators developed?

Office of Environment and Heritage partnered with CSIRO and other experts from the Australian Museum and Macquarie University to develop a peer-reviewed method and identify the best indicators. The full details of the method and its scientific background will be detailed in a technical report that will be published on the OEH website in late 2017.

Office of Environment and Heritage will publish the results of the biodiversity baseline assessments in a NSW Biodiversity Outlook Report, which will be subject to peer-review.

## Further information

Visit the OEH biodiversity webpage and Sustain. Invest. Protect land management portal.

Contact the Environment Line on 13 15 55 or email us at info@environment.nsw.gov.au.

Photos top, left to right: S Cohen/OEH; D Croft/OEH; S Ruming.

Published by:
Office of Environment and Heritage
ISBN 978 1 76039 942 9
OEH 2017/0570
October 2017