

A Trip to Bool Lagoon, South-East, S.A.

By J. Sutton.

A party consisting of Drs. A. Chenery and A. M. Morgan, Messrs. F. E. Parsons and J. Sutton made a short trip from 29th November to 7th December, 1930, to the South-East, going as far as Bool Lagoon. We left Glen Osmond at 8 a.m. on 29th November, motored on the usual track by way of Mount Barker, Wellington, Meningie, the Coorong, Kingston, and reached Robe at 5.50 p.m. (212 miles). We stayed at the Robe Hotel for the night, and left next day at 9.45 a.m. by the road past Lake Hawdon, "Konetta," Reedy Creek, Wilmot Swamp, St. Helena Swamp, Naracoorte to "Peccaree," near Joanna (91 miles), where Mr. Arthur Lemon put us up for three days and accompanied us on each of our trips to Bool Lagoon, 10 miles away. On 1st December we waded out to the "ibisery" in the Lagoon, worked it for five hours, and then searched the cutting-grass clumps for three hours. On 2nd December we waded about the belt of teatrees in the Lagoon for five and a half hours, and on 3rd December we searched the cutting-grass clumps for two and a half hours, then waded about the south end of the teatrees for one and a half hours. We were accompanied on the 2nd and 3rd by Jack Hood, a local youth with a good knowledge of the Lagoon and its bird inhabitants. On 4th December we left "Peccaree" at 9 a.m., and arrived at "Konetta" (62 miles) at 5.10 p.m., working on the way St. Helena Swamp, Wilmot Swamp, and Reedy Creek (south of road). On 5th December we were driven by Mr. John Watson

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to the heronry on Konetta in the forenoon, and in the afternoon we motored to Reedy Creek and waded through the portion north of the road. On 6th December we left Konetta at 9.45 a.m., motored through Robe, and reached Boatswain Point on Guichen Bay at 11.30 a.m. We worked the seashore and adjoining scrub for five hours. Motoring on we arrived at Kingston at 5.45 p.m. (60 miles). We stayed at the Crown Hotel for the night; left next morning, 7th December, at 6.40 a.m. and reached Adelaide at 4.15 p.m. The speedometer showed just under 700 miles for the whole trip. We have to thank our hosts and hostesses at "Peccaree" and "Konetta" for the great hospitality shown to us.

Bool Lagoon is situated 14 miles south of Naracoorte. It is of irregular shape, five miles at its greatest length and three miles at its greatest width, and its area is over 5,500 acres. Mosquito Creek enters it at the north-eastern end; at that end, the western side, and the centre of the Lagoon the reeds grow thickly; the chief varieties are the Common Reed (*Phragmites communis*), Bulrush (*Typha angustifolia*), and Rush (*Juncus* sp.). At the eastern side there is a drop of some 100 feet to the shore-line; from the shore for 100 yards into the Lagoon there are a great number of clumps of cutting-grass (*Gahnia* sp.), up to seven feet in height; from those clumps inwards for another 250 yards the water was just over one's boots; and then there is at this further distance a belt of big teatrees (*Melaleuca*) in deeper water, over a mile in length, in a north and south direction, with a width of about 200 yards. The greatest depth we waded at in the reeds and about the teatrees was two and a half feet. At the south end of the Lagoon, which we did not visit, a drain takes the water through the range to the west into some swamps and lagoons. The water was fresh and delightfully cool amongst the teatrees. The country about the Lagoon is flat, now devoid of trees, and used for grazing and cropping. Dr. Charles Fenner, in writing of the South-Eastern plains, stated:—" . . . Another remarkable feature of this area is a belt, nearly 50 miles in width, of successive dune and swale—ancient sand-dune ridges that are now dignified by the name of "ranges" (Woakwine Range, Avenue Range, etc.). These dune ridges (N.W.—S.E.) run normal to the natural fall of the land (S.—W.), and thus interfere with the development of the natural drainage system. . . . A great part of the inter-dune regions consist of recent alluvial deposits, and there

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are also widespread swamps and lagoons. Physiographically, this area of ancient dunes is one of extraordinary interest. It appears that the series of ridges . . . with their intervening swales and lagoons represent a long-continued series of ancient "Coorong," the most ancient being that which lies nearest to the Naracoorte scarp . . . the ridge which is intersected by the Marambro, Naracoorte, and Mosquito creeks."

Ibisy.—In October, 1927 ("S.A. Ornithologist," Vol. IX, p. 191, 1928), when the Lagoon was previously visited, the nests of the Ibis were situated at the north-eastern end and they were continuous, but on this last visit the nests were found in lots some distance apart, the greater number being situated west of the entrance of the Mosquito Creek, and the chief part of the nesting had been completed; not many nests containing eggs were seen by us. Young birds were about in numbers in all stages of growth, from those able to fly well to others unable to leave the nests. The platforms upon which the nests are built are usually described as being formed of trampled-down reeds, but in those I examined the edges of the reeds used were so straight cut that I consider the reeds were bitten off, not trampled down, by the birds.

St. Helena Swamp.—We visited this swamp on our return journey and waded about in it for half an hour. On two previous occasions a number of occupied nests were found, but this time it turned out a failure. The former rich growth of reeds had been burned off, and the new growth was indifferent. The birds usually nesting there had evidently gone elsewhere.

Wilmot Swamp, about two miles in circumference, is nine miles east of Konetta. The water was up to twelve inches deep, the reeds about three feet high, and the bottom firm. We waded there for 80 minutes.

Reedy Creek.—We waded in the swamps about this creek on both sides of the road, the south side for 90 minutes and the northern side for 95 minutes. The water was up to twelve inches deep, the bottom firm, and the reeds up to three feet in height.

During the trip 130 species of birds, with 27,249 individuals, were noted, as per list herewith. The numbers in parentheses after the names represent the individuals. The species seen about Bool Lagoon are marked thus *, and those near Joanna with †. All the members of the party contributed to the particulars and the census.

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Dromaius novae-hollandiae, Emu (2).—These birds were seen on 5th December on a bracken and lightly-timbered ridge at Reedy Creek. They crossed the main road into similar country.

**Coturnix pectoralis*, Stubble-Quail (28).

†*Geopelia placida*, Peaceful Dove (4).

Phaps chalcoptera, Common Bronzewing (1).

Phaps elegans, Brush Bronzewing (2).

Bronzewing.—One was seen near Robe, but the species could not be determined.

**Rallus pectoralis*, Lewin Water-Rail (3).

A Rail or Crake was seen near Robe, but the species could not be determined.

**Gallinula tenebrosa*, Dusky Moorhen (10).

*†*Porphyrio melanotus*, Blue Bald-Coot (Eastern Swamphen) (14).—Four of these were seen at Bool Lagoon, but eleven nests were found there: (1) built of dried rushes placed on the base of a clump of rushes, with a few reeds growing round it; the bottom of the nest was about two inches above the water; it was an open nest, concave in shape, of shallow depth, with no cover to it, and measured 11 x 8 inches; five eggs; (2) with three eggs just chipping; (3) with four eggs; (4) ready for eggs; (5) with three eggs and an eggshell, the chick having evidently cleared away when the parent flushed; (6) with one egg; (7 to 11) ready for eggs.

**Fulica atra*, Coot (59).

**Podiceps ruficollis*, Little Grebe (36).

Grebe.—Four were seen at Wellington, but the species could not be determined.

Phalacrocorax carbo, Black Cormorant (8).—All were seen at Wellington.

Phalacrocorax fuscescens, White-breasted (Black-faced) Cormorant (2).—These were seen at Boatswain Point, Guichen Bay, Robe.

**Phalacrocorax varius*, Pied (Yellow-faced) Cormorant (4).

**Microcarbo melanoleucus*, Little Pied Cormorant (67).—A "shaggery" was found in the teatree at Bool Lagoon. Eleven nests examined were from eight to twelve feet above the water—three contained five eggs each; four, four eggs each; two, three

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eggs each; and two with one egg each. In two of the nests were many claws of yabbies (*Parachaeraps*).

*Cormorants.—Eleven were seen, but the species could not be determined.

Pelecanus conspicillatus, Pelican (452).—Seen on Lake Alexandrina, 178; on the Coorong, 274. As we passed along the Coorong on 7th December many Pelicans, apparently nesting, were seen on Pelican Islands, south of Wood's Wells.

**Chlidonias leucoparcea*, Marsh Tern (226).—Of these 82 were seen at Bool Lagoón; usually they were flying continuously up and down over sections of the Lagoón, but once we saw them resting on the top strand of a wire fence which crossed the water at one point of the Lagoón.

**Gelochelidon nilotica*, Gull-billed Tern (3).—One was seen flying over Alick's Lagoón (adjoining Bool Lagoón) and two over Bool Lagoón, searching for food.

Hydroprogne caspia, Caspian Tern (4).

Sterna bergii, Crested Tern (13).

Sterna nereis, Fairy Tern (6).

Tern.—One was seen on the Coorong, but the species could not be determined.

**Larus novae-hollandiae*, Silver Gull (798).

Arenaria interpres, Turnstone (1). This was seen on the seashore at Boatswain Point.

*†*Lobibyx novae-hollandiae*, Spur-winged Plover (191).—On our return journey on 7th December neither a Spur-winged nor a Banded Plover was seen by the roadside between Meningie and Waltowa Swamp. Usually those species are met with there in numbers.

Zonifer tricolor, Banded Plover (67).

Plovers.—Four were seen near Meningie, but the species could not be determined.

Pluvialis dominicus, Eastern Golden Plover (17).—In two flocks of eleven and six each on the seashore at Boatswain Point. On flushing they flew right out to sea in the direction of the Baudin Rocks. A specimen was taken—iris very dark brown; bill dark olive, tip black; legs and feet leaden grey, soles darker; inside mouth flesh colour; total length 22 cm.; spread 50.5 cm.;

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weight $4\frac{1}{4}$ oz. Stomach contents: sand and a beach weevil (*Decilaus*).

Charadrius cucullatus, Hooded Dotterel (2).—These were seen on the seashore at Boatswain Point, but not in company; no nesting site was found.

Charadrius ruficapillus, Red-capped Dotterel (75).—At Boatswain Point six nests were found—mere cups in the sand. Five were above high-water mark on the seashore, and one in a valley in the sandhills about 100 yards from the shore. Three nests contained two eggs each, and the other three one egg each.

Charadrius melanops, Black-fronted Dotterel (1).—This was seen at St. Helena Swamp.

Dotterel.—One was seen near Kingston, but the species could not be determined.

Himantopus leucocephalus, White-headed Stilt (20).—Seven of these were seen near Mount Benson (Robe) at the side of the road. They comprised two pairs and a pair with a young bird. The adults of the young bird flushed, but the young bird ran to our right and squatted; on the motor-car being stopped, it ran a further 50 yards and squatted in a very small bush. It was captured and, after its description was taken, released; all the time it was held the parents were flying near and barking continuously. Iris muddy brown; bill, base leaden, tip black; forehead white; top of head brown freckled with black; back of neck brownish grey; upper back black, feathers edged with brown, upper wing-coverts similar; lower back grey spotted with black; legs and feet dull flesh colour.

Cladorhynchus leucocephalus, Banded Stilt (15,219).—All were seen on the Coorong. On 29th November, 1930, an immense flock of these birds was seen in the Coorong sanctuary south of McGrath's Flat and 18 miles from Meningie. There in a large bay a point of low-lying land jutted out some hundred yards into the Coorong. The water was very shallow, especially to the north-west. When we were approaching the spot we saw a flock estimated at 15,000 birds just off the point. When the motor-car was stopped some 10,000 flew towards the north-west end, settled in the shallow water, and stood in serried ranks. Immediately in front of us was another large number of the birds bathing or swimming in open extension a foot or two apart. Farther to the south-east a large number was herded together at the end of a sandspit which extended about 300 yards from

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the shore. These two lots we estimated to total 5,000. We stopped here for lunch in order to view the wonderful sight. After lunch we walked towards the largest flock, but we could not get anywhere near the birds, as they rose in one great flight and alighted a little distance farther away. In all they flushed three times. By far the greater number of the birds had the chestnut band, but there were some birds with that band in various stages of the chestnut colour. Some of the birds uttered a short barking call, which did not appear to differ from that of the White-headed Stilt, except that it was not as strong as that of the latter bird. The Banded Stilt uttered a "bark" occasionally, whilst the White-headed Stilt, when I have heard them, at breeding-time, barked frequently. When the largest flock rose they spread out up to 100 feet in height, but when small parties flew away to other places at some distance they kept quite close to the water in straggling order. On motoring a little farther on we saw a party of about 200 on the shoreline; some 30 or 40 of them were drinking at a little soak of fresh water which was oozing out near the water's edge of the Coorong and was very shallow. To enable them to drink the water some birds bent down sufficiently so as to get their neck and beak parallel with the water, whilst others lay down flat in the water. The walk of this species is a very dainty and mincing gait. Farther along still we saw a single bird, and south of the Causeway 18 others. On 7th December, on our return journey, the Banded Stilts were seen in the same bay. A flock of some 300 were first met with. They flushed on our approach in the motor-car and flew farther north, where we saw an immense number of the birds arranged in three very large companies. As we got near them, many rose a few feet and dropped down again. We estimated there were just as many birds as we had seen on the outward journey. A dead bird with a broken wing was found shot at the shore-line close to where the 300 rose.

Tringa nebularia, Greenshank (24).—Twenty-three were seen on Waltowa Swamp, one flock comprising 20 birds, and one bird was seen near Wood's Wells, on the Coorong.

Erolia ruficollis, Red-necked Stint (74).—These were seen along the Coorong.

Erolia acuminata, Sharp-tailed Sandpiper (350).—Six were seen at Wellington, 12 at Waltowa Swamp, 21 at Meningie. 148 along the Coorong, 29 at, and 14 near, Kingston, and 120 at Boatswain Point.

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Stints and Sandpipers (293).—Sixty were seen along the Coorong, 203 at Waltowa Swamp, and 30 near Ashville, but their species could not be determined.

*Waders (3).—One about the size of a Sharp-tailed Sandpiper, but whiter underneath, seen at Bool Lagoon, and a pair at Kingston, the size of Golden Plovers, were not identified sufficiently to determine the species.

†*Capella hardwicki*, Snipe (5).—Two were seen at Reedy Creek and three on "Peccaree," near Joanna. Two of the latter were killed at one shot by a sportsman, and the other was missed. On being asked, he allowed us to take measurements of the Snipe he had shot that afternoon. He had twelve, one being headless. The eleven bills averaged 6.9 cm.—the longest 7.6, the shortest 6.5 cm. The wing spread of 12 birds averaged 48.41 cm.—the longest 50.5, the shortest 48 cm. The bills of these birds were yellowish olive at the basal portion (more than half), the rest of the bill dark brown; legs light greenish. Only one of the 12 birds was in good condition. The swamps this species seem to favour were very shallow, with poor cover.

†*Burhinus magnirostris*, Southern Stone-Curlew (1).—Calls were heard on the nights of 30th November and 3rd December, near Joanna.

**Grus rubicundus*, Brolga (Native Companion) (3).—These birds flushed from the very shallow water near the teatrees on our first appearance at Bool Lagoon on 1st December. They were not seen again.

*†*Threskiornis molucca*, White Ibis (160).—Seven were seen near Joanna, 122 at Bool Lagoon, one near Mount Benson, one at Konetta, 20 at Reedy Creek, four near Naracoorte, and five at St. Helena Swamp. Many of these birds were seen at close quarters, and were in the breeding plumage. The plumes from the scapulars appear as a black bunch near the end of the tail, but when the birds fly the tail shows quite white, the black plumes having probably disappeared into the wing plumage.

Dr. Chenery found in a dense cluster of reeds well out in Bool Lagoon many nests of this species, all containing either eggs or young—many White Ibis flushing as he waded up. An actual nest site was a heap of broken-down reeds about six inches above water-level. The nest was shallow and lined with reeds; three eggs. Some of the White Ibis were nesting amongst the

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Straw-necked, but as they flushed when we were some distance off, the nests or eggs could not be picked out from those of the latter species.

A specimen was taken—♀, iris muddy brown; bill black; inside mouth black; legs and feet, upper part of tibia where the feathers join the bare skin a ring of dark rose-red, the rest of the legs deep blackish crimson; down the front of the tarsus, the middle and inner toes, an irregular line of white scales; feet, soles, and nails black; bare skin beneath the wing bright crimson; head black, bare skin from the occiput to half-way down the neck with irregular bars of rose-red skin; total length 73 cm.; spread 121.5 cm.; weight 3¼ lb. Stomach contents: stuffed with yabbies (*Parachaeraps*) about an inch long; yabbies were also found in the gullet.

(1) A very young White Ibis in a nest—Head and neck black; iris black, down grey; bill salmon pink, tip black; legs light grey. The chick was panting and working its upper throat greatly.

(2) A chick older than (1)—Iris very dark brown; bill base black, the rest dull flesh colour; inside mouth dull flesh colour; legs and feet leaden blue; head black, covered with black downy feathers; wing scapulars white edged black; all the rest of the body white.

*†*Threskiornis spinicollis*, Straw-necked Ibis (2,463).—Ten were seen near Joanna, 1,907 at Bool Lagoon, 348 at Konetta, 86 at Reedy Creek, 31 at St. Helena Swamp, 41 near Naracoorte and 40 at Wilmot Swamp.

A typical nest was on a platform of reeds built on the stump of a clump of the reeds and 15 inches above the water. It was composed of a few broken rush-stalks and lined with green flags of the reed; very shallow; measurement 8 x 8 inches; two eggs.

One platform I noticed was an irregular oblong shape—sides 3 + 8 + 3 + 10 feet; on it were ten nests—eight with two eggs each, one with an egg, and one empty.

A specimen was taken—♂, breeding; iris dull dark brown; bill, culmen and mandible black; on either side of the maxilla to about half-way towards the point a row of overlapping light horn-coloured scales; head bare to the occiput behind and a line of bare skin down the middle of the front of the neck, black; inside mouth black; legs deep rose-red; feet, three fore toes

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black, hind toe black with a reddish tinge, nails black, soles flesh colour; a patch of bare skin at the side of the breast gamboge-yellow; total length 75 cm., spread 128.5 cm., weight 4 lb. Stomach contents: many water beetles and small yabbies about an inch long with a few somewhat larger yabbies, a number of larvae of the dragon-fly (*Aeschna* sp.); the stomach was very full.

**Platalea regia*, Royal (Black-legged) Spoonbill (55).—These were seen at Bool Lagoon. A specimen (immature) taken had iris bluish grey; bill light horn colour tinged with yellow at base; bare skin round base of bill leaden blue; inside mouth horn colour; legs, feet, and thighs bluish white, each scale outlined in black, knees darker, metatarsi like the thighs in front, the black lines at the back without scutellations, toes like the metatarsi, joints darker, nails black, soles black; shafts of primaries black.

Ten nests were found in the teatrees in Bool Lagoon. A typical nest was 20 feet above the water, very shallow and open; the outside was made of fine teatree bark and sticks, lined with green water-reed flags. It measured 18 inches in width over all; three eggs. The other nests were—one with four eggs; five with three eggs each; one with two eggs; two with two chicks each, one lot two to three days old, the other a week old; one nest with two eggs and a chick just hatched out.

On 1st December, whilst we were wading in the reeds at the ibisery, we saw seven white birds sitting on the tops of the teatrees about three-quarters of a mile away. We thought they were White Egrets, but on the next day they were up there again and proved to be Royal Spoonbills in breeding-plumage with very well-developed crests.

*†*Platalea flavipes*, Yellow-billed Spoonbill (68).—Sixteen were seen at Joanna, 46 at Bool Lagoon, three at Konetta, two near Naracoorte, and one at Reedy Creek. A specimen was taken—♂, breeding; iris white with a tinge of pink; bill yellow with two reddish spots at either side at the base; bare skin of throat, lores, and sides of face bluish with a pinkish tinge, bordered posteriorly by a narrow black line; inside mouth flesh pink; the middle and greater under wing-coverts faintly tinged with rose pink; legs yellow, scales hexagonal; scales at knees and joints of toes heavily outlined in black; soles and nails black; on the under-surface of the extremity of the mandible a large irregular patch of dull black; total length 89 cm., spread

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148 cm., weight 4 lb. Stomach contents: in the gizzard several pieces of the wing-cases of water-beetles as well as very much triturated materials. Shafts of primaries white. Many nests were found in the teatrees in Bool Lagoon. Those examined and found occupied were built from seven to eighteen feet above the water—two contained three young each, in one nest a chick was much larger than the others; one with two eggs and a chick; one with a chick which was calling; four with three eggs each; one with two eggs; and one with chicks (not counted).

*†*Notophox novae-hollandiae*, White-faced Heron (51).

Notophox pacifica, White-necked (Pacific) Heron (7).—Two were seen near St. Helena Swamp, one near Naracoorte, and four at Wilmot Swamp.

**Nycticorax caledonicus*, Nankeen Night-Heron (1,081).—Eighty-one were seen at Bool Lagoon, and 1,000 at Konetta. Two specimens were taken—♂, iris bright yellow; bill black, centre underneath yellowish green; margins of eyelids and bare skin in front of eyes green; legs and feet yellow tinged green, soles bright yellow, nails light horn colour; inside mouth black, tinged green on palate; total length 55.5 cm.; spread 110 cm. Stomach almost empty, but contained remains of yabbies. ♀, total length 55 cm.; spread 104 cm.; weight 1 lb. 13 oz. There were many nests in the teatrees at the heronry on Konetta, but the water had all dried off the swamp. One nest examined contained three chicks, another contained one egg. It was at this heronry we saw 2,000 birds on 21st November, 1928 ("S.A. Ornithologist," Vol. X, p. 62), but on this visit we estimated the number seen at 1,000.

*†*Botaurus poiciloptilus*, Brown Bittern (19).—Three were noted at Joanna, seven at Bool Lagoon, one at Konetta, one at St. Helena Swamp, six at Wilmot Swamp, and one at Reedy Creek. Nests.—At Bool Lagoon, one in the reeds ready for eggs. At Wilmot Swamp, four nests were found—(1) A flat platform, oval-shaped, 9 x 15 inches, made of dry rushes with a few green ones intermingled; the bottom of the nest was four inches above the water; five eggs. (2) A platform a foot above the water, four chicks in the nest and two dead ones in the water beside it. Description of chick—iris dull yellow; legs and feet light green; the whole of the skin where it showed between the down light green; face green; bill yellowish green, culmen brown, tip of maxilla black, pin-point at end of maxilla white; down light

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brown. A portion of a shell was in the nest. (3) With four chicks, older than those in (2). These chicks opened their mouths widely, and all snapped at us when we got close to the nest. (4) With five young. A parent bird flushed off the nest. On a swamp beside the road near Joanna we saw on the first occasion we passed a Bittern with its head and neck straight up and stiff amongst the reeds. It looked just like a brown stick, and held to that attitude for a few minutes, then lowered itself out of view. On the next occasion on which we passed there were three Bitterns in the stick posture. We stopped to watch for some time, during which the heads and necks were upraised and lowered a few times. A Bittern was flushed from the cutting-grass clumps in Bool Lagoon. Whilst we were wading through the ibisery many "booms" were heard.

*†*Chenopsis atrata*, Black Swan (418).—Five cygnets with two adult birds were on a swamp near Joanna, and a similar flock on Bool Lagoon, whilst in addition two cygnets were by themselves on the latter Lagoon.

*†*Casarca tadornoides*, Mountain-Duck (527). — Three hundred and forty-nine of these were seen along the Coorong. One young bird was seen on a swamp near Joanna, three adults with two young on Wilmot Swamp, and two adults and one young on a Konetta swamp.

**Anas superciliosa*, Black Duck (107).—A nest was found at Bool Lagoon in a big fork in a teatree and five feet up from very shallow water; 10 eggs. ♀ flushed off the nest.

*†*Querquedula gibberifrons*, Grey Teal (154).—Two adults with six young and an adult with two young were seen on a swamp near Joanna.

Nyroca australis, Hardhead (White-eyed) Duck (7).—These were seen on Drain Lake, two and a half miles from Robe, in company with the next species.

Oxyura australis, Blue-billed Duck (10).—On the Drain Lake, Robe. The motor-car was stopped on the road at the edge of the Lake, and with the aid of field-glasses we had a good view of these birds resting on the water about 100 yards out. There were five ♂ and five ♀ in the flock. The bill of the male is ultramarine blue, his body chestnut. As soon as the birds moved, the tail, which is spiny-looking, was spread out and stuck up in the air. The females are a dark-brown colour.

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Grey Teal and Hardhead made up a flock of 40 on Waltowa Swamp.

*The species could not be determined of two Ducks near Konetta and ten on Bool Lagoon.

**Biziura lobata*, Musk Duck (30).—At Bool Lagoon a nest was found in a deep cavity formed by the branching out of all the limbs of a teatree. This cavity was about nine inches above the level of the water, there about 18 inches deep. The nest was made of strips of teatree bark and small twigs, and lined with much of the bird's own feathers; three eggs, but four eggs had evidently been pushed out of the nest, one of which was resting on a root of the tree close to the water, and was well incubated, whilst the three others on the bottom were fresh. Jack Hood mentioned that he had on previous occasions found eggs pushed out of the nests of Musk Ducks. At one spot in the ibisery where the reeds were high there were three Musk Ducks (which we could not see) frequently uttering the peculiar one-note whistle.

*†*Circus approximans*, Swamp-Harrier (32).—One bird near Wellington, carrying some object in its talons, was attacked and followed up by a Spur-winged Plover. A nest in the reeds on Bool Lagoon contained one egg. In Wilmot Swamp a nest one foot above the water contained three chicks and an egg chipping. An adult bird flushed from this nest. At Boatswain Point a nest containing two chicks and an infertile egg was found in a clump of sword-grass.

Accipiter cirrocephalus, Collared Sparrowhawk (3).—One at Konetta and two at Mount Benson. At the grove of *Pinus insignis* alongside the road at Mount Benson a bird flew to the nest, when the sitting bird flushed, and the two flew to another pine. The stick nest was 60 feet from the ground and lined with fresh gumleaves. It contained four chicks covered in down coloured a dirty white; the dark wing quills were just showing; bills dark bluish; cere, legs, and feet yellow. At Konetta homestead a nest of this year was about 60 feet up in a *Pinus insignis*. It contained shells of two eggs, one a longitudinal half and the other an egg holed at both ends, the damage having been done when the eggs were fresh. An older nest of the species was found, but was empty.

Uroaetus audax, Wedge-tailed Eagle (1).—This bird was seen 27 miles north of Kingston, near the Little Causeway.

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*†*Haliastur sphenurus*, Whistling Eagle (22).—Beyond the Causeway on the Coorong a Whistling Eagle, a Raven, and a Silver Gull flew up from a dead rabbit on the side of the road.

†*Falco longipennis*, Little Falcon (1).—This was seen near Joanna.

*†*Falco berigora*, Brown Hawk (6).

†*Falco cenchroides*, Nankeen Kestrel (21).

Hawks.—The species of two seen near Ashville could not be determined.

Tyto alba, Barn-Owl (1).—This was flushed from its roosting-place in a *Pinus insignis* at Konetta homestead.

Trichoglossus moluccanus, Rainbow (Blue Mountain) Lorikeet (8).—Two were seen at Kingston and six at 13 miles north of that town.

†*Glossopsitta concinna*, Musk Lorikeet (145) and †*G. porphyrocephala*, Purple-crowned Lorikeet (79).—The great majority of these birds was seen near Joanna. The flowering spikes of the grass-trees *Xanthorrhoea australis* had a great attraction for these Lorikeets. The flowering spike is from 16 inches to 4 feet 10 inches in length, and at times three or more Musk Lorikeets would be on one spike and cause it to bend almost horizontally. Other species seen extracting the nectar from the spikes were Black-chinned, White-plumed, and Yellow-winged Honeyeaters, Noisy Miners, Brush Wattle-Birds, and at Konetta the European Starling. The Musk Lorikeets were in numbers eating the green fruit on the plumbtrees in Mr. Lemon's orchard.

†*Calyptorhynchus funereus*, Yellow-tailed Black Cockatoo (14).—All were seen near-Joanna.

†*Kakatoe galerita*, White Cockatoo (9).—Eight were seen near Joanna and one at Reedy Creek.

†*Platycercus elegans*, Crimson Rosella (31).—These were seen near Joanna, at St. Helena, and Wilmot Swamps and Reedy Creek.

Platycercus adelaidae, Adelaide Rosella (7).—These were seen in the Mount Lofty Ranges.

†*Platycercus eximius*, Eastern Rosella (33).—These were seen along the Coorong, near Joanna and Naracoorte, at Konetta, Reedy Creek, St. Helena, and Wilmot Swamps.

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†*Psephotus haematonotus*, Red-backed Parrot (186).—These were met with in the Mount Lofty Ranges, along the Coorong, and in the South-East. Near Joanna an adult bird was seen feeding two young.

Neophema elegans, Elegant Parrot (4).—This flock was seen along the Coorong, north of Kingston.

The species could not be determined of a pair of *Neophema* which flew across the road 17 miles north of Kingston.

Melospittacus undulatus, Budgerygah (50).—This flock flushed from some high dry grass at Woodchester on 7th December.

†*Dacelo gigas*, Laughing Kookaburra (19).—These were seen in the Mount Lofty Ranges, near Joanna, at Konetta, Reedy Creek, and near Naracoorte. A nest was found at Konetta homestead 30 feet from the ground in a hollow 15 inches deep in a gumtree; three young.

†*Chalcites basalis*, Horsfield Bronze-Cuckoo (2).—These were noted near Joanna.

*†*Hirundo neoxena*, Welcome Swallow (203).—Under the low bridge at Wilmot Swamp 17 nests were counted. Three of them were examined; one contained five eggs, another had eggs which were not counted, the third was feathered and ready for eggs. Under the low bridge at Reedy Creek 18 nests were counted, 13 of which were examined. Nine were empty, one contained five eggs, two had three eggs each, and one had an egg. In both instances it is most probable that some of the nests were not this season's.

Cheramoeca leucosterna, White-backed Swallow (3).—These were seen along the Coorong between Wood's Wells and Salt Creek.

†*Hylochelidon nigricans*, Tree-Martin (113).

Hylochelidon ariel, Fairy Martin (2).—These were seen along the Coorong near Wood's Wells.

†*Rhipidura flabellifera*, Grey Fantail (9):

*†*Rhipidura leucophrys*, Willie Wagtail (30).—A nest was seven feet from the ground in a walnut-tree at the side of Mr. Lemon's homestead. The bird, presumably the female, was sitting, and called frequently whilst on the nest. At times it left the nest and called, but went back after a short period. Its

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mate called during the night from some trees farther away. There appeared to be three eggs in the nest.

†*Seisura inquieta*, Restless Flycatcher (3).

†*Microeca fascinans*, Jacky Winter (14).

†*Petroica multicolor*, Scarlet Robin (15).

†*Melanodryas cucullata*, Hooded Robin (20).

†*Pachycephala rufiventris*, Rufous Whistler (2).

†*Colluricincla harmonica*, Grey Shrike-Thrush (26).—One afternoon near Joanna we followed up a bird that was uttering a single melancholy note. The caller turned out to be a young bird of this species.

*†*Grallina cyanoleuca*, Magpie-Lark (84).—Nests.—At Bool Lagoon a nest was built 15 feet from the water in a teatree; it was lined with feathers, and contained three eggs. At the heronry on Konetta a nest, containing two young, was built 15 feet from the ground in a teatree. Another nest at the same place was lined with feathers, but was empty. At Konetta homestead a nest was 30 feet from the ground in a gumtree. The two birds flew out of the tree, one much later than the other. On being climbed to, the nest was found empty.

†*Falcunculus frontatus*, Eastern Shrike-Tit (2).

†*Coracina novae-hollandiae*, Black-faced Cuckoo-Shrike (4).

†*Coracina robusta*, Little Cuckoo-Shrike (4).—These were seen near Joanna. The call sounded to me like "Wishack."

†*Lalage tricolor*, White-winged Triller (2).—These were seen near Joanna.

†*Pomatostomus temporalis*, Grey-crowned Babbler (17).—These were seen along the Coorong, near Joanna, and at Konetta.

†*Pomatostomus superciliosus*, White-browed Babbler (5).—These were seen near Joanna.

*†*Epthianura albifrons*, White-fronted Chat (516).

†*Aphelocephala leucopsis*, Eastern Whiteface (31).

†*Acanthiza lineata*, Striated Thornbill (5).—These were seen near Joanna and at Robe.

**Acanthiza pusilla*, Brown Thornbill (5).—In the teatree at Bool Lagoon a nest was being built at three feet above the water.

†*Acanthiza reguloides*, Buff-tailed Thornbill (3).—These were seen near Joanna.

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†*Acanthiza chrysorrhoa*, Yellow-tailed Thornbill (88).

†*Acanthiza*.—Two were seen near Joanna, but the species could not be determined.

Sericornis frontalis, White-browed Scrub-Wren (19).

**Calamanthus fuliginosus*, Striated Field-Wren (32).—These were seen at Bool Lagoon, Reedy Creek, Boatswain Point, Robe, and Kingston.

Cinclorhamphus cruralis, Brown Songlark (5).

Dasyornis broadbenti, Rufous Bristle-Bird (52).—These were met with at Robe, Boatswain Point, and in the early morning on 7th December we heard birds singing at 15, 16, 20, and 20½ miles north of Kingston, on the Younghusband Peninsula side, as we motored past. A nest was found at Boatswain Point by Mr. Parsons within a minute after our leaving the motor-car. It was six inches from the ground in a clump of swordgrass, built of dry swordgrass and small twigs, lined with finer swordgrass, rootlets, a few bits of sheep's wool, and some vegetable fibre; two eggs.

**Megalurus gramineus*, Little Grassbird (42).—These were found at Bool Lagoon and St. Helena Swamp. A nest at Bool Lagoon was five feet from the water, and built in the overhanging branchlets of a teatree; it contained young just hatched.

**Acrocephalus australis*, Reed-Warbler (24).—These were noted at Wellington and Bool Lagoon. Four nests were found at Bool Lagoon—(1) In the reeds else to the ibisery and ready for eggs. (2) In the overhanging branchlets of a teatree, five feet above the water; two eggs. (3) In a similar position in a teatree; two young. (4) In a similar position, with three young almost fully fledged.

*†*Cisticola exilis*, Golden-headed Fantail-Warbler (56).—Two were met with near Joanna, 37 at Bool Lagoon, two near Struan, one on Konetta, 13 at Reedy Creek, and one at Wilmot Swamp. Two of those at Reedy Creek were very young birds, to which we were able to get quite close. The female parent was flushed with them. A specimen was taken at Bool Lagoon—♂, iris brown; bill, upper light horn, lower mandible whitish; legs and feet very light brown; inside mouth light brown. Two nests were found in the clumps of cutting-grass in the drying and dried-up portion of Bool Lagoon near the shore-line. (1) In the middle of a clump of cutting-grass and about two feet from

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the ground, composed outwardly of dry grass stems and plentifully covered with white spider-egg sacs, and a little green spider-silk, lined mostly with thistledown; height over all three and a half inches; diameter of entrance one inch; width of body of nest two inches; four eggs. The female flushed from the nest, and in a little time came back towards the nest with a white egg-sac in her bill. The male bird also approached whilst we were at the nesting site. (2) Six inches from the ground in a very thin tussock of cutting-grass. Three young, two of which flew from the nest when Mr. Lemon bent down to examine it. All the young had striped heads. A pair was also seen feeding; three young.

*†*Malurus cyaneus*, Superb Blue-Wren (100).—A nest was found at Konetta homestead containing broken eggshells, most probably destroyed by some marauder. Two of these birds were seen in the reeds about the ibisery in Bool Lagoon, fully 200 yards from the nearest land. One bird was singing in a high clump (10 feet) of the common reed. It flew down to the edge of the water, where it was at once attacked by a Reed-Warbler.

†*Artamus cyanopterus*, Dusky Wood-Swallow (26).—Near Joanna an adult bird was seen feeding two young.

†*Climacteris picumnus*, Brown Treecreeper (26).—These were seen near Joanna, Naracoorte, and Woodchester.

†*Climacteris leucophaea*, White-throated Treecreeper (2).—These were seen near Joanna.

†*Pardalotus ornatus*, Red-tipped Pardalote (29).

Pardalote.—One was seen near McGrath's Flat, Coorong, but the species could not be determined.

*†*Zosterops halmaturina*, Grey-backed Silvereye (82).—A nest was found at Bool Lagoon in the overhanging branchlets of a teatree and three feet above the water; three eggs.

†*Melithreptus gularis*, Black-chinned Honeyeater (8).

†*Acanthorhynchus tenuirostris*, Eastern Spinebill (1).

†*Gliciphila melanops*, Tawny-crowned Honeyeater (6).

Meliphaga virescens, Singing Honeyeater (39).

†*Meliphaga penicillata*, White-plumed Honeyeater (54).

†*Meliornis novae-hollandiae*, Yellow-winged Honeyeater (100).

†*Myzantha melanocephala*, Noisy Miner (42).

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- †*Anthochaera chrysoptera*, Little (Brush) Wattle-Bird (63).
Anthochaera carunculata, Red Wattle-Bird (23).
Acanthagenys rufogularis, Spiny-cheeked Honeyeater (186).
 *†*Anthus australis*, Pipit (139).
 *†*Mirafra javanica*, Horsfield Bushlark (9).
Zonaeginthus bellus, Beautiful Firetail (2).
 †*Zonaeginthus guttatus*, Diamond Firetail (6).
Taeniopygia castanotis, Chestnut-eared Finch (5).
 *†*Corvus coronoides*, Raven (190).
 †*Corcorax melanorhamphus*, White-winged Chough (20).
 †*Strepera melanoptera*, Black-winged Currawong (11).
Cracticus torquatus, Grey Butcher-Bird (14).
 *†*Gymnorhina hypoleuca*, White-backed Magpie (629).