

Magpie, which he supposed was referable to the above species, but he did not succeed in getting a specimen.

✓ ***Cracticus rufescens* (*Melloria quoyi jardini*).**—The Black Butcher-Bird is a very shy bird, and, though common, it is not often seen. It mostly keeps to the scrub. Mr. M'Lennan noted a pair on the Archer River, in the mangroves.

✓ ***Cracticus nigrogularis* (*C. nigrogularis inkermani*).**—The Black-throated Butcher-Bird was fairly plentiful in the forest country bordering the Archer River.

✓ ***Cracticus mentalis* (*Bulestes mentalis kempi*).**—The Black-backed Butcher-Bird was fairly plentiful in the forest country along the Archer River.

“Alike in Difference.”

BY E. J. BANFIELD, R.A.O.U., DUNK ISLAND, QUEENSLAND.

FOR many years past notes have been taken of the dates of arrival and departure of Nutmeg-Pigeons and Metallic Starlings at Dunk Island, each observation confirming the opinion that these delightful birds, so unlike in appearance and character, have two conspicuous qualities in common: both are gregarious; both wondrously precise in habit; both come to these parts from regions nearer the equator early in August, and fly to warmer regions late in March. Though they have not, so far, been observed earlier than August, on two occasions during twenty years casual and embarrassed flocks have lingered after March, one being seen well on in April and another towards the end of May.

This season the first appearance of the heralds of each species were recorded on 8th August, during anything but welcoming weather. The atmosphere was cool and dull, with high winds and driving rain—just such conditions as seem to be abhorrent to sun-loving birds seeking rest and refreshment after long and turbulent flight. The Pigeons flew about excitedly, as if not too sure of locality, for had they not been taught by experience to expect serenity and light and warmth? The Starlings darted in droves through the forest, shrieking distractedly, and disappeared. Two days after, when the sun began to resume control of local meteorological affairs, the Starlings came again, to forthwith tear in haste and flurry the fragments of last year's nests attached to the Moreton Bay ash tree in the forest. Many new nests were built with all possible speed, and the love-making in the tall, slim tree which has been time out of mind the headquarters of the most neighbourly colony showed off the sprightly and beautiful birds in most engaging and fantastic attitudes. On 26th September dozens of broken egg-shells were found under the tree. There will be successive broods until the end of January. A pair of Sulphur-crested Cockatoos still nests in the Starling tree, and the Red-backed Sea-Eagles' eyrie close along-

side is bigger than ever. This one tree has therefore a motley and worthy annual output.

The Nutmeg-Pigeons, less vivacious, and more suspicious of man—for do they not represent easy sport to pot-hunters who raid their nesting resorts?—have crowded Purtaboi, the islet in the bay. Before sunrise a murmur arises from the islet, soon to develop into a loud and melodious sound which might be likened to that of water falling from a height into an echoing ravine among hollow rocks, and at the first gleam of the sun the swaying trees shed their snowy blossom as flock after flock swoops seawards and sails across the blue channel to accustomed feeding-grounds among the ranges of the mainland. The few that remain on the islet are silent during the day; but when the male birds begin to strut and to "Coo-hoo," and to fly with clicking wings, the sounds from Purtaboi, blended and mellowed, will contrast with the unrestrained shriekings of the black, burnished, red-eyed Starlings. An hour before sunset the Pigeons begin to return. The sighing casuarinas are soon overweighted by masses of plump white birds. The living snow settles at dusk and melts at dawn.

Diary records show dates of departure and arrival of Metallic Starlings and Nutmeg-Pigeons during recent years to be as follows:—

1912.—12th August, Starlings arrive; 13th, Nutmegs arrive. 18th December, two Red-backed Sea-Eagles roosting in Moreton Bay ash tree this evening; Starlings seem to have deserted the tree. 20th December, Starlings deserted Moreton Bay ash tree, after several half-hearted attempts to re-establish colony.

1913.—12th March, have not seen Starlings or Nutmegs since 10th. 4th August, heard first of the Starlings; 11th, Starlings have begun to lay in accustomed tree, Red-backed Sea-Eagles also begin housekeeping; 24th, Nutmegs in great numbers—must have missed observation of the first flocks.

1914.—26th March, Starlings manœuvring in great flocks, preparing for northward flight; have not seen Nutmegs since 16th. 10th August.—Starlings return; few in the "nestful tree"; first of the Nutmegs seen.

1915.—25th March, have not seen Nutmegs during last few days; note this day for departure. 1st April, saw flock of Starlings—last. 14th August, heard Starlings, about a week earlier than usual; 29th, Starlings begin to build; Nutmegs arrive in large flocks; probably the heralds came a fortnight ago, escaping notice.

1916.—25th March, Starlings depart; 28th, Nutmegs depart. 1st August, Starlings make their first appearance; 2nd, Nutmegs this afternoon on Purtaboi.

1917.—12th April, Nutmegs on Purtaboi, latest date on record save for the belated flocks specified. 4th July, Sea-Eagles begin

to build in Starling tree, Cockatoos occupying spout in same tree. 8th August, Starlings and Nutmegs arrive. 26th September, egg-shells beneath Starling tree.

On the last day of September this year an attempt was made during a boating trip to compute the number of Nutmeg-Pigeons passing from the mainland to the Family Islands, a few miles to the southward of Dunk Island. The birds in each trailing flock, as well as the number of flocks per minute, were averaged, it being estimated that 20,000 passed in an hour over a strip of ocean a mile wide. Since the aerial pathway favoured by the birds from the mainland to the islets is about three miles wide, not less than 60,000 travelled over it. The parties to the estimate agreed among themselves that it had the merit of being conservative.

Metallic Starlings may be even more numerous than Nutmeg-Pigeons, for their colonies, though not so concentrated as those of the Pigeons, are more fruitful. The Nutmeg hatches a single egg at each successive brood during the season; the Starling's clutch averages four. The first brood may be born in September; the final as late as the end of February.

May both the beautiful and entertaining birds be long one of the most edifying features of the tropical coast!

Further Notes upon Cormorants, their Food, Temperatures, &c.

BY CAPT. S. A. WHITE, M.B.O.U., R.A.O.U.

ONE or two articles having appeared in *The Emu* from my pen upon this subject, it may be interesting to the readers of *The Emu* to see further information upon a subject the writer has been following up for some time past.

The Messrs. Rymill Bros. having most kindly arranged to take Dr. Morgan and the writer to a well-known Cormorant rookery in the mangroves, we left on the evening of 22nd March, 1917, in the motor yacht *Avocet*, and reached the mangrove swamps next day and at once started operations. Only two species of Cormorants were met with—*Hypoleucus varius hypoleucus*, the orange-faced bird, and *Microcarbo melanoleucus* (Little Pied Cormorant). Twelve specimens of the larger species were taken, and five of the smaller. I am indebted to my friend Dr. A. M. Morgan for the temperatures, and we spent Saturday morning taking measurements, dissecting, and making examination of stomach contents, which resulted as follows:—

Stomach contents, *Hypoleucus v. hypoleucus*.—No. 1, leatherjacket (*Monacanthus*, sp.), box-fish (*Aracana*, sp.), weed-fish (*Odax waterhousi*), trumpeter (*Atypechthys strigatus*); No. 2, many fish remains, most likely same as preceding one; No. 3, quite empty; No. 4, fish remains like weed-fish; No. 5, fish remains, parasitic worms; No. 6, portions of squid, one box-fish; No. 7, a small