Department of Sustainability and Environment

(DRAFT ONLY)Surf Coast Shire Bio-mapping

Flora and Fauna of Nine Priority Reserves, 2006-07

A Report for Surf Coast Shire

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Flora, Fauna & Freshwater Research



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RICE NATURE RESERVE

Location

Horseshoe Bend Road, Mount Duneed

Centre Point MGA

268100 easting, 5761100 northing

Surf Coast Shire Priority

Medium

Area

5.0ha

Reserve Description

Rice Nature Reserve is irregularly shaped and bordered by a road to the east with the rest of the Reserve largely delineated by loops of Thompson's Creek; it is surrounded by cleared farmland. Vegetation on the Reserve consists of riparian and grassy woodland and some areas of grassland. Car access is restricted to a car-park in the centre of the Reserve and there are a number of unofficial walking tracks present. Use of the Reserve by humans is thought to mainly be by locals for various recreational activities such as walking, picnicking, horse-riding and trial-bike riding (Surf Coast Shire Environment Unit, 2004c).

Vegetation

Floodplain Riparian Woodland was the predominant EVC in this Reserve (Figure 9), with a canopy of *Eucalyptus camaldulensis* (River Red-gum) to around 15m in height, and lower strata dominated by *Lomandra longifolia* (Spiny-headed Mat-rush) and *Dianella revoluta* sensu lato (Black-anther Flax-lily). Shrub and herb diversity were relatively low, with *Acacia paradoxa* being the most common species. Overall cover of weeds was relatively high at 5-25%, and weeds of concern included *Ulex europaeus* (Gorse), *Phalaris aquatica* and *Rosa rubiginosa* (Sweet Briar). Non-indigenous trees planted around the car-park included *Corymbia maculata* (Spotted Gum) and *Eucalyptus cornuta* (Yate).



<u>Creekline Grassy Woodland</u> was found inside the bend in Thompson's Creek, with a canopy of *Eucalyptus camaldulensis*. *Acacia verticillata* and *A. melanoxylon* dominated the shrub layer above a dense grassy layer dominated by *Poa labillardierei*. *Phragmites australis* occurred along the creek-bank. This EVC was adversely affected by a very high (25-50%) cover of weeds. Of most concern were *Ulex europaeus*, *Watsonia meriana* (Bugle Lily), *Rosa rubiginosa* and *Crataegus monogyna* (Hawthorn), making weed control a high priority. High cover of *Holcus lanatus* was also noted.

Overall, low understorey diversity, high cover of weeds and lack of large (≥ 80cm diameter) trees reduced the potential site scores in the two woodland EVCs (Table 18). Landscape scores were particularly low due to the small size of the Reserve, lack of connectivity and the low amount of native vegetation in the surrounding farming area. Consideration should be given to involving adjoining landholders in a planting program, particularly within the riparian zone along the creek, with the aim of improving connectivity to existing boundary plantings.

The <u>Plains Grassland</u> within the Reserve was divided into two areas for assessment. Area A was in relatively intact condition, and characterised by a high cover of *Themeda triandra*. The diversity of herbs was not as high as would be expected in this vegetation type, likely an effect of the current drought. Species noted included *Convolvulus remotus* (Grassy

Bindweed), *Stellaria pungens* (Prickly Starwort) and the locally rare *Ptilotus macrocephalus* (Feather Heads). Weed cover was relatively low, but species of concern included *Anthoxanthum odoratum* and occasional seedlings of *Ulex europaeus*. The latter should be removed while the plants are still relatively small, and consideration should be given to involving the adjoining landholder (the infestation is heavier on the private land side of the fence).

The management plan (Surf Coast Shire Environment Unit, 2004c) recommends a 3 to 4 year ecological burning rotation, beneficial to *Themeda triandra* grasslands. In any event, the rotation should not exceed 5-6 years, to avoid closure of the tussock grass layer and eventual senescence of both the *Themeda* and the vegetation community (Morgan & Lunt, 1999). Burning in a mosaic pattern should prove more effective at maintaining or enhancing native species richness and disadvantaging the introduced species than slashing. Slashing would probably encourage the growth of weeds at the expense of native species. The effect of continual, low slashing may be seen in area B, adjacent to the car park. In this area, grass species were difficult to identify, although *Austrodanthonia* spp. was noted. The cover of weeds was high, and included *Plantago coronopus*, *Plantago lanceolata*, *Romulea rosea* (Onion Grass), *Vulpia* spp. (Fescue) and *Cerastium glomeratum* (Common Mouse-ear Chickweed). Very high weed cover (25-50%) and low species diversity ensured that this area received a site score of only around half that obtained by Area A.

Table 18. Habitat hectare scores for individual Ecological Vegetation Classes in Rice Nature Reserve, November 2006.

EVC	Area (ha)	Site score (max 75)	Landscape score (max 25)	Total score	Bioregional Conservation Status and Conservation Significance
Plains Grassland (A)	0.8	60	1	61	Status - Endangered Significance – Very High
Plains Grassland (B)	0.5	31	1	32	Status - Endangered Significance – High
Creekline Grassy Woodland	0.5	38	1	39	Status - Endangered Significance – High
Floodplain Riparian Woodland	3.0	43	1	44	Status - Endangered Significance – Very High



Figure 9. EVC mapping of Rice Nature Reserve, ARI 2006

Fauna

A total of 42 vertebrate species was recorded from Rice Nature Reserve, comprising six mammals, 34 birds and two reptiles (Table 19).

Mammals

Apart from insectivorous bats, no native mammals were recorded from this Reserve during the survey. Three bat species were identified, with some calls from bat detectors not able to be distinguished between two Nyctophilus species Gould's Long-eared Bat and Lesser Long-eared bat, and between Large Forest Bat and Southern Forest Bat. Three introduced species were recorded: House Mouse, Black Rat and Dog. The Common Brushtail Possum may be present if there are adequate hollows available.

Birds

Thirty-four bird species were recorded at the Rice Nature Reserve during the short period of survey. The Reserve had a suite of commonly-occurring bush birds in the open woodland, including honeyeaters, whistlers and wrens, as well as more riparian species along the lower riverbanks, such as Clamorous Reed Warbler and Black-fronted Dotterel.

The small river-bend to the south of the Reserve provided suitable habitat for a variety of ducks and waders and the adjacent grassland contained a number of typically swampland species (e.g. Eurasian Coot, Purple Swamphen). A single Latham's Snipe was recorded from this Reserve and this species is listed as Near Threatened (Department of Sustainability and Environment, 2003).

After the small flocks of ducks the most numerous species encountered at this Reserve was the Red Wattlebird, which was common in the woodland areas. The woodlands also provided suitable habitat for a numbers of Crimson Rosella, Eastern Rosella and Redrumped Parrot. Only one introduced species, the Common Starling, was sighted during the survey.

Herpetofauna

Two reptile species were recorded during the survey, the Garden Skink and Lowland Copperhead, though the Reserve is highly likely to support other reptile species, especially since it is structurally heterogeneous (including grassland, woodland, Thompson Creek wetland and boulder scree). The Southern Grass Skink, Weasel Skink, Common Bluetongued Lizard and Tiger Snake are potential residents.

Several frog species are likely to occur in or around the Reserve, including Common Froglet, Southern Bullfrog, Striped Marsh Frog, Spotted Marsh Frog and Southern Brown Tree Frog.

Key management recommendations

- Weed control, particularly of highly invasive species such as Ulex and Watsonia
- Planting of woody species in riparian zone, seeking cooperation of adjoining landowners
- Development an appropriate ecological burning regime
- · Review of park management plan
- Predator control
- Revegetation to consolidate stronger habitat link between north-south areas
- Encourage cooperative arrangement with neighbouring landholders to enhance/protect riparian areas, particularly around pondage site

Table 19. Fauna species recorded at Rice Nature Reserve by ARI, October 2006- March 2007.

Common name

White-striped Freetail Bat Gould's Wattled Bat

Gould's/Lesser Long-eared Bat

Large/Southern Forest Bat

Little Forest Bat House Mouse Black Rat Dog

Australian Wood Duck

Pacific Black Duck Chestnut Teal

White-faced Heron

Swamp Harrier
Purple Swamphen

Eurasian Coot

Latham's Snipe Black-fronted Dotterel

Crimson Rosella
Eastern Rosella
Red-rumped Parrot

Masked Lapwing

Shining Bronze-Cuckoo Southern Boobook Superb Fairy-wren

White-browed Scrubwren Brown Thornbill

Red Wattlebird
Spiny-cheeked Honeyeater

White-plumed Honeyeater
New Holland Honeyeater

Golden Whistler
Grey Shrike-thrush

Magpie-lark Grey Fantail

Willie Wagtail Black-faced Cuckoo-shrike

Australian Magpie
Australian Raven
Little Raven
Clamorous Reed Warbler

Welcome Swallow Common Starling

Garden Skink Lowland Copperhead Species

Tadarida australis

Chalinolobus gouldii

Nyctophilus gouldi/geoffroyi

Vespadelus darlingtoni/ regulus

Vespadelus vulturnus

Mus musculus

Rattus rattus

Canis familiaris

Chenonetta jubata

Anas superciliosa

Anas castanea

Egretta novaehollandiae

Circus approximans

Porphyrio porphyrio

Fulica atra

Gallinago hardwickii

Elseyornis melanops

Vanellus miles

Platycercus elegans

Platycercus eximius

Psephotus haematonotus

Chrysococcyx lucidus

Ninox novaeseelandiae

Malurus cyaneus

Sericornis frontalis Acanthiza pusilla

Anthocaera carunculata

Acanthagenys rufogularis

Lichenostomus penicillatus

Phylidonyris novaehollandiae

Pachycephala pectoralis

Colluricincla harmonica

Grallina cyanoleuca

Rhipidura fuliginosa

Rhipidura leucophrys

Coracina novaehollandiae Gymnorhina tibicen

Corvus coronoides

Corvus mellori

Motacilla citreola

Hirundo neoxena

Sturnus vulgaris

Lampropholis guichenoti

Austrelaps superbus