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THE BIRDS OF COOLABAH AND BREWARRINA,  
NORTH-WESTERN NEW SOUTH WALES,

By

ALFRED J. NORTH, C. M. B. O. U., C. M. Z. S.,  
Ornithologist to the Australian Museum.

The following notes were made at Coolabah, between the 5th and 14th of October, 1915, and those at Brewarrina between the 15th and 22nd of the same month.

Ascertaining last October from a twenty-five years' resident of North-western New South Wales, that the weather conditions in that part of the State were apparently favourable for a collecting tour, I determined to spend my annual leave for 1915, as far as possible, equally at Coolabah and Brewarrina. Coolabah, on the main western line, four hundred and twenty-nine miles north-west of Sydney, is situated in the red soil country, having no natural watercourse, or permanent water, if we except a small gilguy or soak here and there, but which had entirely dried up at the time of my visit, the residents being dependent upon artificially formed tanks and dams for their storage of water.

The principal flora of the open forest lands of Coolabah put me very much in mind of that of the country around Moree in Northern Central New South Wales, the gum (*Eucalyptus*) and Apple (*Angophora*) predominating, and in the scrubs, the Wilga (*Geigeria parviflora*) and pines (*Callitris, sp.*).

For some time prior to reaching Coolabah, the shapely Sour Plum or "Colane" of Western New South Wales, or "Grouie" (*Owenia acidula*) of the Moree District, were much in evidence, resembling as one passed them in the train, the symmetrical artificial trees, found in a child's "Noah's Ark," and not unlike the introduced Pepper plant (*Schinus molle*) common throughout the inland portions of Australia, but usually more squat in appearance. I did not observe *Owenia acidula* either at Coolabah or Brewarrina, but at both places was informed that it occurred in the neighbourhood.

At Coolabah I learned that the district was suffering from the effects of a drought, in fact it was evident some time before reaching it, but not nearly so pronounced as in 1914. On each side of the railway line, particularly on the stock route, the trees appeared to be growing in a desert of red sandy soil, not a blade of natural grass being visible anywhere. At the Government Tank on the Girilambone side of the railway line, with the exception of the Rose-breasted Cockatoo (*Cacatua roseicapilla*), Barnard's Parrakeet (*Barnardius barnardi*), and the Yellow-throated Miner (*Myzantha flavigula*) I saw no birds worthy of note that could not be found in the neighbourhood of Sydney. On the way up a flock of the introduced Starling (*Sturnus vulgaris*) was noted as far west as Trangie, three Emus (*Dromæus novæ-hollandiæ*) were observed about two hundred yards from the railway line shortly after passing Grahweed, and it is almost needless to add that the acclimatised House Sparrow (*Passer domesticus*) was seen nearly everywhere, about station buildings, goods sheds, and stables, etc.

On the morning following my arrival I went into a Wilga scrub immediately at the rear of the hotel but saw very few birds, being out three-quarters of an hour before getting a shot. Visiting a dam I was told of, about a mile and a half from the railway station, and where late in the afternoon one would naturally expect to find birds coming to drink, I was surprised to meet with only three common species—the Magpie-Lark (*Grallina picata*), the Black and White Fantail (*Sauoprocta melaleuca*), more popularly known as the "Willy-Wagtail," and the Yellow-throated Miner (*Myzantha flavigula*).

On Monday, the 11th October, official duties necessitating First-class Constable W. C. Wrightson visiting Bundong, the residence of Mr. Victor Hall, about fifteen miles from Coolabah, he invited me to go with him. This necessitated our driving through Willeroo Station, where there was a marked improvement in the appearance of the country and where several species of birds were obtained, or noted, that were not met with at Coolabah; among the latter, three Emus (*Dromæus novæ-hollandiæ*) which were disturbed from some bushes as we drove slowly past. At Bundong Homestead we were kindly received by Mr. V. B. Hall, Junr., and his Mother.

Although I walked miles every day, it was remarkable that most of the birds were obtained in the Wilga scrub close to the hotel, or immediately around the railway station. At the time of my visit, the Welcome Swallow (*Hirundo neoxena*) was feeding young in a nest in the kitchen of the hotel, the Yellow-throated Miner (*Myzantha flavigula*) was similarly engaged at a nest in a tree opposite my bedroom window, while a White-plumed Honey-eater (*Ptilotis penicillata*) was sitting on a nest in the drooping leafy twigs of a gum near the tank.

On the 14th, just before leaving for Brewarrina, I was asked to go and see a bird-catcher's call birds in the stables of the hotel. Among them he had a beautifully plumaged adult male Barraband's Parrakeet, or "Green-leek" (*Polytelis barrabandi*) which he considered rare, also a Leadbeater's Cockatoo, or "Major Mitchell," (*Cacatua leadbeateri*), a female Red-winged Parrot or "Bello-wing" (*Ptilotes erythropterus*), and some Warbling Grass-Parrakeets or "Budgerigar's" (*Melopsittacus undulatus*).

At Brewarrina early next morning I was awakened by the twittering notes of birds, and on opening my bedroom door which led on to the balcony, found it proceeded from a half dozen Tree Swallows (*Petrochelidon nigricans*), perched on the telegraph wires, close by. Afterwards I discovered this species was the commonest bird in the town.

Brewarrina, on the Darling River, five hundred and eighteen miles north-west of Sydney, and the longest railway journey in the State, is in the black soil country.

Chief among the sights of Brewarrina is its ancient aboriginal fish-traps, made of stones, of the formation of which, no tradition has been handed down to the present dusky inhabitants of the soil. These traps are known locally to the residents of Brewarrina as "The Fisheries," a somewhat misleading term, but in such general constant use, that I shall here adopt it. This series of fish-traps or "yards" is built in the Darling River, at a place known as "The Rocks," a natural broken rocky barrier, close to Bathurst Street, the main thoroughfare of the town, reaching from nearly one side of the river to the other, and extending upwards for about a distance of three hundred yards. When I first saw "The Fisheries" on

Friday, the 15th October, 1915, they were nearly submerged by the freshes on the river, caused by the rain on the two previous days and it was not until the 19th October that the water had subsided enough to take the accompanying photographs, which will give one a better idea of them than pages of description. One can trace these structures, more or less in a state of disrepair, except those shown in Plates xxiv., xxv., and xxvi., which are the only ones at present being worked, for about three hundred yards, the upper portion terminating a little below the Chinamens' garden on the western bank. Another picture taken below Plate xxiv., completes the principal part of "The Fisheries," as they now stand. These fish-traps or "yards" are principally of irregular shape, chiefly of bent elongate-pear form, while others are oval or nearly circular and three or four, or more, are often constructed together and attached again to a long wall of stones which extend in some instances nearly across the river. The walls of the traps are formed entirely of stones, some are very large, as will be seen by the photographs, but the greater part average from nine to eighteen inches in diameter, a hole being left at the widest part of each trap for the fish to enter, which they usually do when swimming up stream, many others being caught in them when the river is in flood, but which of course could only be taken when the river had subsided. At the time of my visit there was only one pure blooded aboriginal watching the traps, who lived in a frail erection on the river bank, only a few yards away from them. He informed me that he belonged to the Cobar tribe, was sixty-seven years of age, and known as "Steve Shaw"; had a wife in the Brewarrina Aboriginal Mission Station, where he had been until eight weeks before. I visited him everyday, in the early morning, but usually he had examined the "yards" before I got there, at the first break of day. Formerly the entrance hole in the wall was plugged with one or more stones, and a small meshed round net was used in catching the fish in the trap. Now the egress was blocked with a small wire covered iron wheel, and the lengthened deep purse-like net, wherein to put the fish, and if necessary, keep them alive, was made of the ordinary galvanised meshed fencing wire. His *modus operandi* after closing the hole in the wall, which was generally in the widest part of the trap, and in the deepest water, was to poke about the trap, usually at the sides and among the stones, with a

piece of straight iron wire, which he carried in his right hand, and gradually drove the fish, if any, into the shallow water in the narrow bent end of the trap, where he secured it in the beforementioned wire purse-like net. "Steve" met with varying success; on the first morning after my arrival he secured five fair-sized Murray Cod (*Oligorus macquariensis*), the next day nothing, he informing me "the fish were all on the other side of the river"; the day following he told me he had caught only a few Bony Bream (*Dorosoma erebi*), which he had cooked and eaten, and the day after that, some Fresh-water Cat-fish (*Copidoglanis tandanus*). On the 19th October, the day I was photographing "The Fisheries," "Steve" was fortunate enough to secure a "Yellow-belly" or Golden Perch (*Plectroplites ambiguus*), about five pounds in weight, which I photographed—"Steve" holding it up in his left hand, in one of the yards—but the fish is hardly discernible in the picture (Plate xxvi). There are several flat grassy patches in the river, adjacent to "The Fisheries," which, together, with the surrounding rocks and stones are resorted to by birds, principally fish eating ones. Conspicuous among them was a pair of White Ibis (*Ibis molucca*), sometimes to be seen standing in the water watching for their prey, or motionless, resting on one leg, on the bank. From the tops of stones, the large Black Cormorant or "Shag" (*Phalacrocorax carbo*), sleek in body, slipped noiselessly into the water, probably anxious to secure some passing fish, disappearing for some seconds, and half rising to the surface again some distance away; the little Black and White Cormorant (*Phalacrocorax melanoleucus*) was also noted "fishing" in the river. The higher parts of the river above "The Rocks," I was informed, was called the Barwon, and that below on the lower level the Darling. The rush of water as it passed through the stone walls at the latter point could be heard over two hundred yards away, in a low dull murmur at night, when all was otherwise quiet. The river yielded not only fish as food to the aborigines, but the large Fresh-water Mussel (*Diplodon (Unio) angasi*) and the Black River Tortoise (*Emydura macquariæ*), occasionally caught on fishing lines. The carapace of one caught in the Barwon, at the Aboriginal Mission Station, nine miles from Brewarrina, measuring 10.5 inches in length by 8 inches in breadth, was subsequently presented by the then Manager, Mr. Geo. F. Evans, to the Trustees.

When in Brewarrina, some of the residents told me that nothing like "The Fisheries" existed elsewhere in any part of Australia. This, however, I knew to be incorrect, for similar structures have been described, as well as "The Fisheries" at Brewarrina, many times, in books, scientific proceedings, magazines, and in newspapers. Moreover, Mr. R. Etheridge, the Curator, on my return, told me of a similar, but smaller structure lower down the Darling, about thirty-two miles below Louth, that he had visited in 1903, in company with Mr. A. W. Mullen, Surveyor and Inspector to the Western Land Board, Bourke. These fish-traps are at a point on the river, between Newfoundland and Curranyalpa Stations.

Fifty-one years ago, Mr. Gideon S. Lang, described these fish-traps at Brewarrina in a lecture delivered by him at St. George's Hall, Melbourne, on the 12th July, 1865, in aid of the Leichhardt Search Fund,<sup>1</sup> where he states:—"The great weir for catching fish, on the Upper Darling, called 'Brewarner,' is, both for conception and execution, one of the most extraordinary works recorded of any savage tribe, and independent of another described by Morrill, the shipwrecked mariner, who passed seventeen years among them, is quite sufficient to prove their capacity to construct works on a large scale, and requiring combined action. This weir, at 'Brewarner,' is about sixty-five miles above the township of Bourke. It is built at a rocky part of the river, from eighty to a hundred yards in width, and extends about a hundred yards of the river course. It forms one immense labyrinth of stone walls about three or four feet high, forming circles from two to four feet in diameter, some opening into each other, forming very crooked, but continuous passages, others having one entrance only. In floods as much as twenty feet of water sweeps over them, and carries away the tops of the walls; the inner parts of the walls, however, are so solidly built with large heavy stones, which must have been brought from a considerable distance, and with great combined labour, that they have stood every flood from time immemorial. Every summer this labyrinth is repaired, and the fish, in going up or down the river, enter it, get confused in its mazes, and are caught by the blacks by hand in immense quantities."

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<sup>1</sup> Lang—The Aborigines of Australia, 1865, pp. 19, 20.

Relative to Plate xxvii., a plan of "The Fisheries," I transcribe a copy of the following hitherto unpublished Report given to the Curator of the Australian Museum, by Mr. A. W. Mullen, Surveyor, etc. to the Western Land Board, Bourke.— "Survey of 'The Fisheries,' in the Darling River, opposite the town of Brewarrina, New South Wales.—Bourke, 17th July, 1906.—'In compliance with verbal instructions from the Western Land Commissioners, I have the honour to transmit herewith a plan and tracing of compass survey of 'The Fisheries' at Brewarrina, made on the 15th June, 1906'" :—

"These fish-traps are supposed to have been constructed by the aborigines, but so long ago that all tradition is lost, even the oldest local blackfellow—'King Watty of the Fisheries'—cannot tell how they originated. As far back as white men can remember, the aborigines have used these traps, and to this day they are kept in repair and fish are caught in them by the local aborigines. The traps are constructed of loose stones and small boulders, arranged in four rows or dams on the natural rocky bar in the bed of the Darling River, opposite the town. The surface of the water on the upper side of the bar is about eleven feet above the surface of water on the lower side of the bar when the river is low, so that when a fresh occurs the water runs rapidly over the bar and through the traps, giving fish many obstacles to surmount in ascending the stream, while the water is shallow. The fish are caught in these traps when the water is running through them and just exposing the tops of stones. The stones in the traps are piled up to a height of from one to two feet, the bases being about double the height. As far as I know, only fish ascending the stream are caught, they enter the traps at the gaps left on the lower sides of the widest portions of the traps in which the water is deeper than in the narrow ends of traps. When the stream is at a suitable height for trapping fish, the aborigines are always on the watch, and when a fish is found to have entered a trap, it is driven into the shallow, narrow end of the trap and knocked on the head with a stick."

In answer to queries of mine, Mr. Mullen writes me as follows, under date 18th July, 1916 :—"I do not know of any fish-traps now, other than those at Brewarrina, but the late Mr. William Crowley, of Collywarry, told me there were stone fish-traps on



rocks in the Barwon River near that station, and about twenty-five miles above Brewarrina, but they have now disappeared." Relative to those I saw in the Darling River, at Newfoundland, below Louth, in company with Mr. Etheridge, in 1903, I enclose the following letter from Mr. Hubert Murray, of Bells-grove, Louth:—"Re the aboriginal fish-traps near Newfoundland, they are not in existence now, having gradually washed away. The principal yards were about three miles below Newfoundland and some smaller ones about five miles lower down."

These fish-traps, formed of boulders and stones, relics of a bygone age, probably before the advent of the white man in Australia, were used throughout the greater of the eastern portions of the continent, being found in New South Wales, Queensland, and the Northern Territory. "The Fisheries" at Brewarrina, a splendid specimen, even now, of concerted and combined aboriginal work, is over five hundred miles inland, but it is remarkable in the northern portions of the continent, where they are more numerous, they are more common in the coastal districts and contiguous islands, occurring also throughout many islands of Torres Strait, almost, if not quite, to the coast of New Guinea. I give the following brief extracts from scientific journals relative to some of them.

The Hon. John Douglas, C.M.G., in an addenda to his article on "The Islands of Torres Straits" states<sup>2</sup>:—"He omitted to mention in his paper that there were some interesting remains of great fishing weirs on Darnley Island—great walls which had been built for catching fish. The present natives could not tell anything about them. They had been built by some previous generation, of which the records were lost now."

Major A. J. Boyd, who wrote the "Narrative of Captain G. Pennefather's Exploration" in H.M.Q.S. *Pearl* in the Gulf of Carpentaria in 1880, from Captain Pennefather's notes, remarks<sup>3</sup>:—"In the afternoon they landed on Point Parker. The landing is not a particularly good one, as it is fringed by rocks and stones for a quarter of a mile from the beach. . . ."

<sup>2</sup> Douglas—Proc. Geogr. Soc. of Austr., Queensld. Branch, i., 1886, p. 83.

<sup>3</sup> Boyd—Proc. Roy. Geogr. Soc. Austr., Queensld. Branch, xi., 1896, pp. 56-7.

“One of the first things that struck them on landing was the magnitude of the native fish-traps. These are precisely of the same description as those of the natives of the islands of Torres Straits. They formed, in reality, a succession of walled-in paddocks of many acres in extent. At high tide the fish come in, and as the tide recedes they are left high and dry.”

Dr. Walter E. Roth, late Northern Protector of Aborigines, Queensland, thus refers to these stone fish-traps:—“On Sweers, Bentinck, Mornington, etc. Islands, [Gulf of Carpentaria] stone dams are erected along the coast-line in the shape of more or less of a half circle, the extreme of the convexity reaching sometimes to as much as 300 yards from the shore. The majority of these dams are contiguous, and built of pieces of stone (subsequently locked together by oyster-growths) to a height of from 18 inches to upwards of 3 feet, the general contour of the rocky beach being everywhere taken advantage of; they are covered at high water. The fish are thus blocked from going out to sea with each receding tide.”

Mr. E. J. Banfield, in a paper on “Blacks as Fishermen,” read before the Royal Society of Queensland, on the 24th June, 1909, remarks:—“Many years have elapsed—peradventure centuries—since the blacks of Missionary Bay, Hinchinbrook Island, built a weir of blocks and boulders of granite which oysters cemented here and there. On the fulness of spring tides fish frolicked over among the boulders. Those which delayed their exit found themselves in an enclosed pool which at certain seasons of the year runs dry. To this day the sea continues to pay tribute! though the blacks of the locality have passed away, and there is none but the red-backed sea eagle or the heavy flighted osprey and a rare and casual white man to receive it. Among the few emblems of the vanishing race, this persistent weir taking toll of the fish month after month, year after year, for the benefit of successive generations of eagles and ospreys, appeals vividly to the imagination.”<sup>5</sup>

<sup>4</sup> Roth—North Queensld. Ethn., Bull. No. 3, 1901, p. 23.

<sup>5</sup> Banfield—Queensld. Geogr. Journ., xxiv., 1909, p. 54.

On Plate xxviii., fig. 1, will be seen the reproduction of a photograph of a mirage on Cato Plains, taken at 3 p.m. on the afternoon of the 21st October, 1915. These mirages were frequently to be seen in this dead level locality, after crossing the bridge over the Barwon River, shown on the same plate, Fig. 2, about a mile away from the billabong bridge and town. All of these optical illusions assumed the same form, being that of a large inland lake or sea with the trees on the distant horizon, apparently standing in water, or the base of their stems obscured with a thick, white haze.

The following species of birds, were noted, and in many instances obtained, during the trip.

CORVUS AUSTRALIS.

Australian Raven.

*Corvus coronoides*, Gould, Bds. Austr., fol., iv., pl. 18 (1848).

*Corvus australis*, Gould, Handbk. Bds. Austr., i., p. 475 (1865).

*Corone australis*, Sharpe, Cat. Bds. Brit. Mus., iii., p. 37 (1877);  
North, Nests and Eggs Austr. Bds., 2nd. ed., i., pt. i., p. 5 (1901).

This species was more freely distributed in and around Coolabah, than in the Brewarrina district. Complaints were loud in the former locality of its chicken thieving propensities, most chickens in the neighbourhood being protected in wire enclosures. Although the lamb and disabled sheep attacking proclivities of this bird were freely admitted in Brewarrina, it was not looked upon with such general abhorrence as it usually is with pastoralists in New South Wales. While going, one day, to photograph the billabong bridge in the latter town, I saw a Raven, feasting on something on the ground, and so intent was it on its meal that it allowed me to approach close enough to see its white iris. Presently a Black-faced Wood-Swallow (*Artamus melanops*) flew at the Raven, snapping its mandibles viciously as it dashed backwards and forwards, half a dozen or more times. Thinking possibly the Raven had caught a young Wood-Swallow, I ventured nearer, when the former flew away, carrying its booty with it into an adjoining back yard, surrounded with a three-railed fence, and I left it there afterwards picking at a bone.

## STRUTHIDEA CINEREA.

## Apostle-bird.

*Struthidea cinerea*, Gould, Proc.-Zool. Soc., 1836, p. 143; *id.*, Bds. Austr., fol., iv., pl. 17 (1848); Sharpe, Cat. Bds. Brit. Mus., iii., p. 140 (1877); North, Nests and Eggs Austr. Bds., 2nd, ed., i., pt. 1, p. 18 (1901).

Common both at Coolabah and Brewarrina, frequenting chiefly open forest-lands and pine scrubs. Usually met with in small flocks, from five to twelve or more in number, feeding on the ground beneath some wide spreading tree. When disturbed these birds take refuge in the lower limbs and rapidly hop from branch to branch, until near the top, then fly off, uttering harsh cries of alarm. If shot at, and one of their number is killed, or even wounded, the whole flock could be obtained, for the remainder, rapidly elevating their tail feathers up and down, and uttering cries of distress, gradually descend and come nearer and nearer, peering down in an inquisitive manner, until they are only a few yards above the head of the intruder. This species, which is often called in the inland portions of New South Wales the "Twelve Apostles" from their habit of associating in flocks, is one of the three species in Australia which constructs an open bowl-shaped nest of mud on the limb of a tree. Like the Chough (*Corcorax melanorhamphus*), in arid localities advantage is often taken to obtain the mud for nest building, after a passing thunderstorm, and of recent years from the margins of the sheets of water, the after result of artesian boring.

## CORCORAX MELANORHAMPHUS.

## White-winged Chough.

*Coracias melanorhamphus*, Vieill. Nouv. Dict. d'Hist. Nat., viii., p. 2.

*Corcorax leucopterus*, Gould, Bds. Austr., fol., iv., pl. 16 (1848).

*Corcorax melanorhamphus*, Gould, Handbk. Bds. Austr., i., p. 470 (1865); Sharpe, Cat. Bds. Brit. Mus., iii., p. 149 (1877); North, Nests and Eggs Austr. Bds., 2nd, ed., i., pt. i., p. 21 (1901).

Seen both at Coolabah and Brewarrina. Flocks of these birds uttering their somewhat mournful notes, were observed in the neighbourhood of the railway station in the former locality, and on the banks of the Barwon River, near Brewarrina. Their actions in the trees resemble those of the Apostle-bird (*Struthidea cinerea*) hopping quickly from limb to limb, and at the same time rapidly elevating and depressing their outspread tail-feathers. During flight, the white bases of the quills are very conspicuous.

CHLAMYDODERA MACULATA.

Spotted Bower-bird.

*Calodera maculata*, Gould, Proc. Zool. Soc., 1836, p. 106.

*Chlamydera maculata*, Gould, Bds. Austr., fol., iv., pl. 8 (1848).

*Chlamydodera maculata*, Gould, Handbk. Bds. Austr., i., p. 450 (1865); Sharpe, Cat. Bds. Brit. Mus., vi., p. 389 (1881); North, Nests and Eggs Austr. Bd., 2nd. ed., i., pt. ii., p. 41 (1902).

Rare, owing principally to the drought, and not met with at Brewarrina, although I was informed that it occurred in the neighbourhood, when the summer fruits were ripening. Only on one occasion was it seen at Coolabah. While conversing with Mr. Leslie Grady, the Postmaster, just outside the Post Office, on the 14th October, a Spotted Bower-bird flew past quite close to us towards the Stationmaster's garden, but was not seen again.

I was informed at the hotel at Coolabah that some of these birds used to frequent the introduced Pepper trees (*Schinus molle*), growing near the house, their presence usually being indicated by mimicking the notes of other species, but none were met with while I was there; the only species procured from these trees being the Spiny-cheeked Honey-eater (*Acanthogenys ruficularis*). When at Bundong, in company with Constable W. C. Wrightson, Mr. Victor B. Hall, Junr., informed us that the Spotted Bower-bird did considerable damage in the orchard, especially when the persimmons were ripening. On making known that specimens of these birds were required by the Australian Museum, Mr. Hall later—on

the 23rd November—forwarded a fine old adult bird to the Trustees, but, unfortunately, through the hot weather, when it was received, it was too far gone for preservation. Both at Coolabah and Brewarrina, I met with many persons who knew the Spotted Bower-bird, and were acquainted with its habits and bower building propensities, but with few who had seen its nest and eggs, although I have known of them being found in many parts of Western New South Wales.

## GRALLINA PICATA.

## Magpie-Lark.

*Gracula picata*, Lath., Ind. Orn., Suppl., p. xxix. (1801).

*Grallina australis*, Gould, Bds. Austr., fol., ii., pl. 54 (1848).

*Grallina picata*, Gould, Handbk. Bds. Austr., i., p. 188 (1865); Sharpe, Cat. Bds. Brit. Mus., iii., p. 272 (1877); North, Nests and Eggs Austr. Bds., 2nd. ed., i., pt. ii., p. 88 (1902).

This familiar and useful species was noted everywhere, in suitable situations, throughout the trip. It is generally distributed over the greater portion of the Australian Continent, and it also occurs in Tasmania, but it is there very rare. This bird is beneficial to all engaged in rural pursuits, feasting on the ground upon the grass eating larvæ of numerous injurious insects, as well as on a small land mollusc, one of the intermediate hosts of fluke. It also frequents newly ploughed lands, orchards, vineyards and plantations, ridding the soil of many insect pests, among the latter being the Sugar Cane eating larvæ of a beetle which does much damage in the cane fields.

## COLLYRIOCINCLA HARMONICA.

## Grey Shrike-Thrush.

*Turdus harmonicus*, Lath., Ind. Orn., Suppl., p. xli, (1801).

*Colluricincla harmonica*, Gould, Bds. Austr., fol., ii., pl. 74 (1848); *id.*, Handbk Bds. Austr., i., p. 220 (1865).

*Collyriocincla harmonica*, Sharpe, Cat. Bds., iii., p. 290 (1877); North, Nests and Eggs Austr. Bds., 2nd. ed., i., pt. ii., p. 92 (1902).

The rich and melodious notes of this species, were first heard, and a pair of birds afterwards seen, in a large *Eucalyptus* growing on a bank of the Barwon River, near Brewarrina. Not seen at Coolabah. This familiar species will freely enter the verandahs and out-houses of residences in the country and the suburbs. One of the foster-parents of the Pallid Cuckoo (*Cuculus inornatus*).

GRAUCALUS MELANOPS.

Black-faced Cuckoo-Shrike.

*Corvus melanops*, Lath., Ind. Orn., Suppl., p. xxiv. (1801).

*Graucalus melanops*, Gould, Bds. Austr., fol., ii., pl. 55 (1848); *id.*, Handbk. Bds. Austr., i., p. 192 (1865); Sharpe, Cat. Bds. Brit. Mus., iv., p. 130 (1881); North, Nests and Eggs Austr. Bds. 2nd, ed., i., pt. ii., p. 103 (1902).

Not common, although observed both at Coolabah and Brewarrina. Seen about the outer branches of the *Eucalypti* growing in the hotel grounds at the former place. This species has a curious habit, when settling after flight, of lifting the wings and refolding them again. Popularly known in many parts of Australia by the name of "Blue Jay."

SAULOPROCTA MELALEUCA.

Black and White Fantail.

*Muscipeta melaleuca*, Quoy et Gaim., Voy. de l'Astrol., Zool., i., p. 180 (1830).

*Rhipidura motacilloides*, Gould. Bds. Austr., fol., ii., pl. 86 (1848).

*Sauloprocta motacilloides*, Gould, Handbk. Bds. Austr., i., p. 244 (1865).

*Rhipidura tricolor*, Sharpe, Cat. Bds. Brit. Mus., iv., p. 339 (1879).

*Sauloprocta melaleuca*, North, Nests and Eggs Austr. Bds., 2nd. ed., i., pt. iii., p. 132 (1903).

A few pairs of the Black and White Fantail, or more popularly known "Willy-wagtail," were seen both at Coolabah and Brewarrina. They were generally observed feeding upon insects disturbed by cows and horses while grazing, and are

close attendants on civilization, frequenting gardens and orchards, and often nesting in fruit trees. They are of a tame and fearless disposition and their notes, which resemble the sound of the words "Sweet pretty creature," may frequently be heard at night, especially when it is moonlight.

## MICRÆCA FASCINANS.

## Brown Flycatcher.

*Loxia fascinans*, Lath., Ind. Orn., Suppl., p. xlvi. (1801).

*Microœca macroptera*, Gould, Bds. Austr., fol., ii., pl. 93 (1848).

*Microœca fascinans*, Gould, Handbk. Bds. Austr.; i., p. 258 (1865); Sharpe, Cat. Bds. Brit. Mus., iv., p. 123 (1879); North, Nests and Eggs Austr. Bds., 2nd. ed., i., pt. iii., p. 149 (1903).

Only one example of the well-known Brown Flycatcher or "Jacky Winter" was noted, my attention being directed to it by Mr. L. Bucknell, Stock Inspector, on the way from Brewarrina to Tarrion Creek. This is generally the first species to usher in, with cheerful notes, the dawn of day in the neighbourhood of Sydney.

## PETRÆCA GOODENOVII.

## Red-capped Robin.

*Muscicapa goodenovii*, Vig. and Horsf., Trans. Linn. Soc., xv., p. 245 (1826).

*Petroica goodenovii*, Gould, Bds. Austr., fol., iii., pl. 5 (1848); *id.*, Handbk Bds. Austr., i., p. 280 (1865).

*Petroica goodenovii*, Sharpe, Cat. Bds. Brit. Mus., iv., p. 171 (1879); North, Nests and Eggs Austr. Bds., 2nd. ed., i., pt. iii., p. 168 (1903).

The Red-capped Robin was common at Coolabah and was the first species obtained by me; several adults of both sexes and one immature male being procured in a Wilga scrub at the back of the hotel. I first mistook the notes of the latter for those of a species of *Maturus*, and followed it for some time before managing to secure it. This species was seldom seen at Brewarrina, and never near the town.



## MELANODRYAS BICOLOR.

## Hooded Robin.

*Grallina bicolor*, Vig. and Horsf., Trans. Linn. Soc., xv., p. 233 (1826).

*Petroica bicolor*, Gould, Bds. Austr., fol., iii., pl. 7 (1848).

*Melanodryas cucullata*, Gould, Handbk. Bds. Austr., i., p. 283 (1865).

*Petræca bicolor*, Sharpe, Cat. Bds. Brit. Mus., iv., p. 173 (1879).

*Melanodryas bicolor*, North, Nests and Eggs Austr. Bds., 2nd. ed., i., pt. iii., p. 170 (1903).

An adult female was the only example seen, while on the way from Brewarrina to Tarrion Creek.

## SMICRORNIS BREVIROSTRIS.

## Short-billed Scrub-Tit.

*Psilopus brevirostris*, Gould, Proc. Zool. Soc., 1837, p. 147.

*Smicrornis brevirostris*, Gould, Bds. Austr. fol., ii., pl. 103 (1848); *id.*, Handbk. Bds. Austr., i., p. 273 (1865); Sharpe, Cat. Bds. Brit. Mus., iv., p. 209 (1879); North, Nests and Eggs Austr. Bds., 2nd. ed., i., pt. iii., p. 189 (1903).

Common at Coolabah, several examples being procured in the Wilga scrubs. Not observed at Brewarrina, the class of country and trees not being suitable to its habits, near the town. This is the smallest species of bird inhabiting New South Wales, its range extending to Queensland, Victoria and South and Western Australia.

## ACANTHIZA ALBIVENTRIS.

## Pale-vented Thorn-bill.

*Acanthiza albiventris*, North, Nests and Eggs Austr. Bds., 2nd. ed., i., pt. iv., p. 276 (1904).

On the 6th October, 1915, being the first morning I was shooting at Coolabah, one of these birds was procured close to the ground, among the leafy branches of a low spreading Wilga. On picking the bird up, for I was too far away to see what it was when firing, found it was *Acanthiza albiventris*, described by me in "Nests and Eggs of Birds found breeding in Australia and Tasmania" in 1904. Unfortunately, although the body feathers were perfect, most of the quills of both wings were more or less damaged by the dust shot, and expecting to get more birds of this species, did not keep it. This was the only example seen, although subsequently others were diligently searched for. I first obtained this species in a low brigalow scrub of West Narrabri, in November, 1896. I have never seen a specimen of the true *Acanthiza pyrrhopygia*, of Gould procured in New South Wales, the type of which was obtained by Gould in the Belts of the Murray, South Australia, and for which the present species was previously mistaken, but doubtless it may occur in the extreme south-western portion of the State.

GEOBASILEUS CHRYSORRHOUS.

Yellow-rumped Thorn-bill.

*Saxicola chrysorrhœa*, Quoy et Gaim., Voy. de l'Astrol., Zool., i., p. 198, Atlas, pl. 10, fig. 2 (1830).

*Acanthiza chrysorrhœa*, Gould, Bds. Austr., fol., iii., pl. 63 (1848).

*Geobasileus chrysorrhous*, Gould, Handbk. Bds. Austr., i., p. 374 (1865); North, Nests and Eggs Austr. Bds., i., pt. iii., p. 282 (1904).

*Acanthiza chrysorrhœa*, Sharpe, Cat. Bds. Brit. Mus., vii., p. 298 (1883).

This well-known species was more frequently met with at Coolabah than at Brewarrina. Known locally in many parts of New South Wales under the name of "Yellow-tail" from its bright yellow upper tail-coverts—which show conspicuously during flight—also "Tomtit" and "Double-dick," the latter from its habit of constructing a double nest; the lower one being dome-shape and the one built on top of it cup-shape. Generally it is formed in the thick leafy end of a low drooping branch.

## APHELOCEPHALA LEUCOPSIS.

## White-faced Squeaker.

*Xerophila leucopsis*, Gould, Proc. Zool. Soc., 1840, p. 175; *id.*, Bds. Austr., fol., iii., pl. 67 (1848); *id.*, Handbk. Bds. Austr., i., p. 382 (1865); Gadow, Cat. Bds. Brit. Mus., viii., p. 73 (1883).

*Aphelocephala leucopsis*, Oberh., Proc. Acad. Nat. Sci. Philad., 1899, p. 214; North, Nests and Eggs Austr. Bds., 2nd. ed. i., pt. iv., p. 291 (1904).

Common both at Coolabah and Brewarrina and usually met with in small flocks feeding upon the ground. When disturbed by too close an approach, it usually flies into a low dead tree or on a bare branch; frequently on to the top of a three railed fence, and after danger is past returning on to the ground again. It is a dull coloured little bird, unobtrusive in habits, one's attention frequently being attracted to it by its low squeaking notes, usually uttered during flight.

## EPHThIANURA ALBIFRONS.

## White-fronted Nun.

*Acanthiza albifrons*, Jard and Selby, Ill. Orn., ii., pl. 56.

*Ephthianura albifrons*, Gould, Bds. Austr., fol., iii., pl. 64 (1848); *id.*, Handbk. Bds. Austr., i., p. 377 (1865); Sharpe, Cat. Bds. Brit. Mus., viii., p. 666 (1883); North, Nests and Eggs Austr. Bds., 2nd. ed., i., pt. iv., p. 343 (1904).

Only one pair, seen at Coolabah, in a paddock near the railway station. At Brewarrina, I was informed that both *Ephthianura tricolor* and *E. aurifrons* occurred in some seasons, but neither were observed during my stay there.

## POMATOSTOMUS TEMPORALIS.

## Grey-crowned Chatterer.

*Pomatorhinus temporalis*, Vig. and Horsf., Trans. Linn. Soc., xv., p. 330 (1826); Gould, Bds. Austr., fol., iv., pl. 20 (1848); Sharpe, Cat. Bds. Brit. Mus., vii., p. 418 (1883).

*Pomatostomus temporalis*, Gould, Handbk. Bds. Austr., i., p. 479 (1865); North, Nests and Eggs Austr. Bds., 2nd ed., i., pt. iv., p. 358 (1904).

Common at Coolabah, less frequently observed at Brewarrina. Usually met with in open forest lands and pine scrubs, in small flocks, from four to seven or more in number, feeding on the grassy sward beneath some wide spreading tree, where with puffed out body feathers and slightly spread wings, they run here and there, disputing among themselves the possession of some insect or other coveted morsel and keeping up at the same time an incessant chattering. From their gregarious and sociable habits these birds are known in many parts of Western New South Wales, by the local name of "Happy Family." When disturbed by too close an approach they fly on to the lower branches of a tree and quickly hop from limb to limb until reaching the top, they leave, sometimes in twos and threes, following in a line one after the other.

The food of this species consisting principally of insects, it is looked upon as a useful bird by agriculturists and orchardists. Mr. R. Etheridge, however, informs me that about Colo Vale, on the southern line, about seventy-three miles distant from Sydney, at the end of August, in some seasons, these birds pull up the freshly sprouting oats, also eat grain later on, when ready for storing, and feast upon fruit when ripe, principally plums and cherries. It must be exceptional I think, for it is the only occasion I have heard of this bird being a pest.

GYMNORHINA TIBICEN.

Black-backed Magpie.

*Coracias tibicen*, Lath., Ind. Orn., Suppl., p. xxvii. (1801).

*Gymnorhina tibicen*, Gould, Bds. Austr., fol., ii., pl. 46 (1848); *id.*, Handbk. Bds. Austr., i., p. 175 (1865); Gadow, Cat. Bds. Brit. Mus., viii., p. 91 (1883); North, Nests and Eggs Austr. Bds., 2nd ed., ii., pt. i., p. 1 (1906).

A few pairs observed immediately around the township of Coolabah, one pair having a nest with young, during my stay, near the Public School, the birds of which frequently swooped down on the children on their way to or from their lessons, as is their wont when one is near the vicinity of their nest. Less frequently met with at Brewarrina.

## CRACTICUS DESTRUCTOR.

## Butcher-bird.

*Vanga destructor*, Temm. Man. d'Orn., pt. i., p. lix.

*Cracticus destructor*, Gould, Bds. Austr., fol., ii., pl. 52 (1848);  
Gadow, Cat. Bds. Brit. Mus., viii., p. 100 (1883); North,  
Nests and Eggs Austr. Bds., 2nd. ed., ii., pt. i., p. 9  
(1906).

*Cracticus torquatus*, Gould, Handbk. Bds. Austr., i., p. 184  
(1865).

Isolated pairs were noted at Coolabah, at some half to three quarters of a mile apart. As usual they were remarkably wary, keeping chiefly to the higher Eucalypti, and their melodious notes were more often heard—especially in the early morning—than the birds were seen. They were less frequently observed at Brewarrina. The Butcher-bird will often destroy, or attempt to withdraw Canaries from their cages.

## CRACTICUS NIGRIGULARIS.

## Black-throated Butcher-bird.

*Vanga nigrogularis*, Gould, Proc. Zool. Soc., 1836, p. 143.

*Cracticus nigrogularis*, Gould, Bds. Austr., fol., ii., pl. 491  
(1848); *id.*, Handbk. Bds. Austr., i., p. 180 (1865).

*Cracticus nigrigularis*, Gadow, Cat. Bds. Brit. Mus., viii., p. 95  
(1883); North, Nests and Eggs Austr. Bds., 2nd. ed., ii.,  
pt. i., p. 14 (1906).

Only two pairs noted, one at Coolabah, the other while on the way from Brewarrina to Tarrion Creek. At the former place while sitting alone quietly in a garden, contrary to their usual custom, one of these birds came and perched on a fence within ten feet of me. The clear and prolonged musical notes of the male are among the richest and most beautiful of those of any of our Australian arboreal birds and can be heard a considerable distance away. Like the two preceding species, the Black-throated Butcher-bird, amongst other food eaten, preys much on the smaller birds.

CLIMACTERIS PICUMNUS.

Brown Tree-creeper.

*Climacteris picumnus* (Temm.), Vig. and Horsf., Trans. Linn. Soc., xv., p. 295 (1826); Temm., Pl. Col. 281, fig. i.; North, Nests and Eggs Austr. Bds., 2nd. ed., ii., pt. ii., p. 42 (1906).

*Climacteris scandens*, (nec Temm.), Gould, Bds. Austr., fol., iv., pl. 93 (1848); *id.*, Handbk. Bds. Austr., i., p. 598 (1865).

*Climacteris leucophaea*, Gadow, Cat. Bds. Brit. Mus., viii., p. 336 (1883).

I procured a pair of these birds passing through Willeroon Station. They were the only birds of this genus observed, and were precisely similar in colour, but slightly smaller than examples obtained in the neighbourhood of Sydney. This Tree-creeper has a wide range over the State, being common in the coastal districts, near Sydney, and is found at Bourke, over five hundred miles inland.

PTILOTIS PENICILLATA.

White-plumed Honey-eater.

*Meliphaga penicillata*, Gould, Proc. Zool. Soc., 1836, p. 143.

*Ptilotis penicillatus*, Gould, Bds. Austr., fol., iv., pl. 43 (1848).

*Ptilotis penicillata*, Gould, Handbk. Bds. Austr., i., p. 519 (1865); Gadow, Cat. Bds. Brit. Mus., ix., p. 244 (1884); North, Nests and Eggs Austr. Bds., 2nd. ed., ii., pt. ii., p. 131 (1907).

Fairly common both at Coolabah and Brewarrina, nesting in the *Eucalypti* in the hotel grounds at the former place, and in the trees along the banks of the Darling and Barwon Rivers in the latter locality. The well-known notes of this Honey-eater, made welcome music to my ears, and reminded me of my early collecting days around Melbourne, the "Greenie," as it was there, and is still called, being the most common species of the Family Meliphagidæ, and its eggs dear to the heart of the average nest-hunting boy.

## PLECTORHYNCHA LANCEOLATA.

## Lanceolate Honey-eater.

*Plectorhyncha lanceolata*, Gould, Proc. Zool. Soc., 1837, p. 153;  
*id.*, Bds. Austr., fol., iv., pl. 47 (1848); *id.*, Handbk.  
 Bds. Austr., i., p. 52 (1865).

*Plectrorhynchus lanceolatus*, Gadow, Cat. Bds. Brit. Mus., ix., p.  
 208 (1884).

Only one pair seen at Coolabah, one of which was procured.

## ACANTHOGENYS RUFIGULARIS.

## Spiny-cheeked Honey-eater.

*Acanthogenys rufogularis*, Gould, Proc. Zool. Soc., 1837, p. 153;  
*id.*, Bds. Austr., fol., iv., pl. 53 (1848).

*Acanthogenys rufigularis*, Gould, Handbk. Bds. Austr., i., p.  
 534 (1865); North, Nests and Eggs Austr. Bds., 2nd. ed.,  
 ii., pt. ii., p. 157 (1907).

*Acanthochaera rufigularis*, Gadow, Cat. Bds. Brit. Mus., ix., p.  
 265 (1884).

Observed feeding in the Pepper trees (*Schinus molle*) in the hotel grounds at Coolabah; one pair procured in a *Eucalyptus* about a quarter of a mile from the railway station. Very much more freely distributed at Brewarrina, particularly in the trees opposite the Chinamens' garden, close to the bridge, over the Barwon River. One's attention is usually attracted to these birds by their peculiar notes, and which somewhat resemble those of the Wattled Honey-eater, or "Gill-bird" (*Anthochaera carunculata*) common in the early winter months in the coastal districts near Sydney.

## PHILEMON CITREOGULARIS.

## Yellow-throated Friar-bird.

*Tropidorhynchus citreogularis*, Gould, Proc. Zool. Soc., 1836, p.  
 143; *id.*, Bds. Austr., fol., iv., pl. 60 (1848); *id.*, Handbk.  
 Bds. Austr., i., p. 549 (1865).

*Philemon citreogularis*, Gadow, Cat. Bds. Brit. Mus., ix., p. 277 (1884); North, Nests and Eggs Austr. Bds., 2nd. ed., ii., pt. ii., p. 173 (1907).

While sitting on the western bank of the Barwon River at Brewarrina under the drooping branches of a gum tree one hot day, a single example of this species was noted; it was the only one observed during my visit.

MELITHREPTUS BREVIROSTRIS.

Short-billed Honey-eater.

*Melithreptus brevirostris*, Vig. and Horsf., Trans. Linn. Soc., xv., p. 315 (1826); Gould, Handbk. Bds. Austr., i., p. 569 (1865); Gadow, Cat. Bds. Brit. Mus., ix., p. 207 (1884); North, Nests and Eggs Austr. Bds., 2nd. ed., ii., pt. ii., p. 190 (1907).

Small flocks of these birds were noted passing from tree to tree at Coolabah. Not observed at Brewarrina. The egg of the Pallid Cuckoo (*Cuculus inornatus*) is frequently deposited in the nest of this species.

MYZANTHA FLAVIGULA.

Yellow-throated Miner.

*Myzantha flavigula*, Gould, Proc. Zool. Soc., 1839, p. 143; *id.*, Bds. Austr., fol., iv., pl. 79 (1848); *id.*, Handbk. Bds. Austr., i., p. 578 (1865); North, Nests and Eggs Austr. Bds., 2nd. ed., ii., pt. ii. p. 202 (1907).

Common both at Coolabah and Brewarrina. It was the first species seen by me in the former locality, and a pair were nesting in a gum tree in the hotel grounds. This Honey-eater is one of the foster-parents of the Pallid Cuckoo (*Cuculus inornatus*).

PARDALOTUS ORNATUS.

Striated Diamond-bird.

*Pardalotus ornatus*, Temm., Pl. Col., iv., pl. 394, fig. 1 (1826); Sharpe, Cat. Bds. Brit. Mus., x., p. 55 (1885); North, Nests and Eggs Austr. Bds., 2nd. ed., ii., pt. ii., p. 217 (1907).



*Pardalotus striatus*, Gould, Bds. Austr., fol., iv., pl. 38 (1848);  
*id.*, Handbk. Bds. Austr., i., p. 161 (1865).

Seen both at Coolabah and Brewarrina; specimens obtained in the former locality, which were frequenting the tall *Eucalypti* in and around the hotel grounds. Comparatively rare.

HIRUNDO NEOXENA.

Welcome Swallow.

*Hirundo neoxena*, Gould, Proc. Zool. Soc., 1842, p. 131; *id.*,  
 Bds. Austr., fol., ii., pl. 13 (1848); Sharpe, Cat. Bds.  
 Brit. Mus., x., p. 144 (1885); North, Nests and Eggs  
 Austr. Bds., 2nd. ed., ii., pt. ii., p. 234 (1907).

This well-known and familiar species was common everywhere, as it generally is in many parts of Australia and Tasmania. Before the advent of white settlers in Australia, the Welcome Swallow constructed its cup-shaped nest of mud, lined with dried grasses and feathers on the top of the remaining portion of broken hollow limbs of trees, or in rock shelters on the banks of rivers, or on cliffs facing the sea. Now its nests may be found anywhere about houses, and in outbuildings, dog's kennels, in laid up ship's galleys, etc.

CHERAMÆCA LEUCOSTERNUM.

White-breasted Swallow.

*Hirundo leucosternus*, Gould, Proc. Zool. Soc., 1840, p. 172.  
*Atticora leucosternon*, Gould, Bds. Austr., fol., ii., pl. 12 (1848).  
*Cheramæca leucosterna*, Gould, Handbk. Bds. Austr., i., p.  
 115 (1865).  
*Cheramæca leucosternum*, Sharpe, Cat. Bds. Brit. Mus., x., p.  
 171 (1885); North, Nests and Eggs Austr. Bds., 2nd.  
 ed., ii., pt. ii., p. 238 (1907).

Noted only three examples of the White-breasted Swallow on the wing at Coolabah in a paddock close behind the hotel. The strikingly contrasted general black and white plumage of this species, and its graceful evolutions performed during flight, renders it one of the most conspicuous of the smaller birds of Australia. Contrary to the usual rule, one of these Swallows approached so close, that I thought it was going to settle upon me.

## PETROCHELIDON NIGRICANS.

## Tree Swallow.

*Hirundo nigricans*, Vieill., Nouv. Dict. d'Hist., xiv., p. 523, (1817).

*Collocalia arborea*, Gould, Bds. Austr., fol., ii., pl. 14 (1848).

*Hylochelidon nigricans*, Gould, Handbk. Bds. Austr., i., p. 111 (1865).

*Petrochelidon nigricans*, Sharpe, Cat. Bds. Brit. Mus., x., p. 190 (1885); North, Nests and Eggs Austr. Bds., 2nd. ed., ii., pt. iii., p. 241 (1909).

The vernacular names of Rock Swallow, as its generic name implies, and House Swallow are equally applicable to this species as that of the generally recognised name of Tree Swallow. It was not met with at Coolabah, but it was the first bird seen by me at Brewarrina, and as I found out afterwards was the most common bird to be met with in the town, not excepting the acclimatised and ubiquitous House Sparrow (*Passer domesticus*). These birds I found were utilizing nearly all the crevices and crannies in the woodwork of houses for their nests, but all seen were under verandahs, either of shops or places of business, or under the verandah of the balcony of the Barwon Hotel where I was staying; one nest, with young, being above the French windows of my bedroom. Nearly all had these breeding places in the woodwork, fashioned to the birds' liking with dried grasses and leaves and outwardly with pellets of mud, the shape varying according to the space to be filled up. The birds entered, and left the nests freely, and it reminded me very much of a similar scene I witnessed about the house and stables of "Holmfirth," at the Reedbeds, near Adelaide, South Australia.

## PETROCHELIDON ARIEL.

## Fairy Martin.

*Collocalia ariel*, Gould, Proc. Zool., 1842, p. 132; *id.*, Bds. Austr., fol., ii., pl. 15 (1848).

*Lagenoplastes ariel*, Gould, Handbk. Bds. Austr., i., p. 113 (1865).

*Petrochelidon ariel*, Sharpe, Cat. Bds. Brit. Mus., x., p. 199 (1885); North, Nests and Eggs Austr. Bds., 2nd. ed., ii., pt. iii., p. 244 (1909).

This, the fourth species, completes all the members of the Family Hirundinidæ, inhabiting Australia. It was met with only at Brewarrina, but was not nearly so freely distributed in the town as the preceding species, but it greatly exceeded in numbers the Tree Swallows in the immediate vicinity. My attention was first attracted to it by seeing two pairs of birds each constructing nests over the two front windows of the School of Arts. Shortly after I saw about a dozen of their curious retort-shaped mud nests in course of construction on a large rock at "The Fisheries," in the Darling, and only a few yards from the bank, on the Brewarrina side of the river, and from where the birds were collecting mud for building the nests. By far the largest community, however, seen on the following day, were busily engaged at nest building, under the bridge, which crosses the Barwon River, about a mile out of town. The same afternoon, driving in company with Mr. L. Bucknell, to Tarrion Creek, I asked him to pull up at the bridge which crosses the creek, there being no water in it at the time, while an examination was made underneath this structure. As was anticipated, there was a number of nests of the Fairy Martin, in various stages of construction, some just commenced, the most about half to three-quarters built, while a few had the bottle neck-like entrance but recently completed, which one could easily discern by the dark colour of the yet undried mud pellets. In two instances I saw birds carrying dried grasses into the otherwise apparently finished nests. All the nests observed by me were new, but none I believe then contained eggs.

From the shape the Fairy Martin forms its nest, this species is known in many parts of Australia under the local name of "Bottle Swallow."

#### ARTAMUS LEUCOGASTER.

#### White-rumped Wood Swallow.

*Ocypterus leucogaster*, Valenc. Mém. Mus. d'Hist., vi., p. 21, pl. viii., fig. 2 (1820).

*Artamus leucopygialis*, Gould, Proc. Zool. Soc., 1842, p. 17; *id.*, Bds. Austr., fol., ii., pl. 33 (1848); *id.*, Handbk. Bds. Austr., i., p. 154 (1865).

*Artamus leucogaster*, Sharpe, Cat. Bds. Brit. Mus., xiii., p. 3 (1890); North, Nests and Eggs Austr. Bds., 2nd. ed., ii., pt. iii., p. 251 (1909).

Only observed at Coolabah, where it was fairly numerous, especially about the hotel and railway station. Examples were first procured that were resting on the tops of small stones a few inches above the ground, others were observed perched on the telegraph wires, and on the hotel, which is the first time I have seen, or known, any species of Wood Swallow to resort to a dwelling. I had frequent opportunities of observing this habit, while sitting on a side balcony near my bedroom, for it was to be seen every day. Generally the birds used to perch in twos and threes, on the edge of the spouting, or on the top of a plaster finial at each side of the hotel. From these places, they would take a short flight in the air, and usually return to, or near, the same spot. On the 6th October, the first day after my arrival in Coolabah, on returning to the hotel in the evening, a little before 6 p.m. I saw about twenty of these birds huddled up closely together on the outer edge of the dining room chimney. Why they should have selected this resting place, was a mystery to me, for although cool, there was no fire in the dining-room grate, so it could not have been for warmth. On looking again about half an hour later, after tea was finished, they had all left.

#### ARTAMUS SUPERCILIOSUS.

##### White-eyebrowed Wood Swallow.

*Ocypterus superciliosus*, Gould, Proc. Zool. Soc., 1836, p. 142.

*Artamus superciliosus*, Gould, Bds. Austr., fol., ii., pl. 32 (1848); *id.*, Handbk. Bds. Austr., i., p. 152 (1865); Sharpe, Cat. Bds. Brit. Mus., xiii., p. 15 (1890); North, Nests and Eggs Austr. Bds. 2nd. ed., ii., pt. iii., p. 253 (1909).

Seen both at Coolabah and Brewarrina, only though passing over in large straggling flocks, flying south, usually fairly high, and uttering their well-known notes, but occasionally low enough to be plainly seen. In neither place did I observe this species alight.

## ARTAMUS MELANOPS.

## Black-faced Wood Swallow.

*Artamus melanops*, Gould, Proc. Zool. Soc., 1865, p. 198; *id.*, Handbk. Bds. Austr., i., p. 149 (1865); Sharpe, Cat. Bds. Brit. Mus., xiii., p. 17 (1890); North, Nests and Eggs Austr. Bds., 2nd. ed., ii., pt. iii., p. 259 (1909).

Observed only at Brewarrina, although fairly well distributed, being noted even in the town, it was nowhere common. That it had been breeding was evident by my seeing, amongst others, fully fledged young, being fed by their parents, in the Chinamens' garden, near the bridge over the Barwon River. It was also observed in the Chinamens' garden lower down the river, close to the town, and on the way to Tarrion Creek from Brewarrina.

## TÆNIOPYGIA CASTANOTIS.

## Chestnut-eared Finch.

*Amadina castanotis*, Gould, Proc. Zool. Soc., 1835, p. 105; *id.*, Bds. Austr., fol., iii., pl. 87 (1848).

*Tæniopygia castanotis*, Gould, Handbk. Bds. Austr., i., p. 419 (1865); Sharpe, Cat. Bds. Brit. Mus., xiii., p. 311 (1890); North, Nests and Eggs Austr. Bds., 2nd. ed., ii., pt. iii., p. 275 (1909).

Only one small flock of from eight to ten birds, seen feeding on the ground in the railway station yard at Coolabah. This is usually the commonest species of Finch inhabiting Western New South Wales.

## ANTHUS AUSTRALIS.

## Australian Pipit.

*Anthus australis*, Vig. and Horsf., Trans. Linn. Soc., xv., p. 229 (1826); Gould, Bds. Austr., fol., iii., pl. 73 (1848); *id.*, Handbk. Bds. Austr., i., p. 392 (1865); Sharpe, Cat. Bds. Brit. Mus., x., p. 615 (1885); North, Nests and Eggs Austr. Bds., 2nd. ed., ii., pt. iii., p. 303 (1909).

A pair of Australian Pipits, or the more popularly known "Ground Lark" was observed while driving with Constable W. C. Wrightson through Willeroon Station to Bundong. Not seen elsewhere.

## MIRAFRA HORSFIELDI.

## Horsfield's Bush Lark.

*Mirafra horsfieldii*, Gould, Proc. Zool. Soc., 1847, p. i.; *id.*, Bds. Austr., fol., iv., pl. 77 (1848); *id.*, Handbk. Bds. Austr., i., p. 404 (1865) (part).

*Mirafra horsfieldii*, Sharpe, Cat. Bds. Brit. Mus., xiii., p. 604 (1890); North, Nests and Eggs Austr. Bds., 2nd. ed., ii., pt. iii., p. 305 (1909).

A single example of this species was seen hovering about ten feet up in the air, pouring forth all the time, as is its wont, its sweet and varied notes. This was in the private grounds of Hayes Bros.' Wool Scouring Works, on the Barwon River, about two miles out from Brewarrina.

## MEROPS ORNATUS.

## Bee-eater

*Merops ornatus*, Lath., Ind. Orn., Suppl. p. xxxv. (1801); Gould, Bds. Austr., fol., ii., pl. 16 (1848); *id.*, Handbk. Bds. Austr., i., p. 117 (1865); Sharpe, Cat. Bds. Brit. Mus., xvii., p. 74 (1892); North, Nests and Eggs Austr. Bds., 2nd. ed., ii., pt. iii. p. 349 (1909).

Common both at Coolabah and Brewarrina, which at the former place I was informed had only appeared the week before my arrival. This migratory species is usually seen in pairs, perched together, near the dead end of a lateral branch of a gum tree, about thirty feet up; and occasionally low down in a Wilga, but always near the extremity of an outer branch. Seen in the sunlight, its brilliant general golden-green plumage and orange-rufous quills render it a most gorgeous and conspicuous object during its somewhat erratic flight. If it were rare, instead of a very common bird at certain times of the year, much more would be thought of the Bee-eater.

## HALCYON PYRRHOPYGIUS.

## Red-backed Kingfisher.

*Halcyon pyrrhopygia*, Gould, Proc. Zool. Soc., 1840, p. 113;  
*id.*, Bds. Austr., fol., ii., pl. 22 (1848).

*Todirhamphus pyrrhopygius*, Gould, Handbk. Bds. Austr., i., p.  
130 (1865).

*Halcyon pyrrhopygius*, Sharpe, Cat. Bds. Brit. Mus., xvii., p.  
258 (1892); North, Nests and Eggs Austr. Bds., ii., pt.  
iii., p. 369 (1909).

Only one seen at Coolabah, perched near the end of a dead  
branch of a tree, outside the railway station enclosure. More  
frequently met with at Brewarrina, especially in the large gum  
trees overhanging the Barwon River, near the bridge.

## LAMPROCOCYX BASALIS.

## Rufous-tailed Bronze Cuckoo.

*Oculus basalis*, Horsf., Trans. Linn. Soc., xiii., p. 179 (1821).

*Chrysococcyx basalis*, Gould, Bds. Austr., fol., iv., pl. 89 (pt.)  
(1848).

*Lamprococcyx basalis*, Gould, Handbk., Bds. Austr., i., p. 626  
(1865); North, Nests and Eggs Austr. Bds., 2nd. ed., iii.,  
pt. i., p. 23 (1911).

*Chalcococcyx basalis*, Shelley, Cat. Bds. Brit. Mus., xix., p. 294  
(1891).

A single example procured while feeding on the ground at  
Coolabah, near the hotel, and which in the distance was mis-  
taken for a female *Lalage tricolor*.

## CACATUA LEADBEATERI.

## Leadbeater's Cockatoo.

*Ptyctolophus leadbeateri*, Vigors, Proc. Zool. Soc., 1831, p. 61.

*Cacatua leadbeateri*, Gould, Bds. Austr., fol., v., pl. 2 (1848);  
*id.*, Handbk. Bds. Austr., ii., p. 5 (1865); Salvad., Cat.  
Bds. Brit. Mus., xx., p. 123 (1891); North, Nests and  
Eggs Austr. Bds., 2nd. ed., iii., pt. ii., p. 81 (1911).

Saw only a bird trapper's call-bird in confinement at Coolabah, but was informed by the owner, as well as by other people, that this species was occasionally procured in the district, but was by no means common.

CACATUA ROSEICAPILLA.

Rose-breasted Cockatoo.

*Cacatua roseicapilla*, Vieill., Nouv. Dict. d'Hist., xvii., p. 12 (1817); Gould, Handbk. Bds. Austr., ii., p. 8 (1865); Salvad., Cat. Bds. Brit. Mus., xx., p. 132 (1891); North, Nests and Eggs Austr. Bds., 2nd. ed., iii., pt. ii., p. 88 (1911).

*Cacatua eos*, Gould, Bds. Austr., fol., v., pl. 4 (1848).

The Rose-breasted Cockatoo or "Galah" as it is more frequent called was occasionally seen singly, or in small flocks at Coolabah; several birds were observed perched on the telegraph wires opposite the hotel early one morning, but they were more common on Willeroon, the adjoining Station. Vast flocks, several hundreds in number, were observed feeding on the ground on Cato Plains, near Brewarrina, and in the vicinity of the Aboriginal Mission Station, on the Barwon River. Neither at Coolabah, nor Brewarrina, were any of these Cockatoos observed breeding. This species commits great havoc in the grain-crops. When taken from the nesting place, while young, it makes a remarkably interesting pet and a fine talker.

CALOPSITTACUS NOVÆ-HOLLANDIÆ

Cockatoo-Parrakeet.

*Psittacus novæ-hollandiæ*, Gmel., Syst. Nat., i., p. 328 (1788).

*Nymphicus novæ-hollandiæ*, Gould, Bds. Austr., fol., v., pl. 45 (1848).

*Calopsitta novæ-hollandiæ*, Gould, Handbk. Bds. Austr., ii., p. 84 (1865).

*Calopsittacus novæ-hollandiæ*, Salvad., Cat. Bds. Brit. Mus., xx., p. 135 (1891); North, Nests and Eggs Austr. Bds., 2nd. ed., iii., pt. ii., p. 95 (1911).



Rare. One specimen only obtained on Willeroon Station, adjoining Coolabah. This species is locally known in many parts of Western New South Wales as the "Quarrion."

POLYTELIS BARRABANDI

Barraband's Parrakeet.

*Psittacus barrabandii*, Swains., Zool. Illustr., pl. 59 (1821).

*Polytelis barrabandi*, Gould, Bds. Austr., fol., v., pl. 15 (1848);  
*id.*, Handbk. Bds. Austr., ii., p. 31 (1865); Salvad., Cat.  
 Bds. Brit. Mus., xx., p. 478 (1891); North, Nests and  
 Eggs Austr. Bds., 2nd. ed., iii., pt. ii., p. 99 (1911).

At Coolabah I saw a fine old adult male of Barraband's Parrakeet, or "Green Leek" in Constable W. C. Wrightson's aviary, and was informed by him that this species is usually very common in the district during winter, but all leave again early in spring. In the winter of 1914, he estimated, while on his rounds, he had observed over seven hundred of these birds, but in the winter months of 1915, little more than half that number. He had at various times seen many Barraband's Parrakeets in cages on the Coolabah railway station, that had been trapped in the district and were awaiting their despatch by train to Sydney bird-dealers.

I was rather surprised to learn of Barraband's Parrakeet occurring so far north and in such numbers. The stronghold of this species in the State, being the Wagga District, where it breeds, some two hundred and eighty miles to the south-east of Coolabah. Barraband's Parrakeet, when taken young from the nesting place, soon learns to clearly articulate short sentences, and when fully adult is one of the most beautiful and attractive of cage pets.

PTISTES ERYTHROPTERUS.

Red-winged Parrakeet.

*Psittacus erythropterus*, Gmel., Syst. Nat., i., p. 343 (1788).

*Aprosmictus erythropterus*, Gould, Bds. Austr., fol., v., pl. 18 (1848).

*Ptilistes erythropterus*, Gould, Handbk. Bds. Austr., ii., p. 37 (1865); Salvad., Cat. Bds. Brit. Mus., xx., p. 481 (1891); North, Nests and Eggs Austr. Bds., 2nd. ed., iii., pt. ii., p. 108 (1911).

Occurs also at Coolabah, but the only examples I saw were cage birds in confinement, one of them an adult female, was a call bird, used by a trapper. Known locally, as in other parts of Northern and North-western New South Wales, as the "Bellowing." A fully adult male with its strikingly contrasted plumage of light green and red makes an unusually attractive cage bird.

BARNARDIUS BARNARDI.

Barnard's Parrakeet.

*Platycercus barnardi*, Vig. and Horsf., Trans. Linn., Soc., xv., p. 283 (1826); Gould, Bds. Austr., fol. v., pl. 21 (1848); *id.*, Handbk. Bds. Austr., ii., p. 40 (1865).

*Barnardius barnardi*, Salvad., Cat. Bds. Brit. Mus., xx., p. 558 (1891); North, Nests and Eggs Austr. Bds., iii., pt. ii., p. 133 (1911).

Barnard's Parrakeet, or "Buln Buln," as it is locally known in Central and Western New South Wales, was met with usually in small flocks of from four to seven in number at Coolabah, sometimes in pairs, but it was nowhere so common as I found it in 1905 on the Castlereagh River, some sixteen miles to the north of Coonamble. Probably the drought had something to do with the scarcity of this species, for I was informed that as a rule, it was plentiful in the neighbourhood. Not seen at Brewarrina.

PSEPHOTUS HÆMATONOTUS.

Red-rumped Parrakeet.

*Platycercus hæmatonotus*, Gould, Proc. Zool. Soc., 1837, p. 151.

*Psephotus hæmatonotus*, Gould, Bds. Austr., fol. v., pl. 36 (1848); *id.*, Handbk. Bds. Austr., ii., p. 69 (1865); Salvad., Cat. Bds. Brit. Mus., xx., p. 567 (1891); North, Nests and Eggs Austr. Bds., 2nd. ed. iii., pt. ii., p. 149 (1911).

Only odd pairs seen at Coolabah, and comparatively rare. It is the most common species of the genus *Psephotus*, inhabiting New South Wales. At Brewarrina it was more freely distributed, especially in the large *Eucalypti*, growing on the sides, or in the vicinity of the Barwon River near the bridge, about a mile out of town. One's attention is usually attracted to this species by the brilliant red colouring of the rump of the adult male, but on this occasion it was the low twittering notes of the female's consort, resembling those of the Warbling Grass-Parrakeet. I soon found that it proceeded from an adult male perched near a hole in a dead branch, and from which the female soon issued and flew a short distance away on to the ground in company with the male. Two other nesting-places were discovered by the same means in trees not far away. This was the only species of the Order Psittaci, I found breeding during the trip.

HALIASTUR SPHENURUS.

Whistling Eagle.

*Milvus sphenurus*, Vieill., Nouv. Dict. d'Hist. Nat., xx., p. 564 (1818).

*Haliastur sphenurus*, Gould, Bds. Austr., fol., i., pl. 5 (1848); *id.*, Handbk. Bds. Austr., i., p. 20 (1865); Sharpe, Cat. Bds. Brit. Mus., i., p. 316 (1874); North, Nests and Eggs Austr. Bds., 2nd. ed. iii., pt. iii. p. 227 (1911).

The Whistling Eagle was the only bird of prey seen. It was noted on several occasions flying low down over the town of Brewarrina, and uttering at intervals, the peculiar notes, from whence it takes its vernacular name. I have never spent a similar period in any part of the State, and noted the Order Accipitres, any way near so poorly represented, and can only attribute it to the unusually dry season.

PHALACROCORAX CARBO.

Black Cormorant.

*Pelecanus carbo*, Linn., Syst. Nat., i., p. 216 (1766).

*Phalacrocorax carbooides*, Gould, Bds. Austr., vii., pl. 66 (1848).

*Phalacrocorax novæ-hollandiæ*, Gould, Handbk. Bds. Austr., ii., p. 488 (1865).

*Phalacrocorax carbo*, Ogilvie-Grant, Cat. Bds. Brit. Mus., xxvi., p. 340 (1898); North, Nests and Eggs Austr. Bds., 2nd. ed. iii., pt. iv., p. 320 (1912).

Noted only at "The Fisheries" in the Darling River at Brewarrina. Occasionally seen perched on a low rock near the water, or on one of the stones forming the fish-traps or "yards," at intervals dropping off noiselessly into the water, and re-appearing again some distance away; perching again afterwards, and repeating the operation. One or two were generally to be seen at this part of the river, but I never observed them catch any fair-sized fish.

PHALACROCORAX MELANOLEUCUS.

Little Black and White Cormorant.

*Hydrocorax melanoleucus*, Vieill. Nouv. Dict. d'Hist. Nat., viii., p. 88 (1817).

*Phalacrocorax melanoleucus*, Gould, Bds. Austr., fol. vii., pl. 70 (1848); *id.*, Handbk. Bds. Austr., ii., p. 493 (1865); Ogilvie-Grant, Cat. Bds. Brit. Mus., xxvi., p. 398 (1898); North, Nests and Eggs Austr. Bds., 2nd. ed. iii., pt. v., p. 333 (1911).

Observed also only at "The Fisheries," in the Darling River, at Brewarrina, usually alone, never more than a pair, and similarly engaged in "fishing." When perched on a low rock near the water, the glistening white under surface shone like silver in the morning sun, as I usually visited this portion of the river shortly after day-break. At Chatswood, near Sydney, this species used to regularly visit a brick hole, in one of the busiest parts of the suburb, shortly after the introduction of a number of carp into the water.

IBIS MOLUCCA.

White Ibis.

*Ibis molucca*, Cuvier, Règne Anim., i., p. 520, note (1829); Sharpe, Cat. Bds. Brit. Mus., xxvi., p. 9 (1898); North, Nests and Eggs Austr. Bds., 2nd. ed. iv., pt. i. p. i. (1913).

*Threskiornis strictipennis*, Gould, Bds. Austr., fol. vi., pl. 46 (1848); *id.*, Handbk. Bds. Austr., ii., p. 284 (1865).

Sometimes one, or a pair of White Ibis were to be seen on the low grass-plots, or on the shallow water, at "The Fisheries," in the Darling River, at Brewarrina, and their general white plumage rendered them a conspicuous feature in the landscape. At times they were seen with about one-third of their bills thrust in the shallow water, feeling about for some stray morsel, or standing on one leg motionless, on the grassy sward of one of the small islets in the river. Of the few aquatic species noted at "The Fisheries," never more than one, or a pair, were seen at the same time, nor were they observed at any other part of the river.

NOTOPHOYX NOVÆ-HOLLANDIÆ.

White-fronted Heron.

*Ardea novæ-hollandiæ*, Lath., Ind. Orn., ii., p. 701 (1790); Gould, Bds. Austr., fol. vi., pl. 53 (1848); *id.*, Handbk. Bds. Austr., ii., p. 299 (1865).

*Notophox novæ-hollandiæ*, Sharpe, Cat. Bds. Brit. Mus., xxvi., p. 109 (1898): North, Nests and Eggs Austr. Bds., 2nd. ed. iv., pt. i., p. 23 (1913).

A single example of the White-fronted Heron was flushed, with its slow laboured flight, from some shallow water at the edge of the Barwon River, near Brewarrina. Known locally, as in most parts of Australia, as the "Blue Crane."

GEOPELIA TRANQUILLA.

Peaceful Dove.

*Geopelia tranquilla*, Gould, Proc. Zool. Soc., 1844, p. 56; *id.*, Bds. Austr., fol. v., pl. 73 (1848); *id.*, Handbk. Bds. Austr., ii., p. 144 (1865); Salvad., Cat. Bds. Brit. Mus., xxi., p. 456 (1893); North, Nests and Eggs Austr. Bds., 2nd. ed. iv., pt. ii. p. 117 (1913).

Common both at Coolabah and Brewarrina, frequenting chiefly the Wilga scrubs in the former locality, as well as the gardens in the townships, and the grounds of the hotel. It

was rare, indeed, that one or more of these little Doves was not to be seen about the yard or stables, feeding upon the ground. At Brewarrina, they came right up to the kitchen of the Barwon Hotel, which is situated in Bathurst-street, the busiest thoroughfare in the town. In addition to their well-known notes somewhat resembling the sounds of the words "Holly-Hock," or "Holly-Oak," they emit occasionally during the breeding season a far-away harsh grating note, like that of the Crane (*Grus australasiana*) or "Native Companion." Comparative with its size this species has one of the loudest notes of any of our Australian birds. During the last ten years the Peaceful Dove has largely increased in the neighbourhood of Sydney, especially in the suburbs of the Milson's Point Line. At the time of my leaving home for this trip, a pair were nesting in a large pine, in a garden directly opposite my house.

## PHAPS CHALCOPHTERA.

## Bronze-Wing.

*Columba chalconotus*, Lath., Ind. Orn., ii., p. 604 (1796).

*Peristera chalconotus*, Gould, Bds. Austr., fol., v., pl. 64 (1848).

*Phaps chalconotus*, Gould, Handbk. Bds. Austr., ii., p. 122 (1865); Salvad., Cat. Bds. Brit. Mus., xxi., p. 526 (1893); North, Nests and Eggs Austr. Bds., iv., pt. ii. p. 127 (1913).

Fairly numerous, at times, at Coolabah I was informed, but at the time of my trip, I only saw examples in confinement, that had been trapped in the neighbourhood. One of these birds was caught by entering an open wired enclosure adjoining an aviary, containing a caged compatriot, among other birds. Usually found in Acacia scrub and dead thistle-beds. The Bronze-Wing generally comes to drink at some dam or water-hole about sundown, and frequently after it is quite dark. Many birds are consequently killed by flying against wire fences, the heads often being found on one side of the fence and the bodies on the other. Numbers of these birds too, are killed by poison laid for rabbits, or by drinking poisoned water, intended for rabbits, which is generally surrounded with wire-netting to prevent stock getting access to it. Tenanted nests of the Bronze-Wing, are more numerous in the spring and summer, but they may be found in any month of the year.

## OCYPHAPS LOPHOTES.

## Crested Bronze-Wing.

*Columba lophotes*, Temm., Pl. Col., 142 (1823).

*Ocyphaps lophotes*, Gould, Bds. Austr., fol., v., pl. 70 (1848);  
*id.*, Handbk. Bds. Austr., ii., p. 139 (1865); Salvad., Cat.  
 Bds. Brit. Mus., xxi., p. 535 (1893); North, Nests and  
 Eggs Aust. Bds., 2nd. ed. iv., pt. ii., p. 146 (1913).

It was remarkable that I was nearly a week in Coolabah before seeing one of these Pigeons, and yet they were freely distributed, only a few hundred yards away from the hotel. With one or two exceptions, all the birds seen by me were at a place known as the "gravel-pits," and all on the southern side of the railway line. Although a similar vegetation existed on the northern side, I never observed one of them there. As I have at other times noticed, these Pigeons come more into evidence about four o'clock in the afternoon, not moving about much during the heat of the day, but generally about this hour, they may be seen in twos and threes and small flocks flying about from tree to tree or feeding upon seeds of grasses, or those of herbaceous plants. Sometimes a dozen or more may be thus assembled, and when disturbed by too close an approach seek refuge in flight, usually in twos and threes. In a similar manner do they leave a tree when one approaches near them. Often have I thought all the Pigeons had left a tree before getting near it, yet many more were flushed from it at intervals, after standing beneath it. On this occasion while quietly engaged in threading up a specimen beneath the tree from where I had shot it, three more came and settled just above my head. One could almost recognise this species, by the rapid, and loud whirring noise made by the wings during flight and which has gained for it in the Moree district the aboriginal name of "Wirr-i-lah." Observed also at Brewarrina, but not so common.

## LEIPOA OCELLATA.

## Mallee-Fowl.

*Leipoa ocellata*, Gould, Proc. Zool. Soc., 1840, p. 826; *id.*, Bds. Austr., fol., v., pl. 78 (1848); *id.*, Handbk. Bds. Austr., ii., p. 155 (1865).

*Lipoa ocellata*, Ogilvie-Grant, Cat. Bds. Brit. Mus., xxii., p. 463 (1893).

Constable W. C. Wrightson informed me that he only once met with this species at Coolabah—better known throughout South-eastern Australia as the Mallee-hen. This was in July, 1913, while riding slowly along about three miles out of Coolabah, at a place known as "The Swamp," when two of these birds quietly walked across the track, and were soon lost to view again in the bush on the opposite side of the road. This was the only occasion he met with them at Coolabah, during his eight years residence there, although they were well known to him, where he was formerly stationed, at Cobar. All persons I questioned relative to this species, were agreed that it was rapidly decreasing in numbers if it had not entirely disappeared from some parts of Western New South Wales. Mr. J. Armstrong, manager of Coronga Peak Station, twenty-eight miles north-west of Coolabah, informed me that the introduced foxes were rapidly getting rid of the Mallee-Fowls in that district, and one was now rarely seen, where formerly they were very numerous. On one occasion he took eight incubated *Lipoa's* eggs from one of their hatching mounds on a distant part of the run, and placed them in a mound constructed by himself inside a small wired in enclosure in the near vicinity of the homestead. Out of this three young ones eventually made their way, two of which died, and the third one made its escape. He also told me that one of the station-hands was successful in rearing, from similarly constructed mounds, no less than twenty-eight young ones, but a Fox getting into the enclosure one night, killed all of them.

ÆDICNEMUS GRALLARIUS.

Southern Stone-Plover.

*Charadrius grallarius*, Lath., Ind. Orn., Suppl., ii., p. lxvi. (1801).

*Ædicnemus grallarius*, Gould, Bds. Austr., fol., v., pl. 5 (1848); *id.*, Handbk. Bds. Austr., ii. p. 210 (1865); North, Nests and Eggs Austr. Bds., 2nd. ed. iv., pt. iii., p. 246 (1913).

*Burhinus grallarius*, Sharpe, Cat. Bds. Brit. Mus., xxiv., p. 18 (1896).

Heard calling on several occasions at Coolabah in the early morning, probably from a large cultivated grass plot in a garden on the other side of the road running past the hotel. No examples seen.



## ÆGIALITIS MELANOPS.

## Black-fronted Dotterel.

*Charadrius melanops*, Vieill., Nouv. Dict. d'Hist., xxvii. p. 139 (1818).

*Hiaticula nigrifrons*, Gould, Bds. Austr., fol., vi., pl. 20 (1848).

*Ægialitis nigrifrons*, Gould, Handbk. Bds. Austr., ii., p. 232 (1865).

*Ægialitis melanops*, Sharpe, Cat. Bds. Brit. Mus., xxiv., p. 300 (1896); North, Nests and Eggs Austr. Bds., 2nd. ed. iv., pt. iii., p. 279 (1913).

Pairs of Black-fronted Dotterel were noted about the margins or in the vicinity of the Barwon River, at Brewarrina. One pair by their actions about three hundred yards from the bridge which crosses this river near the Chinamens' garden, undoubtedly had eggs or young, but I was not looking for the former—in fact I did not take a single egg during the trip—the young stages too of this species were well known to me from examples captured near Sydney.

## HYDROCHELIDON HYBRIDA.

## Marsh Tern.

*Sterna hybrida*, Pallas, Zoogr., Rosso-Asiat., ii., p. 338 (1811).

*Hydrochelidon fluviatilis*, Gould, Bds. Austr., fol., vii., pl. 31 (1848).

*Hydrochelidon hybrida*, Saunders, Cat. Bds. Brit. Mus., xxv., p. 10 (1896); North, Nests and Eggs Austr. Bds., 2nd. ed. iv., pt. iv., p. 301 (1914).

Two of these fairy-like denizens of the air, presumably a pair, flitted almost incessantly up and down "The Fisheries," in the Darling River, at Brewarrina, but were not observed at any other part of the river. The white and delicate shades of grey plumage, of the Marsh Terns, with an irregular background of dark green foliage, rendered them very conspicuous objects while on the wing. I never saw them attempt to descend, and capture anything from the water, as they usually do whether over a river, swamp, or grass-lands.

## DROMÆUS NOVÆ-HOLLANDIÆ.

## EMU.

*Casuarius novæ-hollandiæ*, Lath., Ind. Orn., ii., p. 665 (1789).

*Dromaius novæ-hollandiæ*, Gould, Bds. Austr., fol., vi., pl. 1 (1848); *id.*, Handbk. Bds. Austr., ii., p. 200 (1865).

*Dromæus novæ-hollandiæ*, Salvad., Cat. Bds. Brit. Mus., xxvii., p. 586 (1895); North, Nests and Eggs Austr. Bds. 2nd. ed. iv., pt. iv. p. 398 (1914).

While driving through Willeroon Station, three of these birds rose up from the ground, where they had been partially concealed by some low bushes, and walked slowly away. They were about seventy yards away from the vehicle, and as the day was extremely hot, the horse was going at an easy pace, and neither the horse nor birds apparently cared to break into a run. Not met with at Brewarrina.

Only six Emus seen in three weeks, in country these birds frequent, is a poor record. Both between Narrabri and Moree, and Gilgandra and Coonamble, a decade ago, large flocks of Emus could be seen any day from the passing train, running alongside of the railway fence, or rather in some places, where the fence ought to be.

The Emu was first figured in Phillip's "Voyage to Botany Bay," in 1789, as the New Holland Cassowary, and was characterised the following year by Latham in his "Index Ornithologicus," as *Casuarius novæ-hollandiæ*, Captain Tench in his "Settlement at Port Jackson," in 1793, first making us acquainted with its nests, eggs, and young. But the Emu no longer roams through the scrub between Port Jackson and Botany Bay, as in Phillip's and Tench's time. Ever since the settlement of the State, it has gradually been driven farther back. Its numbers, too, are rapidly decreasing by both birds and eggs being destroyed, in a ruthless manner by men employed for these purposes, for does not the Emu eat grass, and disturb breeding ewes?—unpardonable offences in the eyes of the pastoralist—besides the young birds have other enemies to contend with in the shape of dingoes and the introduced fox.

In the future, to see the Emu in a state of nature, in any great numbers, one must go "out back," as is the ever recurring cry. "Out back" which meant, in the early days of settlement, and for several decades after, subsequent upon the first crossing of the Blue Mountains barrier by Blaxland, Lawson, and Wentworth, in 1813, the fertile plains below. "Out back" still later when it signified the Great Western Plains west of the Macquarie River, and for ever will be heard this cry, as the country becomes more thickly populated, and as the large pastoral areas are resumed for closer settlement, and for the growing of grain. At the present time there are unquestionably thousands of Emus in Western New South Wales, but inevitably in the future must this noble bird be driven further back, until the present terminus of the western railway system is reached, at Bourke, on the Darling River, five hundred and eight miles west of Sydney. "Out back" will then still be heard, as one journeys towards and across the South Australian border, where from Bourke the mode of travelling is replaced by motor car and camel "train," and still further "out back," to where obtains the smoke-signal language of the Central Australian Aborigines. When in the comparatively not far distant future, this unhappy time arrives, for the largest and finest bird in Australia, the Emu will be no more. What chance has a flightless bird of perpetuating its kind, with so many enemies to contend with, and how long will it be before someone records the passing away of the last Emu in Australia, as has been recently done with an at one time infinitely more numerous species, the Passenger Pigeon (*Ectopistes migratorius*), of North America? "Wilson, writing about 1808, estimated that a flock of Wild Pigeons (Passenger Pigeons) observed by him near Frankfurt, Kentucky, contained at least 2,230,272,000 individuals." Yet the last surviving example, a female, which had lived in the aviary of the Cincinnati Zoological Gardens, United States, for twenty-nine years, died on the 1st September, 1914,<sup>6</sup> the species became extinct.

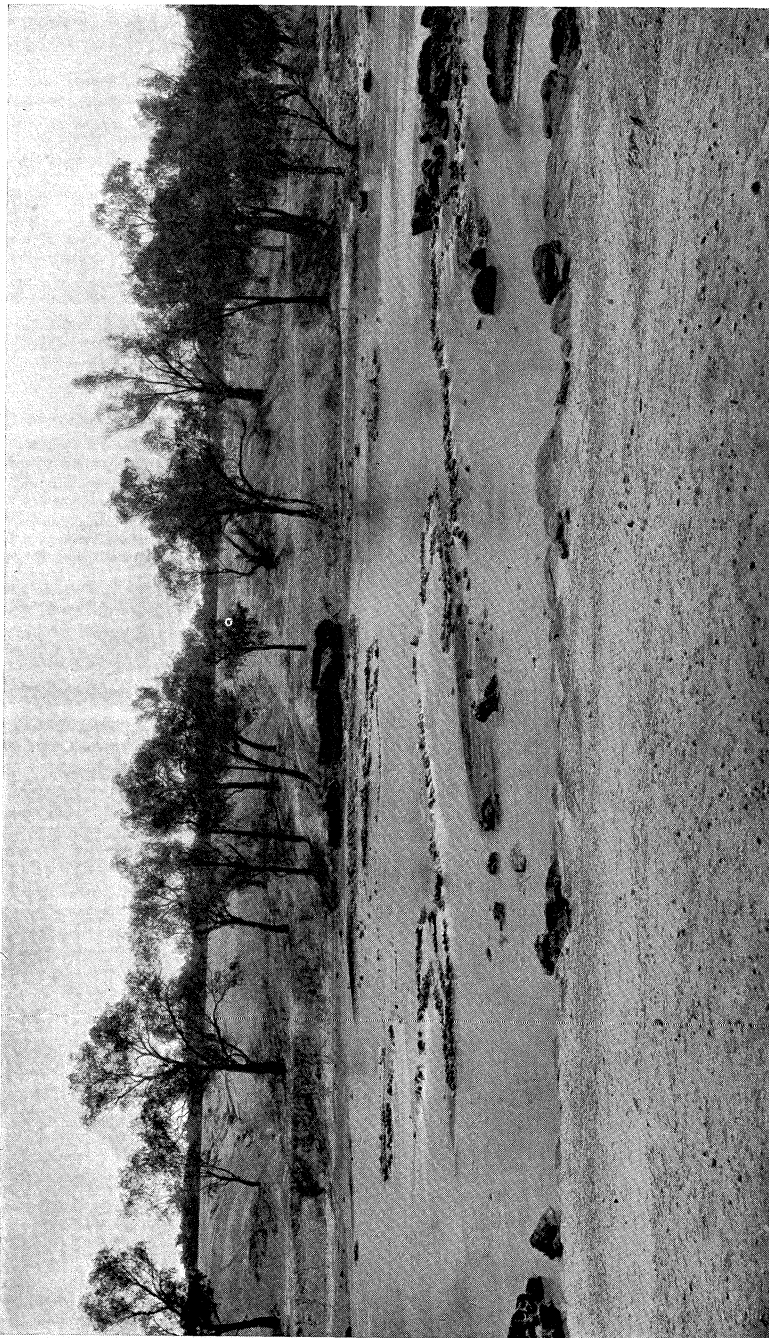
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<sup>6</sup> The Ibis, 1915, p. 183.

EXPLANATION OF PLATE XXIV.

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“The Fisheries” in the Darling River, at Brewarrina  
(northerly view), in the Western Land Board Division of  
New South Wales.

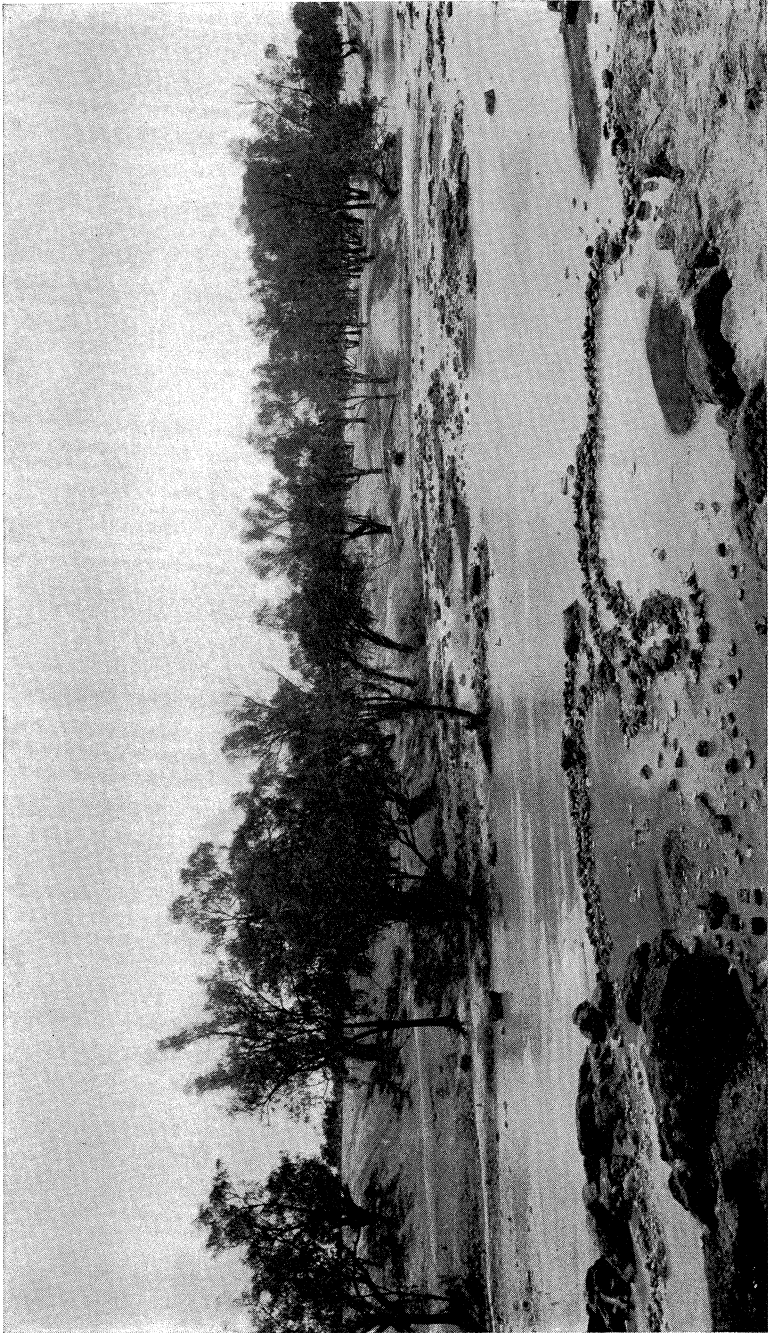


A. J. NORTH, Austr. Mus., photo.

EXPLANATION OF PLATE XXV.

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“The Fisheries” in the Darling River at Brewarrina (this view follows on from the left hand of Plate xxiv.).



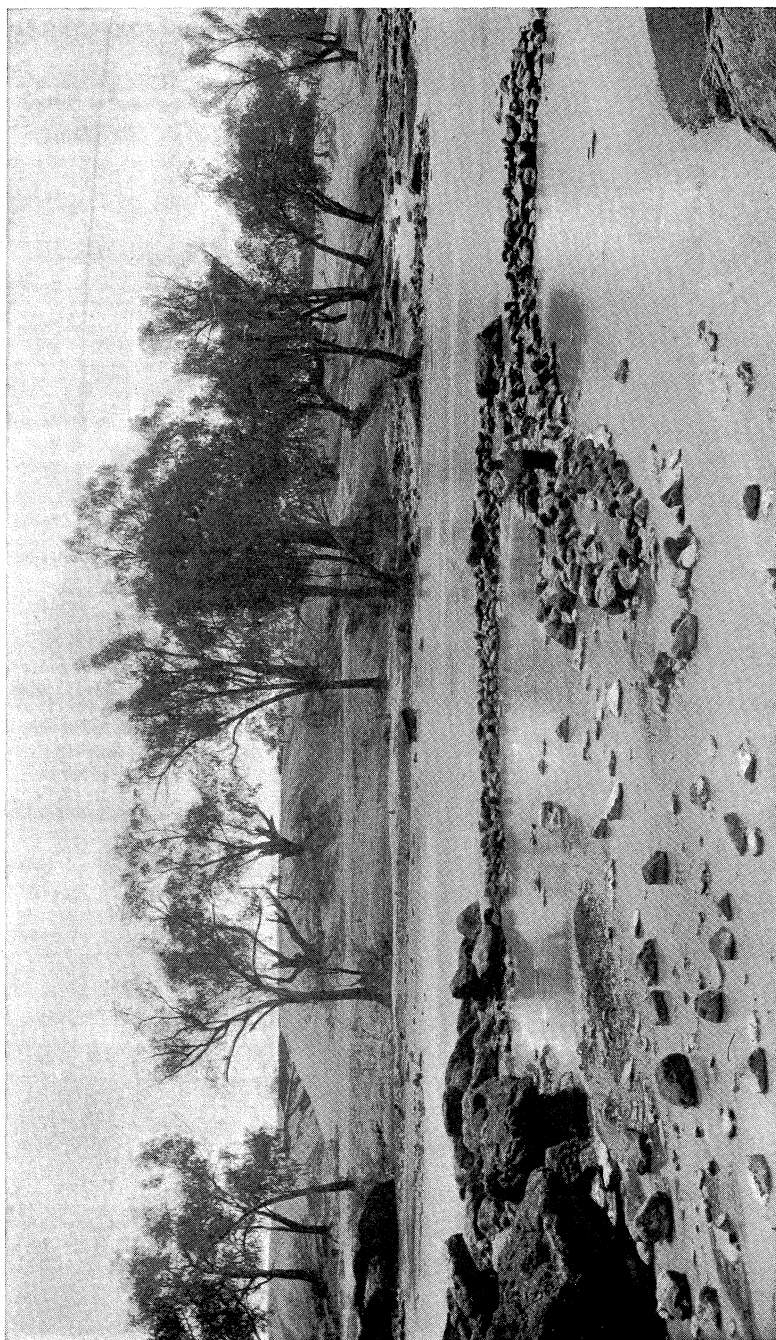
A. J. NORTH, Austr. Mus., photo.

EXPLANATION OF PLATE XXVI.

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“The Fisheries” in the Darling River at Brewarrina (another view of Plate xxv., with the aged aboriginal, “Steve Shaw,” in one of the stone traps holding up a fish).





A. J. NORTH, Austr. Mus., photo.

EXPLANATION OF PLATE XXVII.

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Survey plan of "The Fisheries" in the Darling River at  
Brewarrina, by Mr. Arthur W. Mullen.



EXPLANATION OF PLATE XXVIII.

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Fig. 1 A mirage on Cato Plains near Brewarrina.

„ 2 Bridge over the Barwon River near Brewarrina.

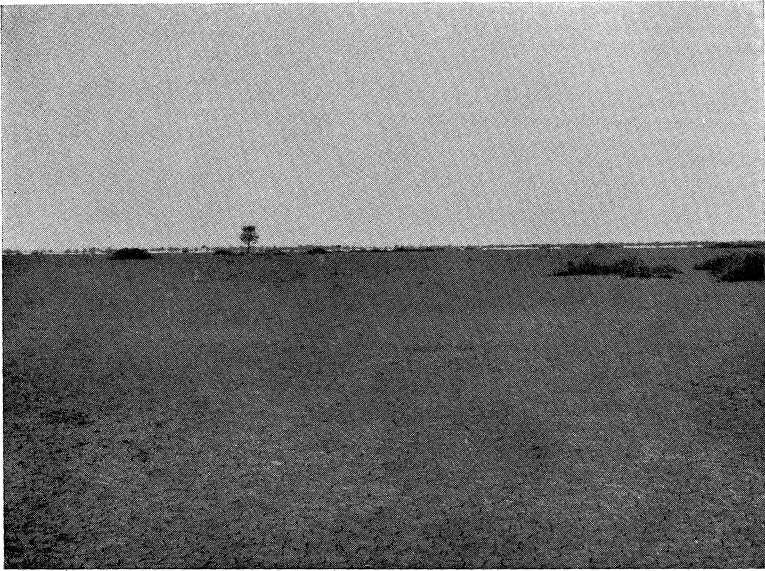


FIG. 1.

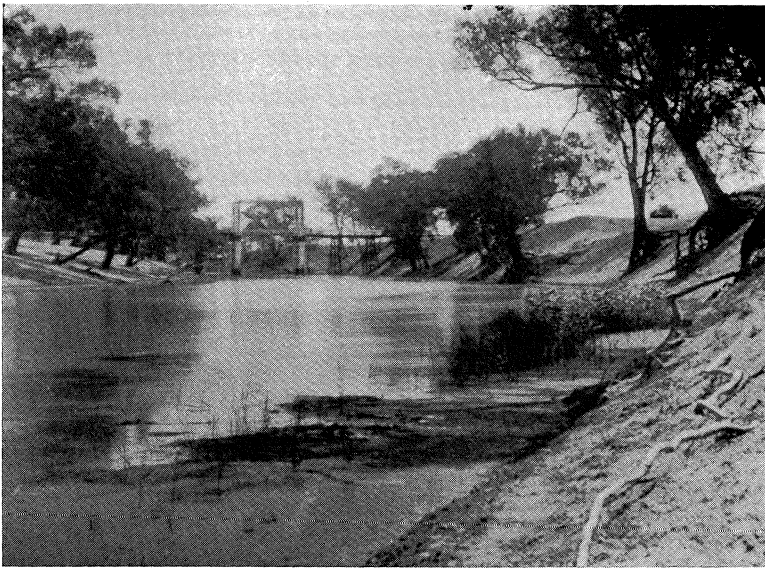


FIG. 2.

A. J. NORTH, Austr. Mus., photo.