APPENDIX 5: THREATENED FAUNA SPECIES PROFILES

The following profiles are sourced from the Department of Environment and Climate Change.

Regent Honeyeater – profile

Scientific name: *Xanthomyza phrygia*
Conservation status in NSW: Endangered
National conservation status: Endangered

Description
The Regent Honeyeater is a striking and distinctive, medium-sized, black and yellow honeyeater with a sturdy, curved bill. Adults weigh 35 - 50 grams, are 20 - 24 cm long and have a wings-pan of 30 cm. Its head, neck, throat, upper breast and bill are black and the back and lower breast are pale lemon in colour with a black scalloped pattern. Its flight and tail feathers are edged with bright yellow. There is a characteristic patch of dark pink or cream-coloured facial-skin around the eye. Sexes are similar, though males are larger, darker and have larger patch of bare facial-skin. The call is a soft metallic bell-like song; birds are most vocal in non-breeding season.

Distribution
The Regent Honeyeater mainly inhabits temperate woodlands and open forests of the inland slopes of south-east Australia. Birds are also found in drier coastal woodlands and forests in some years. Once recorded between Adelaide and the central coast of Queensland, its range has contracted dramatically in the last 30 years to between northeastern Victoria and south-eastern Queensland. There are only three known key breeding regions remaining: north-east Victoria (Chiltern-Albury), and in NSW at Capertee Valley and the Bundarra-Barraba region. In NSW the distribution is very patchy and mainly confined to the two main breeding areas and surrounding fragmented woodlands. In some years non-breeding flocks converge on flowering coastal woodlands and forests.

Habitat and ecology
- The Regent Honeyeater is a flagship threatened woodland bird whose conservation will benefit a large suite of other threatened and declining woodland fauna. The species inhabits dry open forest and woodland, particularly Box-Ironbark woodland, and riparian forests of River Sheoak. Regent Honeyeaters inhabit woodlands that support a significantly high abundance and species richness of bird species. These woodlands have significantly large numbers of mature trees, high canopy cover and abundance of mistletoes.
- Every few years non-breeding flocks are seen foraging in flowering coastal Swamp Mahogany and Spotted Gum forests, particularly on the central coast and occasionally on the upper north coast. Birds are occasionally seen on the south coast.

- In the last 10 years Regent Honeyeaters have been recorded in urban areas around Albury where woodlands tree species such as Mugga Ironbark and Yellow Box were planted 20 years ago.
- The Regent Honeyeater is a generalist forager, which mainly feeds on the nectar from a wide range of eucalypts and mistletoes. Key eucalypt species include Mugga Ironbark, Yellow Box, Blakely's Red Gum, White Box and Swamp Mahogany. Also utilises : E. microcarpa, E. punctata, E. polyanthemos, E. mollucana, Corymbia robusta, E. crebra, E. caleyi, Corymbia maculata, E.mckieana, E. macrorhyncha, E. laevopinea, and Angophora floribunda. Nectar and fruit from the mistletoes A. miquelii, A. pendula, A. cambagei are also eaten during the breeding season. When nectar is scarce lerp and honeydew comprise a large proportion of the diet. Insects make up about 15% of the total diet and are important components of the diet of nestlings. A shrubby understorey is an important source of insects and nesting material.
- Colour-banding of Regent Honeyeater has shown that the species can undertake largescale nomadic movements in the order of hundreds of kilometres. However, the exact nature of these movements is still poorly understood. It is likely that movements are dependent on spatial and temporal flowering and other resource patterns. To successfully manage the recovery of this species a full understanding of the habitats used in the non-breeding season is critical.
- There are three known key breeding areas, two of them in NSW - Capertee Valley and Bundarra-Barraba regions. The species breeds between July and January in BoxIronbark and other temperate woodlands and riparian gallery forest dominated by River Sheoak. Regent Honeyeaters usually nest in horizontal branches or forks in tall mature eucalypts and Sheoaks. Also nest in mistletoe haustoria.
- An open cup-shaped nest is constructed of bark, grass, twigs and wool by the female. Two or three eggs are laid and incubated by the female for 14 days. Nestlings are brooded and fed by both parents at an average rate of 23 times per hour and fledge after 16 days. Fledglings fed by both parents 29 times per hour.

Threats

- Historical loss, fragmentation and degradation of habitat from clearing for agricultural and residential development, particularly fertile Yellow Box-White Box-Blakely's Red Gum woodlands.
- Continuing loss of key habitat tree species and remnant woodlands from strategic agricultural developments, timber gathering and residential developments.
- Suppression of natural regeneration of overstorey tree species and shrub species from overgrazing. Riparian gallery forests have been particularly impacted by overgrazing.
- Inappropriate forestry management practices that remove large mature resourceabundant trees. Firewood harvesting in Box-Ironbark woodlands can also remove important habitat components.
- Competition from larger aggressive honeyeaters, particularly Noisy Miners, Noisy Friarbirds and Red Wattlebirds.
- Egg and nest predation by native birds.

What needs to be done to recover this species?

- Maintain a captive population of Regent Honeyeaters.
- Provide landholders and other community members with information on the ecology and conservation requirements of the Regent Honeyeater. Use incentives on private land to encourage landholders to manage key areas.
- Encourage landholders/agistees to remove stock from sensitive riparian breeding sites.
- No loss of mature key nectar tree species. Minimise the removal of mistletoes at key sites.
- Protect and enhance key breeding and foraging habitats.
- Encourage natural regeneration and increase the remnant size of known and potential Regent Honeyeater habitats.
- Continue treeplanting programs at key breeding and foraging locations.
- No further loss of known woodland and forest habitat throughout the range of the Regent Honeyeater from developments.
- Conduct research into habitat selection in non-breeding season and long-distance movements.
- Investigate impacts of interspecific competition for resources and nest predation by native birds.

References

- Geering, D. and French, K. (1998). Breeding Biology of the Regent Honeyeater Xanthomyza phrygia in the Capertee Valley, New South Wales. Emu 98, 104-116.
- Higgins, P.J., Peter, J.M. and Steele, W.K. (eds.) (2001). Handbook of Australian, New Zealand and Antarctic Birds. Volume 5. Oxford University Press.
- Ley, A. J. and Williams, B. (1994). Breeding behaviour and morphology of the Regent Honeyeater Xanthomyza phrygia. Australian Birdwatcher 15, 366-76.
- Ley, A. J., Oliver, D. L., and Williams, B. (1996). Observations on colour-banded Regent Honeyeaters Xanthomyza phrygia. Corella 20, 88-92
- Menkhorst, P., Schedvin, N. and Geering, D. (1999). Regent Honeyeater (Xanthomyza phrygia) Recovery Plan 1999-2003. Department of Natural Resources and Environment.
- Oliver, D. L. (1998). Roosting of non-breeding Regent Honeyeaters Xanthomyza phrygia. Emu 98, 65-69.
- Oliver, D. L. (1998). The breeding behaviour of the endangered Regent Honeyeater Xanthomyza phrygia near Armidale, New South Wales. Australian Journal of Zoology 46, 153-170.
- Oliver, D. L. (1998). The importance of insects and lerp in the diet of juvenile Regent Honeyeaters Xanthomyza phrygia: implications for the conservation of an endangered woodland bird. Wildlife Research 25, 409-417.
- Oliver, D. L. (2000). Foraging behaviour and resource selection of the Regent Honeyeater Xanthomyza phrygia in northern New South Wales. Emu 100, 12-30.
- Oliver, D. L. (2001). Activity budget of the Regent Honeyeater, Xanthomyza phrygia, in northern New South Wales. Australian Journal of Zoology 49, 695-712.
- Oliver, D. L., Ley, A. J., and Williams, B. (1998). Breeding success and nest site selection of the Regent Honeyeater Xanthomyza phrygia near Armidale, New South Wales. Emu 98, 97-103.

Speckled Warbler - profile

Scientific name: *Pyrrholaemus sagittatus*
Conservation status in NSW: Vulnerable

Description

The Speckled Warbler is a small well-camouflaged very heavily streaked grounddwelling bird related to the scrubwrens, reaching a length of 13cm. The back, wings and tail are grey-brown, with soft dark streaks. The black crown is distinctively streaked with buff. The underparts are pale and particularly heavily streaked. The face is off-white with streaking on the ear coverts. The male has a black upper margin to the brow, while the female has a rufous upper edge to the brow. The dark tail is held horizontally, although in flight the spread tail shows a wide black band above white tips of the outer tail feathers. The call is an undulating rich, trilled, warbling mix of clear sharp whistles and mellow notes. The alarm call is a harsh churring chatter.

Distribution

The Speckled Warbler has a patchy distribution throughout south-eastern Queensland, the eastern half of NSW and into Victoria, as far west as the Grampians. The species is most frequently reported from the hills and tablelands of the Great Dividing Range, and rarely from the coast. There has been a decline in population density throughout its range, with the decline exceeding 40% where no vegetation remnants larger than 100ha survive.

Habitat and ecology

- The Speckled Warbler lives in a wide range of *Eucalyptus* dominated communities that have a grassy understorey, often on rocky ridges or in gullies.
- Typical habitat would include scattered native tussock grasses, a sparse shrub layer, some eucalypt regrowth and an open canopy.
- Large, relatively undisturbed remnants are required for the species to persist in an area.
- The diet consists of seeds and insects, with most foraging taking place on the ground around tussocks and under bushes and trees.
- Pairs are sedentary and occupy a breeding territory of about ten hectares, with a slightly larger home-range when not breeding.
- The rounded, domed, roughly built nest of dry grass and strips of bark is located in a slight hollow in the ground or the base of a low dense plant, often among fallen branches and other litter. A side entrance allows the bird to walk directly inside.

- A clutch of 3-4 eggs is laid, between August and January, and both parents feed the nestlings. The eggs are a glossy red-brown, giving rise to the unusual folk names
- 'Blood Tit' and 'Chocolatebird'.
- Some cooperative breeding occurs. The species may act as host to the Black-eared Cuckoo.
- Speckled Warblers often join mixed species feeding flocks in winter, with other species such as Yellow-rumped, Buff-rumped, Brown and Striated Thornbills.

Threats

- Due to the fragmented nature of the populations and their small size the species is susceptible to catastrophic events and localised extinction.
- Clearance of remnant grassy woodland habitat for paddock management reasons and for firewood.
- Poor regeneration of grassy woodland habitats.
- Modification and destruction of ground habitat through removal of litter and fallen timber, introduction of exotic pasture grasses, heavy grazing and compaction by stock and frequent fire.
- Habitat is lost and further fragmented as land is being cleared for residential and agricultural developments. In particular, nest predation increases significantly, to nest failure rates of over 80%, in isolated fragments.
- Nest failure due to predation by native and non-native birds, cats, dogs and foxes particularly in fragmented and degraded habitats.

What needs to be done to recover this species?

- Keep domestic dogs and cats indoors at night. Desex domestic dogs and cats.
  Assess the appropriateness of dog and cat ownership in new subdivisions.
- Undertake fox and feral cat control programs.
- NPWS should be consulted when planning development to minimise impact on populations.
- Retain dead timber on the ground in open woodland areas.
- Limit firewood collection.
- Retain existing vegetation along roadsides, in paddocks and remnant stands of native trees.
- Encourage regeneration of habitat by fencing remnant stands.
- Fence suitable woodland habitats, particularly those with unimproved pasture and an intact native ground plant layer.
- Increase the size of existing remnants, planting trees and establishing buffer zones of unimproved uncultivated pasture around woodland remnants.
- Assess the importance of the site to the species' survival. Include the linkages the site provides for the species between ecological resources across the broader landscape.
- Report any new sightings of the speckled warbler to the Department of Environment and Conservation.

References

- Garnett, S. and Crowley, G. M. (2000). The Action Plan for Australian Birds. Published by Environment Australia. Canberra, ACT.
- NSW Scientific Committee (2001) Speckled warbler - Vulnerable species determination - final. DEC (NSW), Sydney.
- Pizzey, G. and Knight, F. (2003). The Field Guide to the Birds of Australia 7th Edition. Menkhorst, P. (ed). HarperCollins.
- Schodde, R. and Mason, I.J. (1999). The Directory of Australian Birds. CSIRO Publishing.

Hooded Robin - profile

Scientific name: *Melanodryas cucullata cucullata* **Conservation status in NSW:** Vulnerable

Description

The Hooded Robin is a large Australian robin reaching 17 cm in length. The male is strikingly marked in black and white, with a bold black hood extending down a white breast. The back is black with distinct white shoulder and wing-bar. The tail is black, with prominent white side-panels. Females and immatures are duller, with light brownish-grey upperparts, but the same striking black and white wings. Flight is short and swiftly undulating. The call is a series of descending, fading, mellow notes**.**

Distribution

The Hooded Robin is common in few places, and rarely found on the coast. It is considered a sedentary species, but local seasonal movements are possible. The south-eastern form is found from Brisbane to Adelaide throughout much of inland NSW, with the exception of the north-west. The species is widespread, found across Australia, except for the driest deserts and the wetter coastal areas - northern and eastern coastal Queensland and Tasmania.

Habitat and ecology

- Prefers lightly wooded country, usually open eucalypt woodland, acacia scrub and mallee, often in or near clearings or open areas.
- Requires structurally diverse habitats featuring mature eucalypts, saplings, some small shrubs and a ground layer of moderately tall native grasses.
- Often perches on low dead stumps and fallen timber or on low-hanging branches, using a perch-and-pounce method of hunting insect prey.
- Territories range from around 10 ha during the breeding season, to 30 ha in the nonbreeding season.
- May breed any time between July and November, often rearing several broods.
- The nest is a small, neat cup of bark and grasses bound with webs, in a tree fork or crevice, from less than 1 m to 5 m above the ground.
- The nest is defended by both sexes with displays of injury-feigning, tumbling across the ground.

- A clutch of two to three is laid and incubated for fourteen days by the female. Two females often cooperate in brooding.

Threats

- Clearing of woodlands, resulting in loss and fragmentation of habitat.
- Modification and destruction of ground habitat through heavy grazing and compaction by stock, removal of litter and fallen timber, introduction of exotic pasture grasses and frequent fire.

What needs to be done to recover this species?

- Retain dead timber on the ground in open woodland areas.
- Enhance potential habitat through regeneration by reducing the intensity and duration of grazing.
- Fence habitat to protect from long-term, intense grazing.
- Increase the size of existing remnants, by planting trees and establishing buffer zones of un-modified, uncultivated pasture around woodland remnants.

References

- Boles, W. (1988). The Robins and Flycatchers of Australia. Angus and Robertson, Sydney.
- Fitri, L. L. and Ford, H. A. (1997). Status, habitat and social organisation of the Hooded Robin Melanodryas cucullata in the New England region of New South Wales. Australian Bird Watcher 17: 142-155.
- Fitri, L. L. and Ford, H. A. (2003). Breeding biology of Hooded Robins (Melanodryas cucullata) in New England, New South Wales. Corella 27, 68-74.
- Fitri, L. L. and Ford, H. A. (2003). Foraging behaviour of Hooded Robins (Melanodryas cucullata) in the Northern Tablelands of New South Wales. Corella 27, 61-67.
- Higgins, P. J. and Peter, J. M. (eds) (2002). 'Handbook of Australian, New Zealand and Antarctic Birds. Volume 6: Pardalotes to shrike-thrushes'. Oxford University Press, Melbourne.
- NSW Scientific Committee (2001) Hooded robin (south-eastern form) - Vulnerable species determination - final. DEC (NSW), Sydney.
- Pizzey, G. and Knight, F. (2003). The Field Guide to the Birds of Australia 7th Edition. Menkhorst, P. (ed). HarperCollins.
- Reid, J. R. W. (1999). 'Threatened and declining birds in the New South Wales SheepWheat Belt I: Diagnosis, characteristics and management'. Consultancy report to NSW National Parks and Wildlife Service. CSIRO Wildlife and Ecology, Canberra.
- Robinson, D. and Traill, B. J. (1996). Conserving woodland birds in the wheat and sheep belts of southern Australia. RAOU Conservation Statement No. 10. Birds Australia, Melbourne.

Turquoise Parrot - profile

Scientific name: *Neophema pulchella*

Conservation status in NSW: Vulnerable

Description

The male Turquoise Parrot is a highly distinctive bird with bright green upperparts and a turquoise-blue crown and face. Its shoulders are turquoise-blue, grading to deep blue at the flight-feathers. It has a chestnut-red patch on the upper-wing. The upper-breast of the Turquoise Parrot has an orange tint, while the yellow abdomen may have an orange centre. Females and immature individuals are generally duller, have whitish lores, a green, rather than yellow throat and breast and no red on the shoulder and upper-wing area. It should not be confused with other parrots in the region. The call of the Turquoise Parrot in flight is a tinkling sound, while at other times it may emit a sharp "sit-sit" alarm call.

Distribution

The Turquoise Parrot's range extends from southern Queensland through to northern Victoria, from the coastal plains to the western slopes of the Great Dividing Range.

Habitat and ecology

- Lives on the edges of eucalypt woodland adjoining clearings, timbered ridges and creeks in farmland.
- Usually seen in pairs or small, possibly family, groups and have also been reported in flocks of up to thirty individuals.
- Prefers to feed in the shade of a tree and spends most of the day on the ground searching for the seeds or grasses and herbaceous plants, or browsing on vegetable matter.
- Forages quietly and may be quite tolerant of disturbance. However, if flushed it will fly to a nearby tree and then return to the ground to browse as soon as the danger has passed.
- Nests in tree hollows, logs or posts, from August to December. It lays four or five white, rounded eggs on a nest of decayed wood dust.

Threats

- Clearing of grassy-woodland and open forest habitat.
- Loss of hollow-bearing trees.
- Degradation of habitat through heavy grazing, firewood collection and establishment of exotic pastures.
- Predation by foxes and cats.
- Illegal trapping of birds and collection of eggs which also often results in the destruction of hollows.

What needs to be done to recover this species?

- Undertake fox and feral cat control programs in key habitat areas.
- Retain areas of open woodland with grassy under-storey and adjoining grassland.

- Protect hollow-bearing trees for nest sites. Younger mature trees should also be retained to provide replacements for the older trees when they eventually die and fall over.
- Protect sites where Turquoise Parrots forage and nest from heavy, prolonged grazing.
- Report suspected illegal bird trapping, egg collection or sales to NPWS.

References

- Garnett, S. and Crowley, G. M. (2000). The Action Plan for Australian Birds. Published by Environment Australia. Canberra, ACT.
- Higgins, P.J. (ed), 1999. Handbook of Australian, New Zealand and Antarctic Birds. Volume 4. Oxford University Press.
- Pizzey, G. and Knight, F. (2003). The Field Guide to the Birds of Australia 7th Edition. Menkhorst, P. (ed). HarperCollins.
- Quin, B.R. and Baker-Gabb, D.J. (1993). Conservation and management of the Turquoise Parrot Neophema pulchella in north-eastern Victoria. ARI Technical Report No. 125. Department of Natural Resources and Environment, Melbourne.
- Robinson, D. and Traill, B. J. (1996). Conserving woodland birds in the wheat and sheep belts of southern Australia. RAOU Conservation Statement No. 10. Birds Australia, Melbourne.

Barking Owl – profile

Scientific name: *Ninox connivens*

Conservation status in NSW: Vulnerable

Description

The Barking Owl is a typical hawk-owl, with staring, yellow eyes and no facial-disc. It is grey to greyish-brown above, with white spots on the wings and almost white underneath with greyish-brown vertical streaks. The larger male may be up to 45 cm in length, larger than the Southern Boobook *Ninox novaeseelandiae* and smaller than the Powerful Owl *N. strenua*. It has an unmistakable, quick, dog-like 'wook-wook' territorial call, which it repeats. Pairs of birds perform call-and-answer duets; the male's call is slower and deeper. It also has a rather terrifying, high-pitched tremulous scream, heard early in the breeding season, that has earned it the name 'screaming-woman bird'.

Distribution

The Barking Owl is found throughout Australia except for the central arid regions and Tasmania. It is quite common in parts of northern Australia, but is generally considered uncommon in southern Australia. It has declined across much of its distribution across NSW and now occurs only sparsely. It is most frequently recorded on the western slopes and plains. It is rarely recorded in the far west or in coastal and escarpment forests.

Habitat and ecology

- Inhabits eucalypt woodland, open forest, swamp woodlands and, especially in inland areas, timber along watercourses. Denser vegetation is used occasionally for roosting.

- During the day they roost along creek lines, usually in tall understorey trees with dense foliage such as *Acacia* and *Casuarina* species, or the dense clumps of canopy leaves in large *Eucalypts*.
- Feeds on a variety of prey, with invertebrates predominant for most of the year, and birds and mammals such as smaller gliders, possums, rodents and rabbits becoming important during breeding.
- Live alone or in pairs. Territories range from 30 to 200 hectares and birds are present all year.
- Three eggs are laid in nests in hollows of large, old eucalypts including River Red Gum (*Eucalyptus camaldulensis*), White Box (*Eucalyptus albens*), (Red Box) *Eucalyptus polyanthemos* and Blakely's Red Gum (*Eucalyptus blakelyi*).
- Breeding occurs during late winter and early spring.

Threats

- Clearing and degradation of habitat, mostly through cultivation, intense grazing and the establishment of exotic pastures.
- Inappropriate forest harvesting practices that have changed forest structure and removed old growth hollow-bearing trees.
- Firewood harvesting resulting in the removal of old trees.
- Too-frequent fire which causes degradation of understorey vegetation which provides habitat and foraging substrate for prey species.

References

- Garnett, S. and Crowley, G. M. (2000). The Action Plan for Australian Birds. Published by Environment Australia. Canberra, ACT.
- Higgins, P.J. (ed), 1999. Handbook of Australian, New Zealand and Antarctic Birds. Volume 4. Oxford University Press.
- NSW National Parks and Wildlife Service (2003) Draft Recovery Plan for the Barking owl (Ninox connivens). NSW NPWS, Sydney.
- NSW Scientific Committee (1998) Barking Owl - Vulnerable species determination - final. DEC (NSW), Sydney.
- Pizzey, G. and Knight, F. (2003). The Field Guide to the Birds of Australia 7th Edition. Menkhorst, P. (ed). HarperCollins.
- Robinson, D. and Traill, B. J. (1996). Conserving woodland birds in the wheat and sheep belts of southern Australia. RAOU Conservation Statement No. 10. Birds Australia, Melbourne.

Squirrel Glider – profile

Scientific name: *Petaurus norfolcensis*

Conservation status in NSW: Vulnerable

Description

Adult Squirrel Gliders have a head and body length of about 20 cm. They have blue-grey to brown-grey fur above, white on the belly and the end third of the tail is black. There is a dark stripe from between the eyes to the mid-back and the tail is soft and bushy averaging about 27 cm in length. Squirrel Gliders are up to twice the size of Sugar Gliders, their facial markings are more distinct and they nest in bowl-shaped, leaf lined nests in tree hollows. Squirrel Gliders are also less vocal than Sugar Gliders.

Location and habitat

Distribution

The species is widely though sparsely distributed in eastern Australia, from northern Queensland to western Victoria.

Habitat and ecology

- Inhabits mature or old growth Box, Box-Ironbark woodlands and River Red Gum forest west of the Great Dividing Range and Blackbutt-Bloodwood forest with heath understorey in coastal areas.
- Prefers mixed species stands with a shrub or Acacia midstorey.
- Live in family groups of a single adult male one or more adult females and offspring.
- Require abundant tree hollows for refuge and nest sites.
- Diet varies seasonally and consists of Acacia gum, eucalypt sap, nectar, honeydew and manna, with invertebrates and pollen providing protein.

Threats

- Loss and fragmentation of habitat.
- Loss of hollow-bearing trees.
- Loss of flowering understorey and midstorey shrubs in forests.
- Individuals can get caught in barbed wire fences while gliding.

Recovery strategies

- Priority actions are the specific, practical things that must be done to recover a threatened species, population or ecological community. The Department of Environment and Conservation has identified **9 priority actions** to help recover the Squirrel Glider in New South Wales.
- What needs to be done to recover this species?
- Retain den trees and recruitment trees (future hollow-bearing trees).
- Retain food resources, particularly sap-feeding trees and understorey feed species such as Acacias and banksias.
- Replace top one or two strands of barbed wire on fences with regular wire in and adjacent to habitat.
- Retain and protect areas of habitat, particularly mature or oldgrowth forest containing hollow-bearing trees and sap-feeding trees.

- In urban and rural areas retain and rehabilitate habitat to maintain or increase the total area of habitat available, reduce edge effects, minimise foraging distances and increase the types of resources available.

References

- Davy S. (1984). Habitat preferences of arboreal marsupials within a coastal forest in southern NSW. Possums and Gliders (ed. A.P. Smith and I.D. Hume): 509-16. Surrey Beatty and Sons, Sydney.
- Menkhorst, P. and Knight, F. (2001). A Field Guide to the Mammals of Australia. Oxford Uni Press, Melbourne.
- Suckling G.C. 1995 Squirrel Glider in R Strahan (Ed.) The Mammals of Australia. Pp234-235. Reed Books, Chatswood.

Little Bentwing Bat – profile

Scientific name: *Miniopterus australis*

Conservation status in NSW: Vulnerable

Description

Little Bentwing-bats are small chocolate brown insectivorous bats with a body length of about 45 mm. The fur is long and thick, especially over the crown and around the neck. The tip of the wing is formed by a particularly long joint of the third finge

Distribution

Coastal north-eastern NSW and eastern Queensland.

Habitat and ecology

- Moist eucalypt forest, rainforest or dense coastal banksia scrub.
- Little Bentwing-bats roost in caves, tunnels and sometimes tree hollows during the day, and at night forage for small insects beneath the canopy of densely vegetated habitats.
- They often share roosting sites with the Common Bentwing-bat and, in winter, the two species may form mixed clusters.
- In NSW the largest maternity colony is in close association with a large maternity colony of Common Bentwing-bats (M. schreibersii) and appears to depend on the large colony to provide the high temperatures needed to rear its young.

Threats

- Disturbance of colonies, especially in nursery or hibernating caves may be catastrophic.
- Destruction of caves that provide seasonal or potential roosting sites.
- Changes to habitat, especially surrounding maternity caves.
- Use of pesticides.

What needs to be done to recover this species?

- Retain stands of native vegetation.
- Reduce use of pesticides.
- Protect known roosting and nursery sites and surrounding forest.
- Check with DEC before undertaking recreational caving activities.

References

- Churchill, S. (1998) Australian Bats. New Holland, Sydney.
- NPWS (2000). Threatened Species of the Lower North Coast of New South Wales. NPWS, Sydney.
- NPWS (2002). Threatened Species of the Upper North Coast of NSW: Fauna. NPWS, Coffs Harbour.

Eastern Freetail Bat – profile

Scientific name: *Mormopterus norfolkensis*

Conservation status in NSW: Vulnerable

Description

The Eastern Freetail-bat has dark brown to reddish brown fur on the back and is slightly paler below. Like other freetail-bats it has a long (3 - 4 cm) bare tail protruding from the tail membrane. Freetail-bats are also known as mastiff-bats, having hairless faces with wrinkled lips and triangular ears. They weigh up to 10 grams.

Distribution

The Eastern Freetail-bat is found along the east coast from south Queensland to southern NSW.

Habitat and ecology

- Occur in dry sclerophyll forest and woodland east of the Great Dividing Range.
- Roost maily in tree hollows but will also roost under bark or in man-made structures.
- Solitary and probably insectivorous.

Threats

- Loss of hollow-bearing trees.
- Loss of foraging habitat.
- Application of pesticides in or adjacent to foraging areas.

What needs to be done to recover this species?

- Retain hollow-bearing trees and provide for hollow tree recruitment.
- Retain foraging habitat.
- Minimise the use of pesticides in foraging areas.

References

- Allison, F.R. and Hoye, G.A. (1995). (pp. 484-5) Eastern Freetail-bat in The Australian Museum Complete Book of Australian Mammals. Strahan, R. (ed.). Reed Books, Sydney.
- Churchill, S. (1998) Australian Bats. New Holland, Sydney.
- Menkhorst, P. and Knight, F. (2001). A Field Guide to the Mammals of Australia. Oxford Uni Press, Melbourne.

Yellow bellied Sheathtail Bat – profile

Scientific name: *Saccolaimus flaviventris*

Conservation status in NSW: Vulnerable

Description

The Yellow-bellied Sheathtail-bat is a very distinctive, large, insectivorous bat up to 87 mm long. It has long, narrow wings, a glossy, jet-black back, and a white to yellow belly extending to the shoulders and just behind the ear. Characteristically, it has a flattened head and a sharply-pointed muzzle. The tail is covered with an extremely elastic sheath that allows variation in the tail-membrane area. Males have a prominent throat pouch; females have a patch of bare skin in the same place.

Yellow-bellied Sheathtail-bat
Image: Bruce Thomson
© Bruce Thomson

Distribution

The Yellow-bellied Sheathtail-bat is a wide-ranging species found across northern and eastern Australia. In the most southerly part of its range - most of Victoria, south-western NSW and adjacent South Australia - it is a rare visitor in late summer and autumn. There are scattered records of this species across the New England Tablelands and North West Slopes.

Habitat and ecology

- Roosts singly or in groups of up to six, in tree hollows and buildings; in treeless areas they are known to utilise mammal burrows.
- When foraging for insects, flies high and fast over the forest canopy, but lower in more open country.
- Forages in most habitats across its very wide range, with and without trees; appears to defend an aerial territory.
- Breeding has been recorded from December to mid-March, when a single young is born.
- Seasonal movements are unknown; there is speculation about a migration to southern Australia in late summer and autumn.

Threats

- Disturbance to roosting and summer breeding sites.

- Foraging habitats are being cleared for residential and agricultural developments, including clearing by residents within rural subdivisions.
- Loss of hollow-bearing trees; clearing and fragmentation of forest and woodland habitat.
- Pesticides and herbicides may reduce the availability of insects, or result in the accumulation of toxic residues in individuals' fat stores.

What needs to be done to recover this species?

- Raise landowners' awareness about the presence of the species and provide information on how their management actions will affect the species' survival.
- Conduct searches for the species in suitable habitat in proposed development areas.
- DEC should be consulted when planning development/s to minimise impact/s on populations.
- Retain stands of native vegetation, especially those with hollow-bearing trees (including dead trees), and retain other structures containing bats. Retain a buffer of vegetation around roost sites in vegetated areas.
- Protect hollow-bearing trees for breeding sites, including those on farmland; younger mature trees should also be retained to provide replacements for the older trees as they die and fall over.
- Reduce the use of pesticides in the environment.
- Encourage regeneration and replanting of local flora species to maintain bat foraging habitat.
- Assess the site's importance to the species' survival, including linkages provided between ecological resources across the broader landscape.
- Mark known sites and potential habitat onto maps used for planned poison-spraying activities.

References

- Churchill, S. (1998) Australian Bats. New Holland, Sydney.
- Hall, L.S. and Richards, G.C. (1979). Bats of Eastern Australia. Queensland Museum Booklet No. 12. Brisbane.
- Lumsden, L.F. and Menkhorst, P. (1995). Yellow-bellied Sheathtail-bat. Pp 161-162. In: Menkhorst, P.W. Editor. Mammals of Victoria. Oxford University Press, Melbourne.

Greater Broad-nosed Bat – profile

Scientific name: *Scoteanax rueppellii*

Conservation status in NSW: Vulnerable

Description

The Greater Broad-nosed Bat is a large powerful bat, up to 95 mm long, with a broad head and a short square muzzle. It is dark reddish-brown to mid-brown above and slightly paler

below. It is distinguished from other broad-nosed bats by its greater size. While similar to the Great Pipistrelle *Pipistrellus tasmaniensis*, it differs by having only two (not four) upper incisors.

Distribution

The Greater Broad-nosed Bat is found mainly in the gullies and river systems that drain the Great Dividing Range, from north-eastern Victoria to the Atherton Tableland. It extends to the coast over much of its range. In NSW it is widespread on the New England Tablelands, however does not occur at altitudes above 500m.

Habitat and ecology

- Utilises a variety of habitats from woodland through to moist and dry eucalypt forest and rainforest, though it is most commonly found in tall wet forest.
- Although this species usually roosts in tree hollows, it has also been found in buildings.
- Forages after sunset, flying slowly and directly along creek and river corridors at an altitude of 3 - 6 m.
- Open woodland habitat and dry open forest suits the direct flight of this species as it searches for beetles and other large, slow-flying insects; this species has been known to eat other bat species.
- Little is known of its reproductive cycle, however a single young is born in January; prior to birth, females congregate at maternity sites located in suitable trees, where they appear to exclude males during the birth and raising of the single young.

Threats

- Disturbance to roosting and summer breeding sites.
- Foraging habitats are being cleared for residential and agricultural developments, including clearing by residents within rural subdivisions.
- Loss of hollow-bearing trees.
- Pesticides and herbicides may reduce the availability of insects, or result in the accumulation of toxic residues in individuals' fat stores.
- Changes to water regimes are likely to impact food resources, as is the use of pesticides and herbicides near waterways.

What needs to be done to recover this species?

- Actively encourage the conservation of the riparian vegetation and water quality of streams and rivers.
- Raise landowners' awareness of the presence of this species, and provide information on how their management actions will affect the species' survival.
- Conduct searches for the species in suitable habitat in proposed development areas.
- DEC should be consulted when planning development/s to minimise impact/s on populations.
- Protect hollow-bearing trees for breeding sites, including those on farmland; younger mature trees should also be retained to provide replacements for the older trees as they die and fall over.

- Reduce the use of pesticides in the environment and enter known sites of this species and its potential habitat onto maps used for planned poison spraying activities.
- Retain stands of native vegetation, especially those with hollow-bearing trees (including dead trees), and retain other structures containing bats. Retain a buffer of vegetation around roost sites in vegetated areas.
- Encourage regeneration and replanting of local flora species to maintain bat foraging habitat.
- Assess the site's importance to the species' survival, including linkages provided between ecological resources across the broader landscape.

References

- Churchill, S. (1998) Australian Bats. New Holland, Sydney.
- Hoye, G.A and Richards, G.C. (1995). Greater Broad-nosed Bat. Pp 527-528. In: Strahan, R. Editor. The Australian Museum Complete Book of Australian Mammals. Angus and Robertson, Sydney.
- McKean, J.L. (1966). Some new distributional records of broad-nosed bats (Nycticeius spp.). Vic. Nat. 83:25-30.
- Menkhorst, P. and Knight, F. (2001). A Field Guide to the Mammals of Australia. Oxford Uni Press, Melbourne.
- Woodside, D.P. and Long, A. (1984). Observation on the feeding habits of the Greater Board-nosed Bat, Nycticeius rueppellii (Chiroptera: Vespertilionidae). Aust. Mammal. 7:121-129.

Eastern cave Bat – profile

Scientific name: *Vespadelus troughtoni*

Conservation status in NSW: Vulnerable

Description

A small chestnut-brown bat with rufous tones on the head, and darker wings. It has smallish, conical ears and a short, uptipped nose. The species is very difficult to separate from several other closely related species that occur in similar areas. The most reliable physical distinguishing feature is the shape of the male's penis.

Distribution

The Eastern Cave Bat is found in a broad band on both sides of the Great Dividing Range from Cape York to Kempsey, with records from the New England Tablelands and the upper north coast of NSW. The western limit appears to be the Warrumbungle Range, and there is a single record from southern NSW, east of the ACT.

Eastern Cave Bat Image: Bruce Thomson © Bruce Thomson

Habitat and ecology

- Very little is known about the biology of this uncommon species.
- A cave-roosting species that is usually found in dry open forest and woodland, near cliffs or rocky overhangs; has been recorded roosting in disused mine workings, occasionally in colonies of up to 500 individuals.
- Occasionally found along cliff-lines in wet eucalypt forest and rainforest.
- Little is understood of its feeding or breeding requirements or behaviour.

Threats

- Clearing and isolation of dry eucalypt forest and woodland, particularly about cliffs and other areas containing suitable roosting and maternity sites, mainly as a result of agricultural and residential development.
- Loss of suitable feeding habitat near roosting and maternity sites as a result of modifications from timber harvesting and inappropriate fire regimes usually associated with grazing.
- Pesticides and herbicides may reduce the availability of invertebrates, or result in the accumulation of toxic residues in individuals' fat stores.
- Damage to roosting and maternity sites from mining operations, and recreational activities such as caving.
- There is a strong likelihood that unrecorded populations could be unintentionally affected by land management actions.
- Probable predation by cats and foxes.
- Very little is known about the ecology, behaviour and habitat requirements.

What needs to be done to recover this species?

- Raise landowners' awareness about the potential presence of this species and provide information on how their management actions could affect the species' survival.
- Keep domestic cats indoors at night; desex domestic cats.
- Undertake fox and feral cat control programs.
- Protect known and potential habitat from burning at too-frequent intervals.
- Assess appropriateness of cat ownership in new subdivisions.
- Reduce the use of pesticides in habitat areas.
- Avoid damage or disturbance to known roosting and maternity sites from mining activities, and from recreational caving activities.
- Protect known and potential habitat from clearing and isolation, particularly dry open forest and woodland around cliffs, rock overhangs and old mine workings.
- Assist in determining distribution and population size by recording sightings (which are most likely to be of dead specimens) for submission to DEC.
- Research is required into all aspects of this species' biology.
- Surveys need to be conducted in suitable habitat with the species' range, and in suitable habitat in proposed development areas.
- Mark sites and potential habitat onto maps used for planned poison spraying activities.

References

- Churchill, S. (1998) Australian Bats. New Holland, Sydney.
- Kitchener, D.J., Jones, B. and Caputi, N. (1987). Revision of Australian Eptesicus (Microchiroptera: Vespertilionidae). Rec. West. Aust. Mus. 13:427-500.
- Menkhorst, P. and Knight, F. (2001). A Field Guide to the Mammals of Australia. Oxford Uni Press, Melbourne.
- Parnaby, H. (1995) Greater Long-eared Bat in The Australian Museum Complete Book of Australian Mammals. Strahan, R. (ed.). Reed Books, Sydney.

Border Thick-tailed Gecko – profile

Scientific name: *Underwoodisaurus sphyrurus*
Conservation status in NSW: Vulnerable **National conservation status:** Vulnerable

Description

The Border Thick-tailed Gecko is a small lizard up to 10 cm long. It is pale fawn to brown above with faint darker brown flecks and many small white spots arranged in rows across the head, back and sides and on the legs. The tail is fat and rectangular with a thin tapering tip and has four pale rings. These Geckos are active at night and shelter by day under rock slabs and fallen timber.

Distribution

Found only on the tablelands and slopes of northern NSW and southern Queensland, reaching south to Tamworth and west to Moree. Most common in the granite country of the New England Tablelands.

Habitat and ecology

- Rocky hills with dry open eucalypt forest or woodland.
- Favours forest and woodland areas with boulders, rock slabs, fallen timber and deep leaf litter.

Threats

- Frequent burning of rocky dry open forest or woodland.
- Removal of fallen timber for firewood.
- Grazing and trampling of habitat by domestic stock and feral goats.
- Predation by foxes and feral cats.
- Removal of bushrock for garden landscaping.
- Clearing and fragmentation of areas of rocky dry open forest and woodland for agriculture and development.

What needs to be done to recover this species?

- Retain bushrock in its natural setting and obtain rocks for gardens only from licensed dealers.
- Assist with the control of foxes, feral cats and feral goats.
- Protect areas of habitat from frequent fire.
- Limit firewood collection in areas of potential habitat.
- Retain and protect areas of rocky dry open forest and woodland from clearing, fragmentation and disturbance.

References

- Cogger, H. G. (2000). Reptiles and Amphibians of Australia. 6th ed. Reed New Holland, Sydney.
- NPWS (2003). Threatened Species of the New England Tablelands and North West Slopes of NSW. NPWS, Coffs Harbour.