

## 3. Animals of high conservation priority

These species are rare and have declined substantially. They are faced with continuing threats, mainly habitat loss or alteration. Most may be conserved by managing key habitats or threats in the region.

In this chapter, EPBC Act = *Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth), IUCN = International Union for the Conservation of Nature, NP = national park, NPW Act = *National Parks and Wildlife Act 1974*, NR = nature reserve, RP = regional park, SCA = state conservation area, SF = state forest, and TSC Act = *Threatened Species Conservation Act 1995*.

### 3.1 Australasian bittern (*Botaurus poiciloptilus*)

This large, secretive heron usually lives alone, in dense reeds and rushes in freshwater swamps or saltwater wetlands associated with tidal estuaries. It is identified by its distinctive booming call during the breeding season.

**Status/direction of change:** Rare visitor/declining

**Significance of study area:** Non-core

**Key habitat:** Coastal wetlands

**Legislative listing:** Vulnerable – TSC Act



Photo: T. Shimba

#### Threats

The main threats are habitat destruction and alteration through changed flooding regimes; the drainage, salinisation, siltation and pollution of wetlands caused by urbanisation; and cats and foxes preying on the eggs and young. Other threats include the degradation of drought refuges; clearing of riparian vegetation for agriculture; and grazing and trampling.

#### Distribution

The Australasian bittern is found between southern Queensland and Tasmania in eastern Australia and in south-western Western Australia, as well as in New Zealand and New Caledonia.

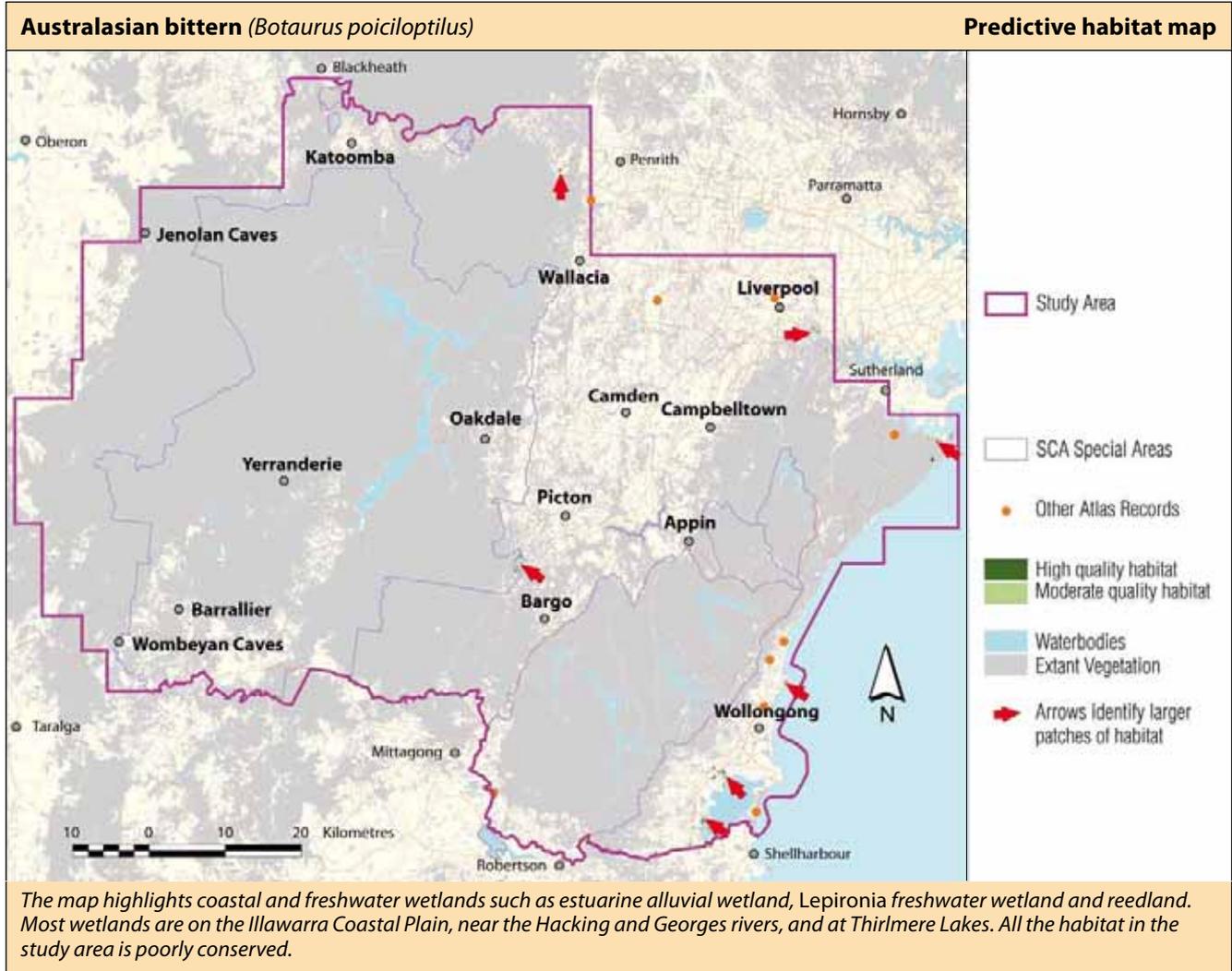
In NSW it occurs mainly in the Riverina. In and around Sydney, it lives on the coast and in reserves, including Dharug NP and Pitt Town and Kooragang NRs.

In the Illawarra, it is a rare visitor though there are more sightings during drought years. The bird has been seen in the past few years at Woonona, Sandon Point and Thirroul. Further west, it has been seen at Thirlmere Lakes and on the Cumberland Plain. Its population in the study area is probably not more than 50 and its annual population in the Illawarra is less than 20.

Outside the study area, the species is found in Towra Point NR and Cecil Hoskins NR near Moss Vale. The nearest known breeding sites are at Commonderry (near Shoalhaven Heads) and Wingecarribee Swamps.

#### How you can help

- > Join a bird-watching group such as the Bird Observers Club of Australia ([www.birdobservers.org.au](http://www.birdobservers.org.au)), Birds Australia ([www.birdsaustralia.org.au](http://www.birdsaustralia.org.au)) or the Cumberland Bird Observers ([www.cboc.org.au](http://www.cboc.org.au)) to find out more about this rare bird.
- > If you live near a wetland, join a 'friends of the wetland' group or start your own – phone your local council for advice. Alternatively, find a wetland conservation project near you by contacting Conservation Volunteers Australia – visit [www.conservationvolunteers.com.au/volunteer/conservation-connect.asp](http://www.conservationvolunteers.com.au/volunteer/conservation-connect.asp), or Wetland Care – visit [www.wetlandcare.com.au](http://www.wetlandcare.com.au) or phone: (02) 6681 6169.
- > Never let your dog wander into swamps or bogs as they may disturb sleeping or nesting birds.



### 3.2 Barking owl (*Ninox connivens*)

This owl has a dark brown back and a white underbody with coarse brown streaking, and a distinctive, dog-like barking call. It lives in dry, open eucalypt forests and woodlands, near rivers and swamps. It eats more insects than other large forest owls, though it also feeds on small mammals and birds during the breeding season. It nests in hollows of live trees, often on the edge of cleared country, where it lays one to three eggs.

**Status/direction of change:** Extremely rare resident/possibly declining

**Significance of study area:** Non-core

**Key habitat:** Grassy box woodlands

**Legislative listing:** Vulnerable – TSC Act. Draft NSW recovery plan (DEC various b)



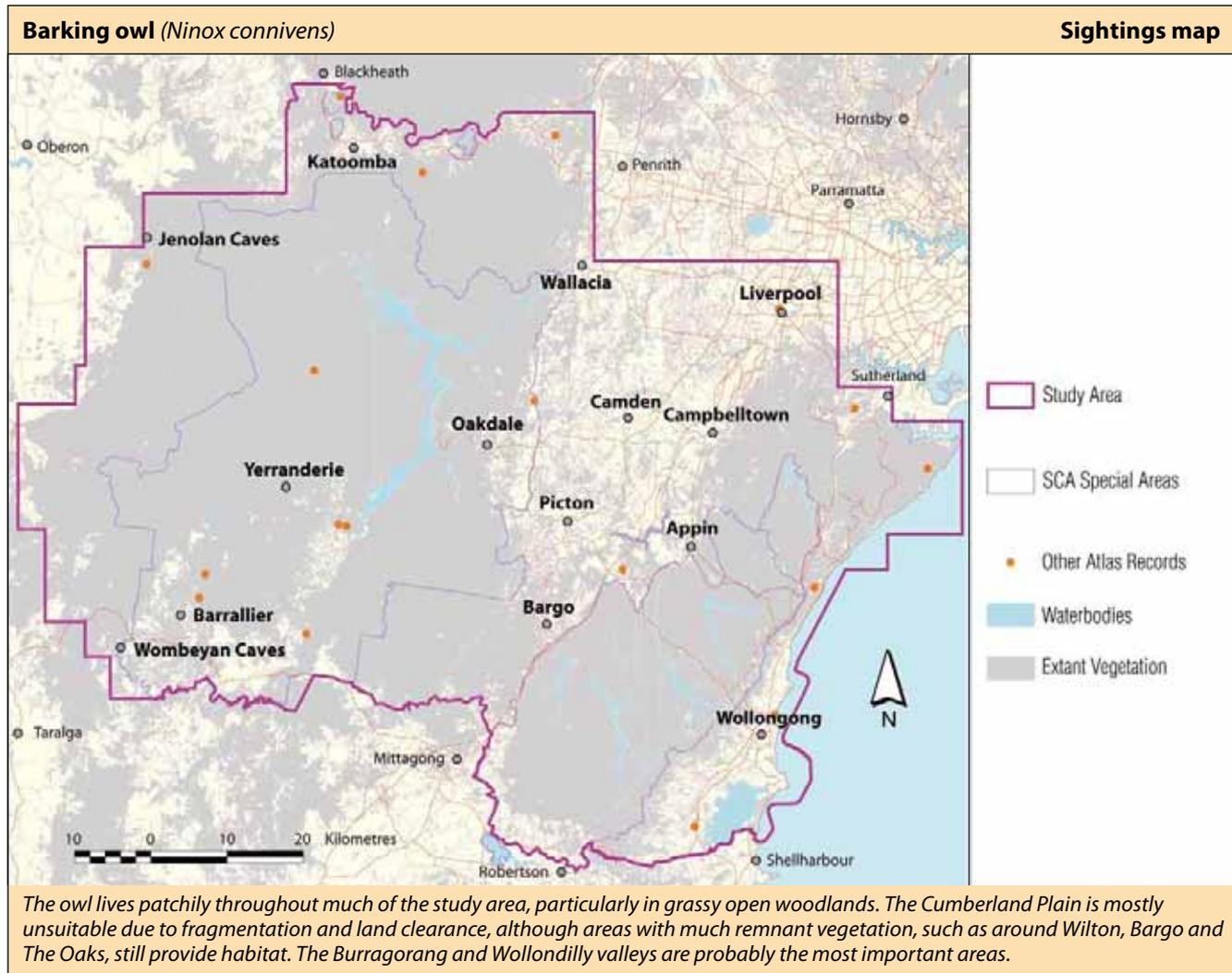
#### Threats

The main threat is habitat destruction, particularly due to the clearing of woodlands and forests for farming, the collection of firewood, and grazing and forestry operations that cause old-growth and over-mature trees to be cut down and reduce available nesting sites. Other threats include predation, particularly of fledglings; collisions with fences and vehicles; secondary poisoning from rodenticides; and competition from feral honeybees (*Apis mellifera*). Due to the long generation time of this species, it does not recover quickly following population declines.

## Distribution

The owl lives throughout NSW, though it is rarer in the far west and at higher altitudes. In and around Sydney, important locations include the Capertee and western Hunter valleys, and grassy box woodlands on the edges of Yengo and Wollemi NPs and Manobaloi NR.

In the study area, the owl has been seen in only 18 locations, with many sightings considered to be misidentifications. Call playbacks at 490 sites and 688 hours of spotlighting during 2002–05 produced only four records, from the Bindook Highlands, Scotts Main Range and near The Oaks. Surveys of the Cumberland Plain in 2006 found the owl around Razorback Range and north of the study area, near Richmond. Other sightings have been in grassy open woodlands on high-fertility soils such as in the Burragorang and Wollondilly valleys.



## How you can help

- > Retain living and dead trees that have hollows on your land, including paddock trees – they provide shelter and nesting sites. Leave fallen timber on the ground as it provides habitat for prey.
- > If you hear the distinctive call of the owl, record it and send it to DECC. Also, complete a sightings form – visit [www.nationalparks.nsw.gov.au/images/scientific\\_licence\\_datasheet.xls](http://www.nationalparks.nsw.gov.au/images/scientific_licence_datasheet.xls) and [www.nationalparks.nsw.gov.au/PDFs/WildlifeAtlas\\_Field\\_Data\\_Book.pdf](http://www.nationalparks.nsw.gov.au/PDFs/WildlifeAtlas_Field_Data_Book.pdf) – and email it to [gis@environment.nsw.gov.au](mailto:gis@environment.nsw.gov.au).
- > To find out more about the owl and to listen to a recording of its call, visit [www.threatenedspecies.environment.nsw.gov.au/tsprofile/profile.aspx?id=10561](http://www.threatenedspecies.environment.nsw.gov.au/tsprofile/profile.aspx?id=10561).
- > If you are trying to get rid of rats, use traps rather than baits to avoid poisoning owls. If rats are in the roof, find where they are getting in and block the hole with metal and chicken wire.
- > Join a local bushcare group or create your own if you live near degraded grassy woodland, to regenerate habitat for the owl, especially if you live in rural western Sydney or in the Wollondilly or Burragorang valleys. Contact your local council, Conservation Volunteers Australia ([www.conservationvolunteers.com.au/volunteer/conservation-connect.asp](http://www.conservationvolunteers.com.au/volunteer/conservation-connect.asp)), Bushcare – visit [www.landcareonline.com](http://www.landcareonline.com) or phone: (02) 9412 1040 – or Greening Australia (visit [www.greeningaustralia.org.au/getinvolved/index.html](http://www.greeningaustralia.org.au/getinvolved/index.html) or phone: (02) 9560 9144).

### 3.3 Black bittern (*Ixobrychus flavicollis*)

This medium-sized, grey–black heron has a distinctive yellow stripe on its head and neck. It is usually found alone or in pairs in thick vegetation at the edges of freshwater and estuarine wetlands, and breeds in thick leafy trees overhanging water. In the Illawarra region it is usually seen in watercourses containing swamp oak (*Casuarina glauca*) or river oak (*C. cunninghamiana*).

**Status/direction of change:** Rare summer visitor/ declining

**Significance of study area:** Non-core

**Key habitat:** Coastal wetlands, alluvial woodlands and forests

**Legislative listing:** Vulnerable – TSC Act



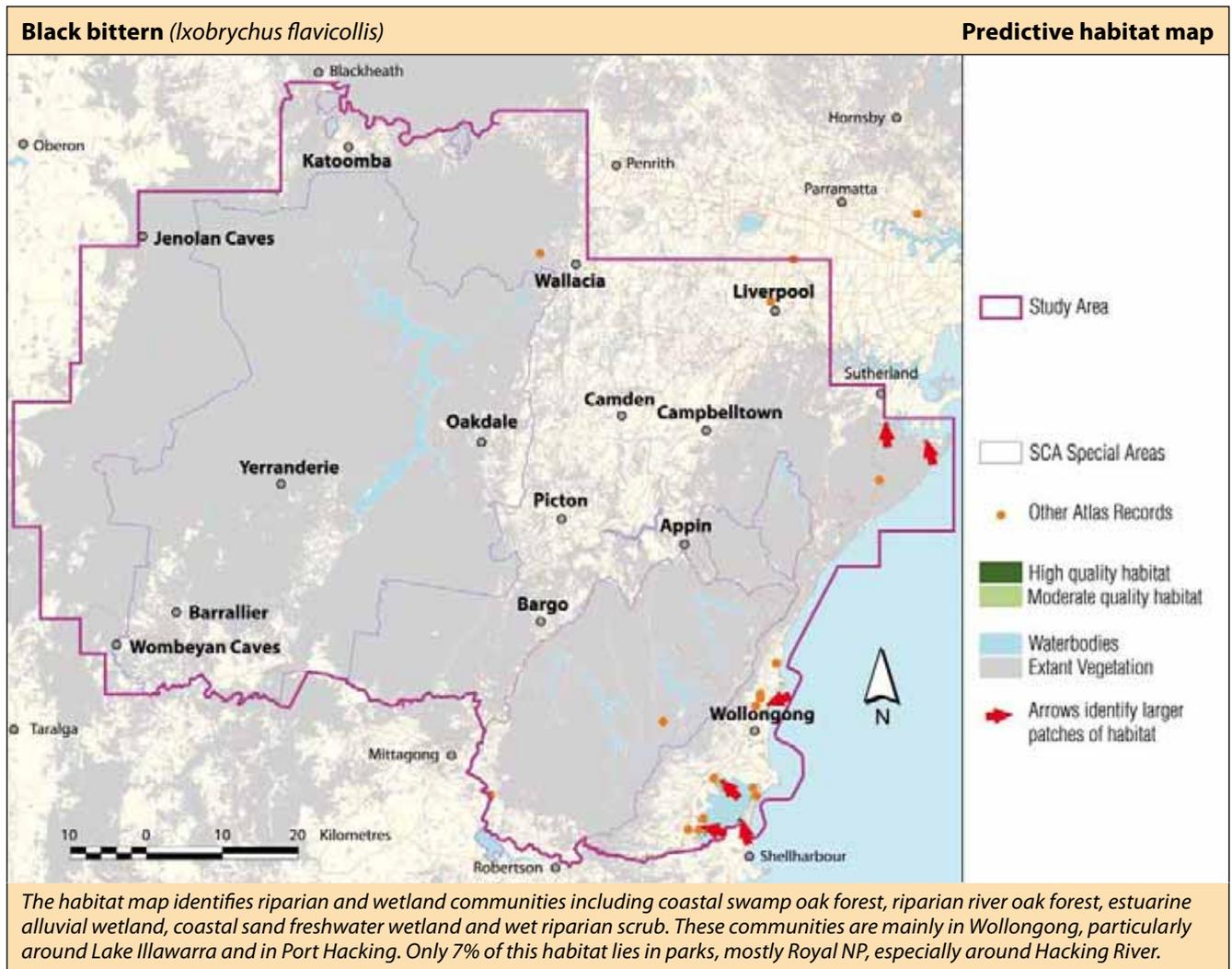
#### Threats

Habitat alteration is the greatest threat, including clearing of riparian vegetation for agriculture and urbanisation, and the resulting increase in salinity and sedimentation.

#### Distribution

In Australia, the black bittern lives on the north and east coast between the Kimberleys in Western Australia and extreme eastern Victoria. It is rare south of Sydney. There is an isolated declining population in south-western Western Australia.

In NSW, the bird lives on the coast, and occasionally west of the Great Divide. In and around Sydney, the bird is rare but lives along major rivers such as the Hawkesbury, including in Dharug and Scheyville NPs.



In the study area, less than 20 birds are estimated to live in the Illawarra. Most birds have been seen on lower Duck Creek, around Wollongong, or in various wetlands on the coastal plain. Importantly, there is a nesting record for West Dapto, confirming that the species breeds in the area. The most recent records are from Collins Creek in urban Woonona in 2005, where one bird was heard calling at night over several weeks.

Survey work in 2002–05 focused on drinking water catchments and reserves and did not target black bittern habitat. Further surveys may find this species to be more prevalent than currently recognised. Nonetheless, the map confirms that very limited suitable habitat remains, almost all of which is threatened by urbanisation and degradation.

### How you can help

- > If you own land with areas of swamp oak or river oak, fence stock out and replant or encourage regeneration of bankside vegetation. This will also help improve water quality. Alternatively, write to your council to encourage them to protect the black bittern's breeding habitat.
- > If you live near a wetland, join a 'friends of the wetland' group or start your own – see 3.1 for details.
- > Stop your dog wandering into swamps or bogs where it may disturb nesting or sleeping birds.

## 3.4 Black-chinned honeyeater (*Melithreptus gularis gularis*)

The black-chinned honeyeater is distinguished from other honeyeaters by its larger size, bright blue or jade green eye-wattle and distinctive call. The bird is nomadic, and moves between dry eucalypt woodlands with ironbark or box species and low to moderate rainfall, where it is usually found in pairs or small groups of up to 12. It feeds on insects, nectar, lerps, flowers and leaves, usually in the upper canopy.

**Status/direction of change:** Rare resident/declining

**Significance of study area:** Non-core

**Key habitat:** Grassy box woodlands

**Legislative listing:** Vulnerable – TSC Act



Photo: P. McHoney

### Threats

The main threats are habitat clearance and fragmentation. The bird cannot survive in vegetation remnants of less than 200 hectares, possibly due to competition from aggressive honeyeater species and increased nest predation from species such as pied currawongs (*Strepera graculina*).

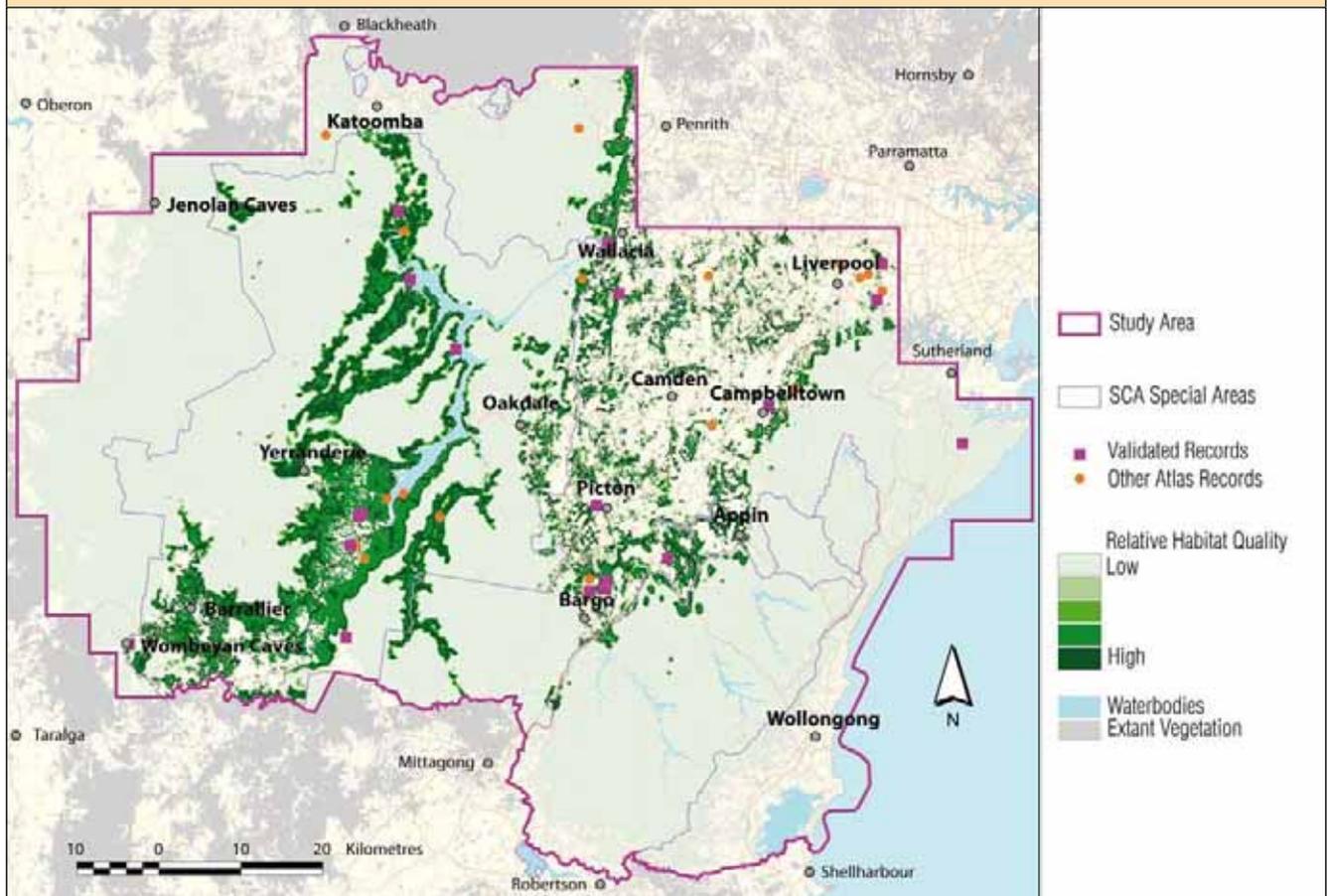
### Distribution

This honeyeater is found between south-eastern Queensland and Victoria. In NSW, it lives in the Nandewar region, on the south-west slopes in the south-eastern highlands, and around Sydney. In the latter area, the bird lives in western Sydney, and the Capertee and Hunter valleys, which have fertile soils and winter-flowering trees like white box (*Eucalyptus albens*) and spotted gum (*Corymbia maculata*). These areas have been heavily cleared, degraded and fragmented. The bird has also been seen in Goulburn River and Werakata NPs, in Munghorn Gap NR, and on the fringes of Wollemi NP.

This bird is rarely seen in the study area. There are scattered records from the western Cumberland Plain and it is rare though possibly resident in the Illawarra. Other sightings have been in Burragorang Valley and Warwick Farm. During the 2002–05 surveys, it was seen in Kedumba Valley, at Butchers Creek Camp on the western shore of Lake Burragorang and at Wirrimbirra Sanctuary near Bargo. Only one record for Jooriland was made in 2002–05. However, the bird may only visit the region when there are suitable eucalypts flowering, particularly in winter. Autumn and winter surveys in 2006 have detected this species north of Bargo and on the northern edge of the Cumberland Plain near Kurrajong.

### How you can help

- > Join a bird-watching group – see 3.1 for details.
- > Protect and enhance grassy woodland on your property if you own a large section of bushland. Suitable species for rehabilitation include white box (*Eucalyptus albens*) and spotted gum (*Corymbia maculata*).
- > Join a local bushcare group to regenerate bushland – see 3.2 for details.



The map predicts suitable habitat in low-lying areas, particularly high fertility woodlands and forests of the rain-shadow valleys and escarpment slopes of the southern Blue Mountains. The most important areas are Burragorang and Coxs River valleys and the Cumberland Plain. Of this habitat, much has been cleared and less than half is in reserves.

### 3.5 Blue Mountains water-skink (*Eulamprus leuraensis*)

This medium-sized, semi-aquatic lizard can be identified by the markings on its back, consisting of four narrow golden to white stripes on a dark brown to black background. The skink is found in high sedge and shrubby swamps that have boggy soil and plants such as button grass (*Gymnoschoenus sphaerocephalus*), blady grass (*Lepidosperma limicola*), yellow flag (*Xyris ustulata*) and weeping baekia (*Baekia linifolia*). The skink is active on warm sunny days from September to late April, when it forages in vegetation for insects including grasshoppers, flies, moths, weevils and wasps.

**Status/direction of change:** Extremely rare resident/ probably stable

**Significance of study area:** Core

**Key habitat:** Upland swamp

**Legislative listing:** Endangered – TSC and EPBC Acts. National recovery plan (Department of the Environment and Water Resources various b). NSW recovery plan (DEC various b)



Photo: S. Nally

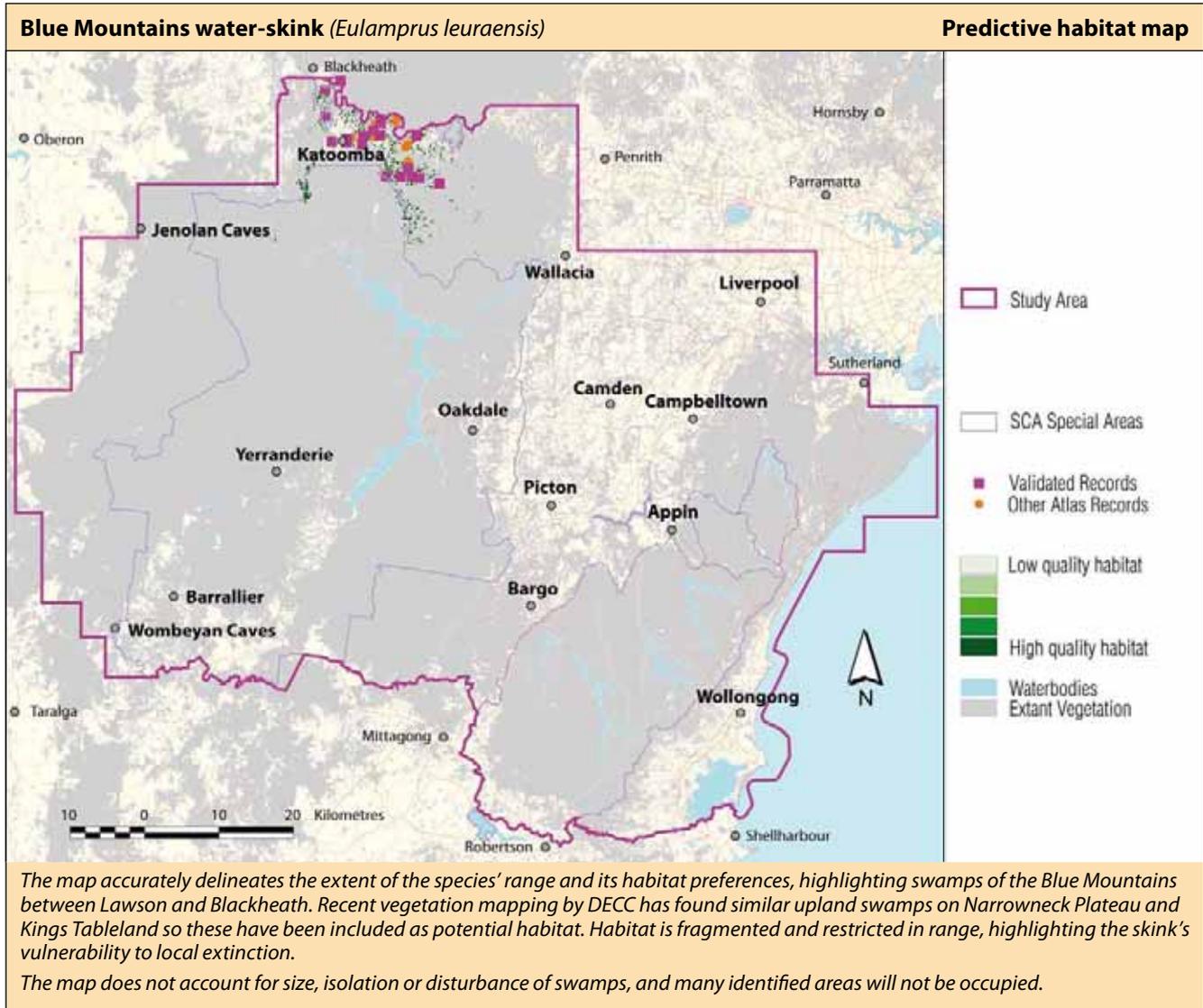
#### Threats

The skink is highly threatened because of the small number and isolation of its populations, its limited geographic distribution and the lack of habitat. Key threats include habitat loss; habitat degradation such as sedimentation, pollution and weed invasion of swamps from nearby urban developments; predation by cats; inappropriate fire regimes and swamp drainage from longwall mining. The impacts of these threats require more research and monitoring.

## Distribution

This skink has a very restricted distribution, living in only 40 locations between the Newnes Plateau and south of Hazelbrook, most of which are in Blue Mountains NP and Newnes SF, though it also lives in crown reserves and in Blackheath and Katoomba Special Areas. Most locations are near urban settlements.

Over 50% of all known sites for the skink are in the study area. During the 2002–05 study, there were no new locations recorded despite targeted searches being conducted in suitable habitat in Katoomba, Woodford Creek and Blackheath Special Areas. Nevertheless, this species is secretive and often difficult to detect without pitfall trapping or if survey conditions are less than ideal.



## How you can help

- > Join the Australian Herpetological Society ([www.ahs.org.au](http://www.ahs.org.au)) to find out more about this rare skink.
- > Report anybody you see collecting lizards from the wild to your local national parks office.
- > Volunteer to do bushcare work in the Blue Mountains area to improve habitat for the skink – visit [www.environment.nsw.gov.au](http://www.environment.nsw.gov.au) and click on the following links: 'Parks and Wildlife' (top link), 'How you can help' (side link), 'Taking care of national parks', 'Park volunteer programs', 'Blue Mountains National Park'. Alternatively, phone DECC on (02) 4787 8877.
- > If you live in the Blue Mountains, stop your cat wandering into local bushland – particularly swamps – where it may kill this rare lizard.

### 3.6 Broad-headed snake (*Hoplocephalus bungaroides*)

This snake is a nocturnal ambush predator, about 60 cm long, and is recognised by its distinctive black and yellow pattern. It is semi-arboreal, sheltering in winter under sandstone on rock outcrops, and in summer in tree hollows in woodland. The snake primarily feeds on Lesueur’s velvet gecko (*Oedura lesueurii*), which shelters around sandstone outcrops and less frequently under bark and in hollows of dead trees. The snake is particular about where it retreats to during the day, which may be a factor limiting its population.

**Status/direction of change:** Extremely rare resident/declining

**Significance of study area:** Core

**Key habitat:** Rocky outcrops in sandstone woodlands

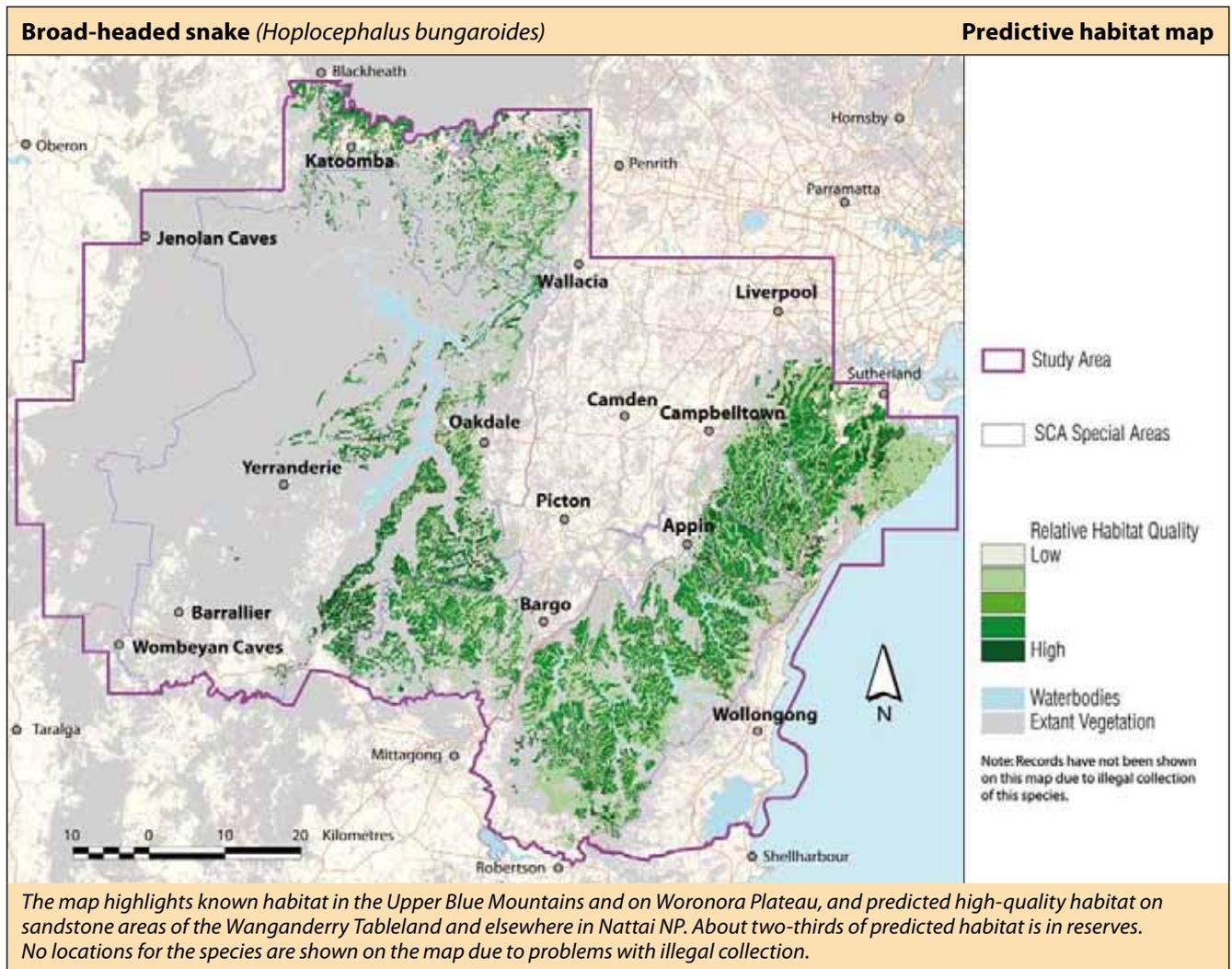
**Legislative listing:** Endangered – TSC Act. Vulnerable – EPBC Act



Photo: N. Williams

#### Threats

A key threat is the collection of bush rock for landscaping (which removes the sheltering habitat of the snake and Lesueur’s velvet gecko). This activity is generally prohibited or requires permits, but is practiced illegally. As the snake is colourful, rare and venomous, it is taken by snake-collectors. Other threats include overgrowth of rock outcrops due to fire suppression; urbanisation of sandstone ridgetops; the impacts of feral animals, especially foxes and goats, through predation and disturbance; habitat alteration through longwall mining; and removal of dead wood and dead trees. The snake may also be affected by logging operations due to its reliance on tree hollows for part of the year.



## Distribution

In and around Sydney, the snake is restricted to Hawkesbury and Narrabeen sandstone environments between Wollemi NP and the Clyde River catchment, south-west of Nowra. It has disappeared from Port Jackson and Middle Harbour, and from the western edge of its distribution around Bathurst. It still lives in the upper Blue Mountains and in Wollemi and Royal NPs, extending onto the Woronora Plateau. It also lives in eastern Morton NP west of Nowra.

This is the rarest snake in the region, with only 22 new locations listed since 1990, despite targeted surveys. However, the study area is thought to contain much suitable habitat, including the upper Blue Mountains and Woronora Plateau, particularly Heathcote and Royal NPs.

During the 2002–05 study, one snake was detected at Medlow Gap in the Warragamba Special Area. This is quite far from other locations, but there is suitable habitat in this area. Another location has been found on the Woronora Plateau on a well-shaded, small rock outcrop in long unburnt woodland, where different individuals have been found for four consecutive years. This site would be considered very marginal habitat by herpetologists and snake collectors, which may have contributed to the snake's survival.

## How you can help

- > Report anyone removing bush rock illegally to your local council or national parks office. To download DECC's bush rock removal factsheet, go to [www.nationalparks.nsw.gov.au/PDFs/bushroc1k.pdf](http://www.nationalparks.nsw.gov.au/PDFs/bushroc1k.pdf).
- > Report anybody you suspect of taking snakes or lizards from the wild to your local national parks office, DECC's Environment Line on 1300 361 967 or the police. All reptiles are protected in NSW and none may be taken without a permit.
- > Join the Australian Herpetological Society ([www.ahs.org.au](http://www.ahs.org.au)) to find out more about this rare snake.

## 3.7 Dingo (*Canis lupus dingo*)

A subspecies of the wolf, the dingo was introduced by humans to Australia around 5000 years ago, resulting in the extinction of the thylacine (*Thylacinus cynocephalus*) and Tasmanian devil (*Sarcophilus harrisi*) in mainland Australia. The dingo is now the native top-order predatory mammal. Dingoes are omnivorous, though they primarily eat medium to large mammals such as wallabies and kangaroos. They regulate kangaroo numbers in South Australia and probably elsewhere, and help to control feral species such as cats, pigs, goats and foxes. They live in most environments, from densely forested to cleared areas.

**Status/direction of change:** Uncommon resident/declining

**Significance of study area:** Core

**Key habitat:** Many

**Legislative listing:** See under 'Distribution'



Photo: H. Jessup

## Cultural significance

The dingo is important to indigenous communities of the Blue Mountains. Many community members believe that dingoes in the Southern Blue Mountains should be conserved. Dingoes are depicted in rock art in the area. Traditionally, dingoes were highly-valued pets and hunting dogs. Aboriginal words for dingo from the region include Gundungurra – binure (old mountain dingo) and mirragang (common dingo); Darug – mirri (camp dingo) and dingo (wild dingo); and Tharawal – nurragee and mirragang (dingo).

## Threats

The key threat is interbreeding with domestic dogs. While pure dingoes live in NSW, over 60% of dingoes have some dog genes and hybridisation is continuing. Other threats include hunting, poisoning and trapping to reduce the dingo's impacts on livestock.

## Distribution

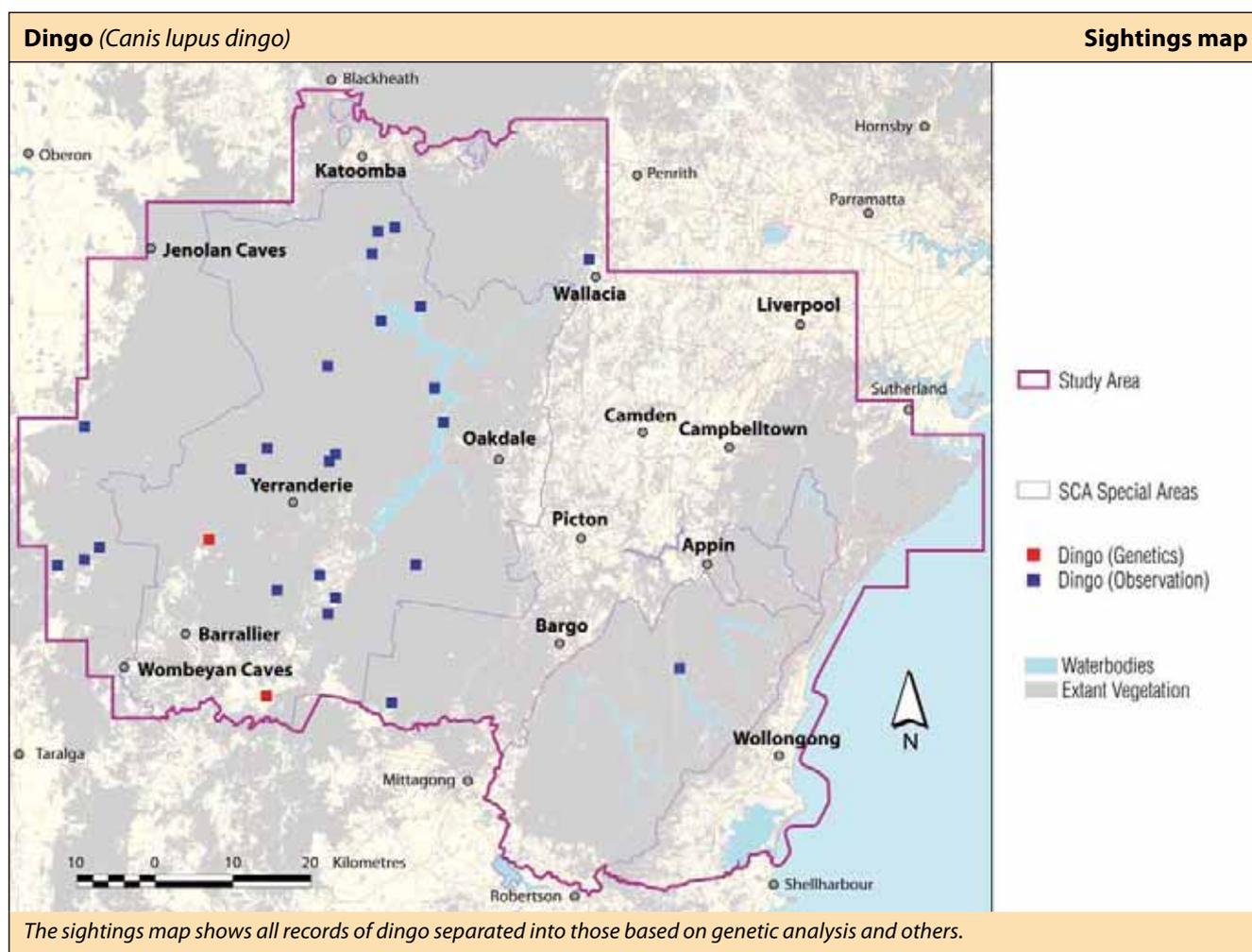
The dingo is listed on the IUCN red list of threatened species as vulnerable due to a 30% decrease in numbers (see IUCN 2005). In NSW, dingo populations from Sturt NP, the coastal ranges and some coastal parks have been nominated as endangered populations under the TSC Act. In contrast, the dingo is unprotected under the NPW Act, despite being considered a native species – a discrepancy that is yet to be resolved. Dingoes are also a declared pest species under the *Rural Lands Protection Act 1998*.

The southern Blue Mountains is a dingo conservation area, meaning control of wild dogs in this area requires a management strategy that balances the requirement to conserve dingoes with the need to manage their impacts on neighbouring agricultural lands.

Before European settlement, dingoes would have occupied much of the area in and around Sydney, both as companion animals and in the wild. They are now restricted to patches along the Great Dividing and Watagan ranges.

In the study area, dingoes or hybrids no longer live on the Illawarra Coastal Plain. There are recent sightings from the western edge of the Cumberland Plain, such as around Mulgoa and Richmond north of the study area. Until a sighting in late 2006 they were considered to be extinct on the Woronora Plateau though they were frequently found there until the 1940s. They still live in the southern Blue Mountains, including on the banks of Wollondilly, Gillan's and Sheehys creeks. While fewer than one in ten are of pure dingo ancestry, most are at least 75% dingo and fulfil an identical role as a top order predator. In another study, three dingoes were identified as pure, one 15 km from Yerranderie, one from an unrecorded location in Nattai NP (not shown on map), and one found dead on the Wombeyan Caves Rd near Bullio.

During the 2002–05 project, 26 dingoes were recorded. These were along Nattai River and near High Range in Nattai NP; below Burragorang Walls in Burragorang SCA; on Lacys Tableland, Scotts Main Range, the Kedumba Valley; and around Jerrong Road in the south-west of the study area. Records were only made if dingoes showed no physical evidence of hybridisation, or were identified by their distinctive howls. The records indicate where the most genetically intact populations live and where conservation efforts should be focused.



### How you can help

- > If you own a bush property, particularly in the Burragorang or Wollondilly valleys, before you bait or shoot dingoes consider the role they have in controlling pigs, goats, foxes, rabbits and kangaroos.
- > Never feed dingos that may visit your campsite or property as they may become a pest and have to be euthanased.