

Birds of Narran Lake Nature Reserve, New South Wales

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Summary

The 181 species of birds recorded from the Narran Lake Nature Reserve are listed. A further 19 species are on a supplementary list of doubtful records from the Nature Reserve and of potential additions to the full list. Occurrence and breeding activity of waterbirds in the Nature Reserve in 1998–2001 inclusive are documented. The Nature Reserve experienced high floods in October 1998 and April 1999; a large breeding event took place on the first of these but little breeding occurred on the second.

Introduction

Narran Lake Nature Reserve is in the Western Division of New South Wales between Walgett and Brewarrina. Its location and layout have been mapped previously (Ley 1998a). This bird list has been compiled from observations made during numerous visits to the area since 1985 and is the first complete list published for the Nature Reserve.

Public access into Narran Lake Nature Reserve is restricted, and permission to enter should be sought from the National Parks and Wildlife Service (NPWS) office in Narrabri. Special-interest groups may seek permission to enter but general public access for recreation purposes is not permitted.

Natural Heritage of Narran Lake Nature Reserve

The following description is paraphrased from Hunter (1999) and NPWS (2000).

Climate

The climate is semi-arid; the average annual rainfall for the ten years 1990–99 was 495 mm. There is a long hot summer and a short cold winter with average maximum and minimum temperatures of 36°C and 21°C, and 18°C and 6°C respectively.

Landform

About half the Nature Reserve, including Back and Clear Lakes, is inundated from the Narran River which forms the south-western boundary. The eastern half of the Nature Reserve is low, undulating sandy and rocky ridge country with playa lakes and drainage depressions located east of Clear Lake. Between the wetland shore and the ridge country is an area of discontinuous aeolian lunettes and sandy levees.

Geology and soils

Cretaceous sandstone and quartzite sediments of the Rolling Downs Group are exposed on the ridge country in the eastern part of the Nature Reserve. Soils

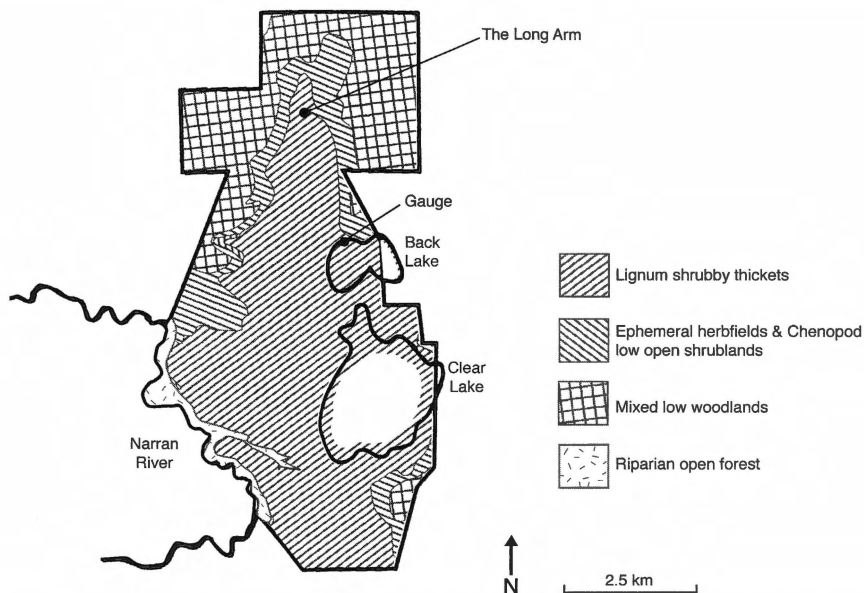


Figure 1. Vegetation communities within Narran Lake Reserve. Adapted from Hunter (1999).

on the ridges are generally red sandy loams, gravelly in the highest areas. On the Narran River floodplain, the Rolling Downs sediments are overlain by Quaternary sediments that consist of cracking grey clay soils in the lakes and adjacent wetlands, and light grey clays in nearby playa lakes.

The lunettes are composed of orange sands; wind and water erosion in the lunette area has resulted in severe scalding and production of claypans.

Hydrology

Of the four distributaries of the Condamine–Balonne river system, three (the Culgoa, Birie and Bokhara Rivers) flow into the Barwon River; the fourth, the Narran River, terminates in the Narran Lake wetland system although during large floods it too may reach the Barwon. The Narran has a small, shallow main channel with contiguous floodplain and flows intermittently as a result of heavy rainfall in Queensland; during a large flood it branches to fill Clear Lake which overflows to flood other areas in the Nature Reserve while simultaneously flowing into Narran Lake. When Clear Lake is full more water flows into Narran Lake. Water levels in the Nature Reserve can drop quickly unless flows in the river are sufficiently large to keep Clear Lake inundated. Once flooded, the Nature Reserve can hold water for up to twelve months while Narran Lake proper can hold water for up to two years.

Vegetation

Five major vegetation communities have been identified within the Nature Reserve (Figure 1).

Lignum shrubby thickets occupy about two-thirds of the area of the Nature Reserve including Clear and Back Lakes. The expanses of *Lignum Muehlenbeckia florulenta* are some of the largest in New South Wales and here support the major breeding colonies of Straw-necked Ibis *Threskiornis spinicollis* and other species. In some places River Red Gums *Eucalyptus camaldulensis* and/or River Cooba *Acacia stenophylla* occur with a dense Lignum understorey. Stands of Common Reed *Phragmites australis* also occur in this community.

Ephemeral herbfields including small areas of chenopod low open shrublands occur in a band surrounding the two lakes.

Mixed low woodlands dominated by White Cypress Pine *Callitris glaucophylla*, Wilga *Geijera parviflora* and Poplar Box *Eucalyptus populnea* occupy much of the northern section of the Nature Reserve.

A small area of riparian open forest of River Red Gum, Coolibah *E. coolabah* and Black Box *E. largiflorens* occurs along the channel of the Narran River at the south-western boundary of the Nature Reserve.

Annotated List

This list contains the 181 bird species confirmed as occurring in the Narran Lake Nature Reserve.

The occurrence of waterbirds, as defined previously (Ley 1998a), in the Nature Reserve up to the end of 1997 has been covered elsewhere (Ley 1998a,b and references therein). Here, my records of waterbird activity in 1998–2001 inclusive are documented. Breeding of colonial-nesting waterbirds during 1998–2001 inclusive, mainly summarised from internal NPWS working documents (A. Henderson pers. comm.), is outlined separately below.

As counts are available for most waterbird species, no attempt is made here to rate the birds' abundance, which is subject to extreme fluctuation depending on the presence or absence of water in the Nature Reserve.

Non waterbirds are given an abundance rating as follows:

Common = usually present.

Uncommon = not usually seen, present irregularly.

Occasional = vagrants, etc.

As applicable, species are coded thus:

R = those species confirmed as breeding in the Nature Reserve and having a restricted breeding distribution in the Western Division of New South Wales (Smith *et al.* 1995);

T = those species listed under international treaties to which Australia is a signatory (Japan–Australia Migratory Birds Agreement and China–Australia Migratory Birds Agreement);

E = endangered, V = vulnerable, P = possibly threatened, N = near threatened; in

WD = Western Division of New South Wales (Smith *et al.* 1995), NSW = New South Wales (NSW *Threatened Species Conservation Act* 1995), Aust. = Australia (Garnett & Crowley 2000).

Emu *Dromaius novaehollandiae* Common. One thousand feeding on the dry bed of Clear Lake 8 November 1994; large numbers in the Nature Reserve, including many groups of juveniles, during mid 2001.

Stubble Quail *Coturnix pectoralis* Occasional. Records 19 February 1989, when one bird was present in weeds on the dry bed of Back Lake, and 21 February 1997.

Magpie Goose *Anseranus semipalmata* E (WD), V (NSW) Three at the Long Arm 6 October 1998 (A. Henderson pers. comm.); four at Back Lake 16 March 1999.

Plumed Whistling-Duck *Dendrocygna eytoni* Ten at the Long Arm 24 October 1998 (A. Henderson pers. comm.); a flock of eight at Back Lake 16 March 1999.

Blue-billed Duck *Oxyura australis* V (NSW), P (WD) One at Clear Lake 20 April 1999.

Musk Duck *Biziura lobata* Regular in ones or twos at Clear Lake and Salt Lake.

Freckled Duck *Stictonetta naevosa* V (NSW), P (WD, Aust.) Two at Back Lake 18 March 1998 (A. Henderson pers. comm.); 39 at Back Lake 9 June 1998 (A. Henderson pers. comm.); a pair at Back Lake 9 November 1998 (L. Cupper pers. comm.) and 24 November 1998 (M. Maher pers. comm.); a pair at Clear Lake 28 July 2000.

Black Swan *Cygnus atratus* Present when conditions are suitable; dependent young present 24 November 1998; 280 present 8 April 1999.

Australian Shelduck *Tadorna tadornoides* Not recorded in 1998–2001.

Australian Wood Duck *Chenonetta jubata* Always present, sometimes totalling several hundred throughout the Nature Reserve.

Pacific Black Duck *Anas superciliosa* Dependent young present at Salt Lake 24 November 1998.

Australasian Shoveler *Anas rhynchos* Maximum count 30 on 11 June 1998.

Grey Teal *Anas gracilis* Maximum count 2300 on 3 March 2001.

Chestnut Teal *Anas castanea* Two at the Long Arm 24 October 1998 (A. Henderson pers. comm.).

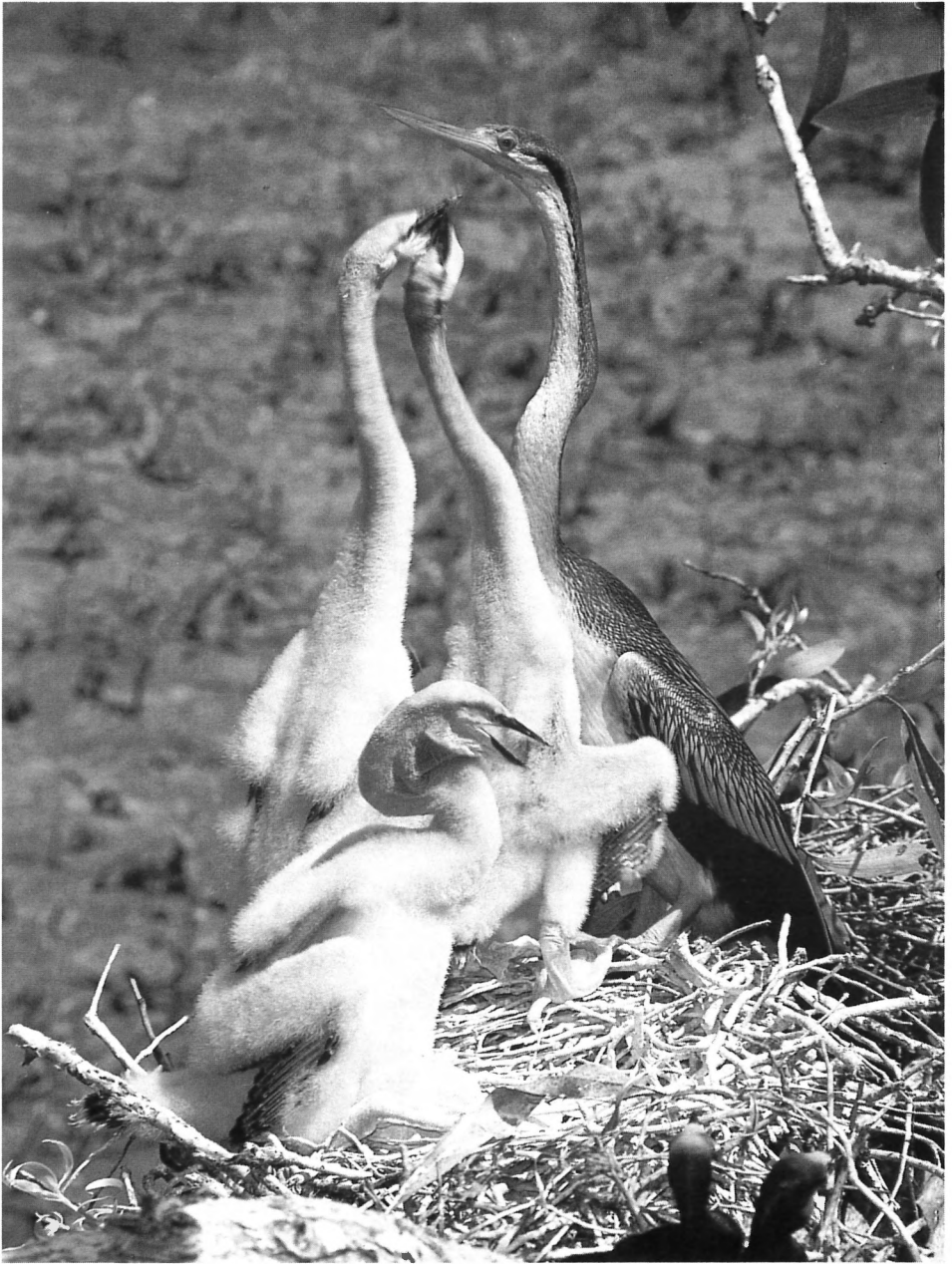
Pink-eared Duck *Malacorhynchus membranaceus* Maximum count 200 on 20 May 1999.

Hardhead *Aythya australis* Maximum count 30 at Clear Lake 3 March 2001; dependent young at Back Lake 24 November 1998.

Australasian Grebe *Tachybaptus novaehollandiae* Maximum count 20 at the Long Arm 20 April 1999.

Hoary-headed Grebe *Poliiocephalus poliocephalus* Maximum count a flock of 150 at Back Lake 11 June 1998.

Great Crested Grebe *Podiceps cristatus* R Maximum count four at Clear Lake 11 June 1998.



Female Darter feeding chicks

Plate 7

Photo: G.A. Cumming

Darter *Anhinga melanogaster* R Maximum count 100 at Back Lake 16 March 1999; nesting at the previously documented places (Ley 1998a,b) between November 1998 and April 1999; 20 nests with large young at Clear Lake and Back Lake 3 March 2001.



Little Pied Cormorant at nest

Plate 8

Photo: G.A. Cumming

Little Pied Cormorant *Phalacrocorax melanoleucos* Many nests in River Coobas along with those of Darters and Little Black Cormorants west of Back Lake 24 November 1998; otherwise maximum count 10 at various places 8 April 1999.

Pied Cormorant *Phalacrocorax varius* R Maximum count 450 at Clear Lake 16 March 1999; active nests present between November 1998 and June 1999 at Clear Lake and Back Lake; maximum nest counts 20 at Back Lake and 20 at Clear Lake 8 April 1999.

Little Black Cormorant *Phalacrocorax sulcirostris* Five hundred nests at Back Lake in six of the same River Red Gums used by previous colonies (Ley 1998a, b) 24 November 1998; also several nests with those of Darters and Little Pied Cormorants west of Back Lake on the same date.

Great Cormorant *Phalacrocorax carbo* R Twenty-five nests with fledging young with those of Pied Cormorants at Clear Lake in February–March 1999; four nests, one with eggs, at the same place 8 April 1999.

Australian Pelican *Pelecanus conspicillatus* R Maximum count 500 at Clear Lake 3 March 2001.

White-faced Heron *Egretta novaehollandiae* Maximum count 200 including a flock of 100 at the Long Arm 20 April 1999.

Little Egret *Egretta garzetta* One at Clear Lake 3 March 2001.

White-necked Heron *Ardea pacifica* Maximum count 20 at Clear Lake 3 March 2001.

Great Egret *Ardea alba* R, T Maximum count 40 on 8 April 1999.

Intermediate Egret *Ardea intermedia* R Maximum count 26 on 16 March 1999.

Cattle Egret *Ardea ibis* T One record: one with cattle south of Clear Lake 20 May 1999.

Nankeen Night Heron *Nycticorax caledonicus* R One hundred in flooded Lignum and River Red Gums at Back Lake 20 May 1999; two at Back Lake 2 March 2001.

Little Bittern *Ixobrychus minutus* N (Aust.) Calling from dense reeds at Back Lake 9 November 1998.

Glossy Ibis *Plegadis falcinellus* R, T Maximum count 50 in Lignum at Back Lake 2 March 2001.

Australian White Ibis *Threskiornis molucca* R Maximum count 30 at Back Lake and Clear Lake 2 March 2001.

Straw-necked Ibis *Threskiornis spinicollis* R Maximum count 3000, mostly juveniles, at Clear Lake 3 March 2001.

Royal Spoonbill *Platalea regia* R Maximum count 40 on 20 April 1999.

Yellow-billed Spoonbill *Platalea flavipes* Maximum count 100 west of Back Lake 27 June 1999; five active nests in River Red Gums at Back Lake 3 March 2001.

Black-necked Stork *Ephippiorhynchus asiaticus* E (NSW) One record: a single bird east of Back Lake 1 June 2000 (I. Fraser pers. comm.).

Black-shouldered Kite *Elanus axillaris* Occasional, depending on seasonal conditions.

Black Kite *Milvus migrans* Uncommon.



Yellow-billed Spoonbill feeding young

Whistling Kite *Haliastur sphenurus* Maximum count 15, including two nesting pairs, 16 March 1999.

White-bellied Sea-Eagle *Haliaeetus leucogaster* T Maximum count three, two adults and a juvenile, 11 June 1998 and 20 May 1999; bird flushed from nest adjacent to Clear Lake 14 July 1998 (M. Prior pers. comm.) and 29 July 2000.

Swamp Harrier *Circus approximans* Maximum number an estimated five pairs in the Nature Reserve 20 April 1999.

Brown Goshawk *Accipiter fasciatus* Uncommon.

Collared Sparrowhawk *Accipiter cirrhocephalus* Occasional. One record 30 September 1990.

Wedge-tailed Eagle *Aquila audax* Common. Seventeen birds flushed from the Long Arm 31 October 1996.

Little Eagle *Hieraaetus morphnoides* Occasional. One record 16 July 1989.

Brown Falcon *Falco berigora* Uncommon.

Australian Hobby *Falco longipennis* Uncommon.

Grey Falcon *Falco hypoleucos* V (NSW), P (WD), N (Aust.) Occasional. One record 5 May 1996.

Peregrine Falcon *Falco peregrinus* Uncommon.

Nankeen Kestrel *Falco cenchroides* Common.

Brolga *Grus rubicunda* P (WD, NSW) A group of two adults and one juvenile at the Long Arm 20 April 1999.

Australian Spotted Crake *Porzana fluminea* One in Lignum at Back Lake 16 December 1998.

Purple Swamphen *Porphyrio porphyrio* Two at the Long Arm on both 6 and 24 October 1998 (A. Henderson pers. comm.).

Dusky Moorhen *Gallinula tenebrosa* Not recorded in 1998–2001.

Black-tailed Native-hen *Gallinula ventralis* Maximum count 500 at the Long Arm 16 March 1999.

Eurasian Coot *Fulica atra* Maximum count 200 at several places 8 April 1999.

Australian Bustard *Ardeotis australis* E (NSW), V (WD), N (Aust.) Occasional. One record, 21 May 1999 (A. Henderson pers. comm.).

Little Button-quail *Turnix velox* Occasional. One record: a single bird in shrubland west of Clear Lake 13 December 2001.

Latham's Snipe *Gallinago hardwickii* T, P (WD) Three at the Long Arm 19 March 1998 (A. Henderson pers. comm.); one at Back Lake 6 February 1999.

Black-tailed Godwit *Limosa limosa* T, V (NSW) Three records since 1997: 20 at Back Lake 6 February 1999; eight and 30 at the Long Arm on 16 March and 8 April 1999 respectively.

Bar-tailed Godwit *Limosa lapponica* T Not recorded in 1998–2001.

Marsh Sandpiper *Tringa stagnatilis* T Fifty at Back Lake 6 February 1999; 42 at the Long Arm 16 March 1999; three at Clear Lake 3 March 2001.

Common Greenshank *Tringa nebularia* T One at Back Lake 6 February 1999; three in breeding plumage at two locations 20 April 1999.

Red-necked Stint *Calidris ruficollis* T The only record for the Nature Reserve is of one bird at Clear Lake 4 March 2001.

Sharp-tailed Sandpiper *Calidris acuminata* T Five hundred at Back Lake and 20 at Clear Lake 6 February 1999; eight and one at two different locations 16 March 1999 and 20 April 1999 respectively; three at Salt Lake 12 December 2001.

Curlew Sandpiper *Calidris ferruginea* T One record: a single bird at Clear Lake 28 July 2000.

Black-winged Stilt *Himantopus himantopus* Highest count 600 at Back Lake 6 February 1999.

Red-necked Avocet *Recurvirostra novaehollandiae* Highest count 180 at Clear Lake 4 March 2001.

Red-capped Plover *Charadrius ruficapillus* Highest count eight at Clear Lake 28 July 2000.

Black-fronted Dotterel *Elseyaornis melanops* Highest count 300 at Clear Lake 28 July 2000.

Red-kneed Dotterel *Erythronyx cinctus* Highest count a total of 30 at several locations 20 April 1999.

Banded Lapwing *Vanellus tricolor* Highest count 30 flying over Back Lake 8 April 1999; eggs and dependent young present 25 September 2001.

Masked Lapwing *Vanellus miles* Highest count 100 at several locations 20 April 1999; 82 at Clear Lake 29 June 2001.

Australian Pratincole *Stiltia isabella* Not recorded in 1998–2001.

Silver Gull *Larus novaehollandiae* Highest count 50 at Clear Lake 3 March 2001.

Gull-billed Tern *Sterna nilotica* R Highest count six at Back and Clear Lakes 8 April 1999.

Caspian Tern *Sterna caspia* T One at Clear Lake 20 May 1999.

Whiskered Tern *Chlidonias hybridus* Up to several hundred in a mixed flock with White-winged Black Terns at Clear Lake 3 March 2001.

White-winged Black Tern *Chlidonias leucopterus* T Two hundred at the Long Arm 16 March 1999; up to several hundred with Whiskered Terns at Clear Lake 3 March 2001.

Common Bronzewing *Phaps chalcoptera* Common.

Crested Pigeon *Ocyphaps lophotes* Common.

Diamond Dove *Geopelia cuneata* Sometimes common, but usually not present.

Peaceful Dove *Geopelia striata* Uncommon.

Bar-shouldered Dove *Geopelia humeralis* Uncommon.

Galah *Cacatua roseicapilla* Common. Sometimes in flocks of 1000 or more.

Major Mitchell's Cockatoo *Cacatua leadbeateri* V (NSW), N (Aust.) Uncommon.

Cockatiel *Nymphicus hollandicus* Common.

Red-winged Parrot *Aprosmictus erythropterus* Common.

Pale-headed Rosella *Platycercus adscitus* Uncommon.

Australian Ringneck *Barnardius zonarius* Common.

Blue Bonnet *Northiella haematogaster* Common.

Red-rumped Parrot *Psephotus haematonotus* Uncommon.

Mulga Parrot *Psephotus varius* Common.

Budgerigar *Melopsittacus undulatus* Occasional.

Pallid Cuckoo *Cuculis pallidus* Uncommon.

Fan-tailed Cuckoo *Cacomantis flabelliformis* Occasional. Two records 11 June 2000 and 29 June 2001.

Black-eared Cuckoo *Chrysococcyx osculans* Occasional. Two records 9 November 1994 and 20 May 1999.

Horsfield's Bronze-Cuckoo *Chrysococcyx basalis* Common.

Shining Bronze-Cuckoo *Chrysococcyx lucidus* Uncommon.

Barking Owl *Ninox connivens* V (NSW), P (WD) Occasional. One bird in River Red Gums at Back Lake 1 May 1996; also Cawthorne (2001).

Southern Boobook *Ninox novaeseelandiae* Uncommon.

Tawny Frogmouth *Podargus strigoides* Uncommon.

Spotted Nightjar *Eurostopodus argus* Uncommon.

Australian Owlet-nightjar *Aegotheles cristatus* Common.

Laughing Kookaburra *Dacelo novaeguineae* Common.

Sacred Kingfisher *Todiramphus sanctus* Common.

Rainbow Bee-eater *Merops ornatus* Common.

Dollarbird *Eurystomus orientalis* Uncommon. Near the western limit of its range at this latitude.

Brown Treecreeper *Climacteris picumnus* V (NSW), N (Aust.) Common.

Splendid Fairy-wren *Malurus splendens* Common at the northern end of the Nature Reserve.

Variegated Fairy-wren *Malurus lamberti* Common, including in Lignum over floodwater.

White-winged Fairy-wren *Malurus leucopterus* Common, including in Lignum in dry lake-beds.

Spotted Pardalote *Pardalotus punctatus* Occasional. First recorded in the Nature Reserve 29 July 2000. Near its western limit at this latitude.

Striated Pardalote *Pardalotus striatus* Common.

Weebill *Smicromis brevirostris* Common.

Western Gerygone *Gerygone fusca* Common.

Inland Thornbill *Acanthiza apicalis* Common.

Chestnut-rumped Thornbill *Acanthiza uropygialis* Common.

Yellow-rumped Thornbill *Acanthiza chrysorrhoa* Common.

Yellow Thornbill *Acanthiza nana* Common.

Spiny-cheeked Honeyeater *Acanthagenys rufogularis* Sometimes common, but mostly uncommon.

Striped Honeyeater *Plectorhyncha lanceolata* Common.

Noisy Friarbird *Philemon corniculatus* P (WD) Occasional.

Little Friarbird *Philemon citreogularis* Uncommon.

Blue-faced Honeyeater *Entomyzon cyanotis* Uncommon.

Yellow-throated Miner *Manorina flavigula* Common to uncommon.

Singing Honeyeater *Lichenostomus virescens* Common.

White-plumed Honeyeater *Lichenostomus penicillatus* Common.

Brown-headed Honeyeater *Melithreptus brevirostris* Common.

Brown Honeyeater *Lichmera indistincta* Uncommon.

Black Honeyeater *Certhionyx niger* Occasional. Two records: a pair east of the Long Arm 9 November 1994 and two pairs west of Clear Lake 13 December 2001.

Crimson Chat *Epthianura tricolor* Occasional.

Orange Chat *Epthianura aurifrons* Occasional.

White-fronted Chat *Epthianura albifrons* Common. In flocks of up to 50+; 30+ feeding on the dry margin of Clear Lake 29 July 2000.

Jacky Winter *Microeca fascinans* Common.

Red-capped Robin *Petroica goodenovii* Common.

Hooded Robin *Melanodryas cucullata* V (NSW), N (Aust.) Uncommon.

Eastern Yellow Robin *Eopsaltria australis* Uncommon.

Grey-crowned Babbler *Pomatostomus temporalis* V (NSW), N (Aust.) Uncommon.

Crested Bellbird *Oreoica gutturalis* Common.

Golden Whistler *Pachycephala pectoralis* P (WD) Uncommon. Records 12 August 1998, 20 May 1999, 11 June 2000 and 29 July 2000, all of immature birds.

Rufous Whistler *Pachycephala rufiventris* Common.

Grey Shrike-thrush *Colluricincla harmonica* Common.

Restless Flycatcher *Myiagra inquieta* Common.

Magpie-lark *Grallina cyanoleuca* Common. Flocks of 50+ and 80+ feeding on the drying bed of Clear Lake 28 July 2000.

Grey Fantail *Rhipidura fuliginosa* Common.

Willie Wagtail *Rhipidura leucophrys* Common.

Black-faced Cuckoo-shrike *Coracina novaehollandiae* Common.

White-bellied Cuckoo-shrike *Coracina papuensis* Occasional. Records from River Red Gums at Back Lake 8 April 1999 and 20 May 1999.

Ground Cuckoo-shrike *Coracina maxima* Uncommon. Records from 19 November 1989, 8 November 1994, 11 June 2000 and 29 July 2000.

White-winged Triller *Lalage sueurii* Occasional.

White-breasted Woodswallow *Artamus leucorhynchus* Common.

Masked Woodswallow *Artamus personatus* Occasional.

White-browed Woodswallow *Artamus superciliosus* Uncommon to common. A flock of 200 at Back Lake 20 April 1999.

Black-faced Woodswallow *Artamus cinereus* Uncommon.

Little Woodswallow *Artamus minor* Uncommon.

Grey Butcherbird *Cracticus torquatus* Common.

Pied Butcherbird *Cracticus nigrogularis* Common.

Australian Magpie *Gymnorhina tibicen* Common.

Australian Raven *Corvus coronoides* Common.

Little Raven *Corvus mellori* Occasional.

White-winged Chough *Corcorax melanorhamphos* Common.

Apostlebird *Struthidea cinerea* Common.

Spotted Bowerbird *Chlamydera maculata* Common.

Richard's Pipit *Anthus novaeseelandiae* Common.

Zebra Finch *Taeniopygia guttata* Uncommon.

Double-barred Finch *Taeniopygia bichenovii* Common.

Mistletoebird *Dicaeum hirundinaceum* Uncommon.

Welcome Swallow *Hirundo neoxena* Common.

Tree Martin *Hirundo nigricans* Common. Several thousand at Back Lake 1 May 1996 and 23 November 1998.

Fairy Martin *Hirundo ariel* Uncommon.

Clamorous Reed-Warbler *Acrocephalus stentoreus* Common.

Little Grassbird *Megalurus gramineus* Common.

Rufous Songlark *Cincloramphus mathewsi* Uncommon.

Brown Songlark *Cincloramphus cruralis* Occasional.

Golden-headed Cisticola *Cisticola exilis* Occasional. Present in Lignum at Clear Lake 4 March 2001.

Silvereye *Zosterops lateralis* Uncommon.

Common Starling *Sturnus vulgaris* Uncommon. Highest count a flock of 30 west of Clear Lake 25 September 2001.

Supplementary list

This list includes species recorded from Narran Lake proper which is outside the Nature Reserve (N.S.W. Field Ornithologists Club undated; AL pers. obs.). Records of the N.S.W. Field Ornithologists Club (undated) are included without comment. Also included are records from a biodiversity survey of the Nature Reserve (Cawthorne 2001) which are considered as possibly doubtful. All the species listed are subject to confirmation for inclusion in the Nature Reserve list; some are certainly false identifications and will probably never be recorded in the Nature Reserve. Doubtful records are included here because, even if they have not formally been published, they have appeared in print. Several species recorded in the vicinity of the Nature Reserve are included as possible future additions to the Nature Reserve list.

Black-breasted Buzzard *Hamirostra melanosternon* V (NSW) One record of a young bird at Beefwood Tank, Narran Lake Station, 22 September 1985 (AL pers. obs.).

Black Falcon *Falco subniger* One record, 21 January 1999, a pair at Mahady's Tank, Narran Lake Station (AL pers. obs.). Also N.S.W. Field Ornithologists Club (undated).

Spotless Crake *Porzana tabuensis* N.S.W. Field Ornithologists Club (undated). Also reported from the Nature Reserve 22 September 1999 (A. Henderson pers. comm.) but retained in the supplementary list for lack of supporting documentation.

Red-chested Button-quail *Turnix pyrrhothorax* N.S.W. Field Ornithologists Club (undated).

Wood Sandpiper *Tringa glareola* T Reported from the Nature Reserve 19 January 1999 (A. Henderson pers. comm.) but retained in the supplementary list for lack of supporting documentation.

Common Sandpiper *Actitis hypoleucos* T N.S.W. Field Ornithologists Club (undated), Cawthorne (2001).

Little Corella *Cacatua sanguinea* Cawthorne (2001).

Sulphur-crested Cockatoo *Cacatua galerita* Cawthorne (2001).

Blue-winged Parrot *Neophema chrysostoma* N.S.W. Field Ornithologists Club (undated).

Masked Owl *Tyto novaehollandiae* V (NSW), N (Aust.) Recorded at Narran Lake Station 6 May 1985 (Debus & Rose 1994, N.S.W. Field Ornithologists Club undated).

Red-browed Pardalote *Pardalotus rubricatus* Two birds at Wilkie Station 26 September 2001 (AL pers. obs.).

Southern Whiteface *Aphelocephala leucopsis* N.S.W. Field Ornithologists Club (undated), Cawthorne (2001).

Painted Honeyeater *Grantiella picta* V (NSW), N (Aust.) Two birds in mistletoe-infested Leopardwood *Flindersia maculosa* at Kigwigil Station 25 September 2001 (AL pers. obs.).

Chestnut-crowned Babbler *Pomatostomus ruficeps* Present at Wilkie Station 14 November 1997 (AL pers. obs.).

Little Crow *Corvus bennetti* N.S.W. Field Ornithologists Club (undated).

White Wagtail *Motacilla alba* Several anecdotal reports of sightings are undoubtedly misidentifications of White-fronted Chats, as was a sighting from Clear Lake supported by photographic evidence.

House Sparrow *Passer domesticus* N.S.W. Field Ornithologists Club (undated).

Plum-headed Finch *Neochmia modesta* N.S.W. Field Ornithologists Club (undated).

Diamond Firetail *Stagonopleura guttata* V (NSW), N (Aust.) N.S.W. Field Ornithologists Club (undated).

Colonial-nesting waterbirds in the Nature Reserve during 1998–2001 inclusive

This information is partly based on my observations, but is mainly summarised from N.P.W.S. field reports (A. Henderson pers. comm.).

Water-level readings at the Back Lake gauge in 1998–2001 are shown in Figure 2. There was a small peak in the water level in April–July 1998, then two high flood peaks when the Nature Reserve was ‘full’ in October 1998 and April 1999.

At the time of the first of these peaks no waterbird breeding activity was observed.

At the time of the peak of October 1998 and during the following three months a major breeding event occurred in the Nature Reserve. Colonies formed at the previously documented places and included the same species as had been present in earlier breeding events (Ley 1998a). Significant numbers of Darter (estimated maximum number of breeding pairs 550), Little Pied Cormorant (600), Pied Cormorant (100), Little Black Cormorant (360), Great Cormorant (100), Glossy Ibis (7500), Australian White Ibis (7500), Straw-necked Ibis (125 000), Royal Spoonbill (7500) and Yellow-billed Spoonbill (10) were recorded.

By January 1999 breeding had finished in the main colony, in channelised Lignum between Back and Clear Lakes, although Darters, Great and Pied Cormorants and Yellow-billed Spoonbills still had active nests elsewhere.

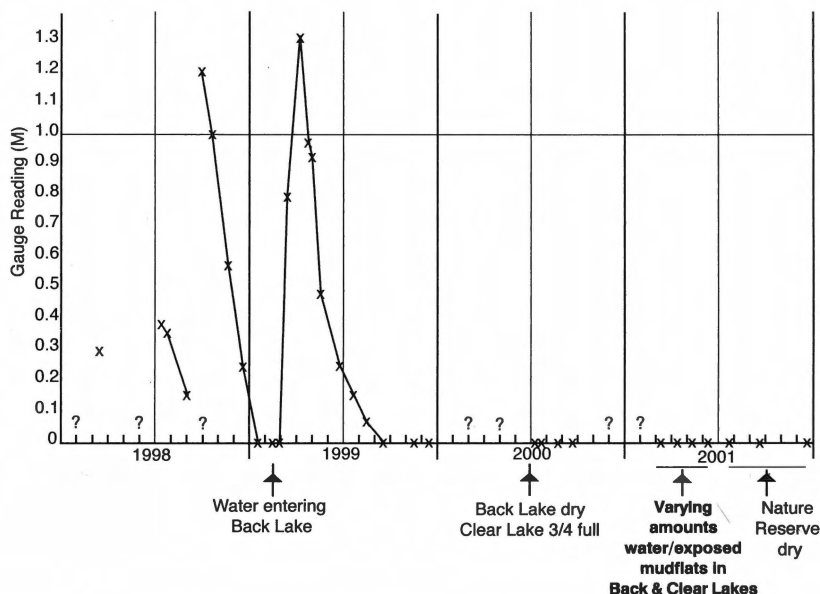


Figure 2. Water levels at the Back Lake gauge, Narran Lake Nature Reserve 1998–2001 inclusive.

Following this flood the Nature Reserve did not dry out completely before water began entering Back Lake during February 1999 at the start of a flood which peaked in April 1999 (Figure 2). This flood stimulated little breeding activity. The large colony dominated by Straw-necked Ibis did not re-form but Darters (maximum 20 active nests), Pied Cormorants (200) and Great Cormorants (25) bred in the south-west corner of Clear Lake.

Following this second high flood, water had receded from the Back Lake gauge by late 1999. There are two gaps, of six and five months respectively, in the availability of gauge readings during 2000 and 2001, but by March 2001 the water level was below the gauge and by mid 2001 the Nature Reserve was dry and remained so for the rest of the year (Figure 2). No waterbird breeding was recorded after the end of 1999.

Discussion

The Narran Lake Nature Reserve is a Ramsar listed wetland and is a major waterbird breeding site on a national scale. During 1998–2001 Little Bittern, Black-necked Stork, Red-necked Stint and Curlew Sandpiper were added to the list of waterbirds recorded in the Nature Reserve, taking the total to 67 species. The overall bird list of 181 species includes 14 species listed under international treaties to which Australia is a signatory, 17 species of conservation concern nationally, in New South Wales or in its Western Division, and 13 breeding species that have a restricted breeding distribution in the Western Division of New South Wales.

The two floods in the Nature Reserve in 1998–99 resembled in magnitude and relative timing the two flood peaks in 1996. In both cases, a major breeding event occurred on the first flood but there was little breeding on the second (Ley 1998a). The flood in the first half of 1997 also attracted few breeding birds, although a few Straw-necked Ibises made a seemingly feeble and, in the end, abortive start to breeding at that time (Ley 1998b).

At the end of 2001 the Nature Reserve had been dry for half a year and, given that the Australian continent was entering a dry period under the conditions described as El Niño, the time until the next flood may be protracted. Before the first 1996 flood the Nature Reserve had been without a flood for 40 months, and dry spells such as this, in a wetland which historically has averaged a flood every two years and two floods in 25% of years, may do lasting damage. The effect of prolonged dry spells on the vegetation of the wetlands, which is not only of intrinsic value but which is also the substrate on which much of the waterbird breeding occurs, is unpredictable.

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