

RHIPIDURA DRYAS (Wood Fantail).

Gould, sp. 137; Cat. B. Brit. Mus., vol. iv., p. 322.

The eggs and nest of this beautiful Fantail are very similar to those of its near ally, the Rufous Fantail (*R. rufifrons*). The nest was found on 18th November, situated on a thin fork near the end of a branch and about 10 feet from the ground; it was composed of fine shreds of bark and lined with fine grass seed-stalks and lightly covered outwardly with cobwebs, and measures—internal depth, 1 inch; external, $1\frac{1}{2}$ inches; internal breadth, $1\frac{1}{4}$ inches; external, 2 inches. The nest contained two fresh eggs, which are light buff in colour and marked on the larger end only, where the small reddish-brown and greyish markings form a confluent zone. The eggs measure—(1) .66 x .48 inch; (2) .67 x .49 inch.

PTILOSCLERA VERSICOLOR (Red-crowned Lorikeet).

Gould, sp. 447; Cat. B. Brit. Mus., vol. xx., p. 66.

This Lorikeet is found in Northern Australia, and they generally live in flocks, except when nesting. They lay their eggs in a hollow limb, generally at a considerable distance from the ground, and the rotten wood on which the eggs are laid usually soon discolours them. The eggs are white, without gloss, and one taken on 27th January measures .98 x .78 inch. The clutch is either one or two eggs.

PLATYCERCUS AMATHUSIA (Blue-cheeked Parrakeet).

Gould, sp. 420; Cat. B. Brit. Mus., vol. xx., p. 548.

This bird ranges over Northern Australia, and is very similar to the Pale-headed Parrakeet (*P. pallidiceps*). It was nesting in the Port Darwin district in July, two clutches of eggs being taken, one on the 10th and the other on the 14th of that month. They are pure white and glossy, and measure—A, (1) .99 x .79, (2) 1 x .78; B, (1) 1.01 x .78, (2) 1 x .80. The two nests each had two fresh eggs in, evidently uncompleted clutches.

Stray Feathers.

LATE CLUTCHES OF LARKS.—On 8th February I noticed a nest of the Black-breasted Song-Lark (*Cinclorhamphus cruralis*) containing four eggs. On the 14th of same month I saw another nest containing five eggs—a record clutch, I think, for this species. On 26th I found a nest of the Bush-Lark (*Mirafra horsfieldi*) with three eggs on the point of hatching.—FRED. L. BERNEY. Richmond (N.Q.), 4/3/03.

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NUDE COCKATOOS.—I have a tame white Cockatoo (Sulphur-crested) which is a bit of a puzzle. He most persistently refuses to grow feathers. Eighteen months ago I took him from the nest

a most perfect, full-feathered bird. He has run at large ever since, fed on varied food. He learned to talk quickly, but, alas! moulted his beautiful white coat and is now in an almost nude state, every fresh crop of feathers being a failure, the feather or stump breaking off just close to the skin. I observed a couple of wild Cockatoos in a similar condition last week. Unnatural state of affairs, is it not?—A. M. POWELL. Bungarby, *via* Cooma, N.S.W.

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A "GALAH" NOTE.—Last week, as a lady was proceeding from Sandringham station to her home, she saw a bird pursued by two Hawks, which have been very bold in that neighbourhood this season. This turned out to be a "Galah" Cockatoo, which almost immediately flew on to her dress, and accompanied her home. Though at first it would allow no one but its rescuer to touch it, it afterwards proved so tame that it would perch on shoulder or arm of any member of the family, and, though at liberty, came regularly to be fed. One morning it was missing, but on "Cocky" being called two or three times it surprised the young lady looking for it by answering "Here I am," close by her. On another occasion a son was sitting under the tea-tree, smoking, and the Galah climbed on to him, only to descend at once, however, and return with a stick in its beak. This was only one of many instances of mimicry shown by it.—H. KENDALL. 17/3/03.

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HOW GANNETS DIVE.—On the 17th of October, 1902, one Gannet was diving in the estuary of the Derwent between One-Tree and Crayfish Points. This was the first I had seen since the 2nd of June, and was apparently a casual visitor, for no more appeared until the 5th of November, from which day until now (21st January) they have been seen frequently. The dive of the Gannet (so far as the eye can judge) is taken vertically, or very nearly so. As a rule the wings remain expanded until the bird reaches (or almost reaches) the water. But occasionally the wings are closed for an instant at some height above the water—perhaps in order to accelerate the speed by reducing the extent of surface to which the air offers resistance. The foregoing remarks apply to dives taken from a height of about 15 feet and over. When they are taken from a lower elevation the course is frequently an oblique one. I desire in this note to correct a formerly expressed opinion regarding the movements of the Gannet in diving.*—J. R. M'CLYMONT. Brown's River Road, near Hobart.

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BROWN'S RIVER ROAD (NEAR HOBART) NOTES.—In the first week of August of a recent winter, a company of Yellow-rumped Tits (*Acanthiza chrysorrhoa*), frequenting some suburban fields,

* Papers and Proc. Roy. Soc. Tas., 1887, p. 113.

separated and began nest-building. But this was not the first sign of coming spring. On the 21st of July two Yellow-throated Honey-eaters (*Ptilotis flavigularis*) began to trill their call-note, to which they often added three or four grace-notes, mellower in quality. On the 24th day of the same month a Magpie (*Gymnorhina hyperleuca*) flew into a black wattle (acacia) and piped for the space of half an hour—it may have been to please his mate. Variations were introduced such as I had not heard at other seasons of the year. Tail and body moved continually whilst he was singing. A pair of the above-mentioned Yellow-rumped Tits selected as the site of their nest a pittosporum growing in a grass plot. Two varieties of this shrub grew at the place; one was broad-leafed, but had few branchlets; the other was narrow-leafed, but abounded in branchlets, and was impenetrable to the eye unless one peered into it. The Tits wisely preferred to build in latter. They began about the 15th of August, and continued to build until the 22nd, when the open (top) nest was completed. It was not feather-lined either at that time or later. After a few days' interval the birds resumed work, and finished the covered nest (with the exception, perhaps, of the external entrance) on the 5th of September. But, a few days later, perceiving doubtless that the nest had been disturbed, they removed the feathers with which the covered nest was lined, and deserted the spot. The measurements of this nest were as follows:—The open nest was 2 inches in depth, and $2\frac{1}{2}$ inches in diameter externally, the walls being thin and frail, as I believe is always the case. The egg receptacle was separated from the open nest by a partition only. It was $4\frac{1}{2}$ inches deep externally, and had an unprotected elliptical entrance in the side. Another Yellow-rumped Tit's nest, which was built in a cypress, contained partially incubated eggs on the 17th of November. A miniature archway, leading to the interior of the lower nest, was formed of wiry plant-stalks; it was $1\frac{1}{4}$ inches in height and projected $1\frac{3}{8}$ inches from the main structure. The testimony of eye-witnesses who have seen the open (or top) nest occupied by adult or young birds would be of great value, for it would set at rest all doubts regarding its use. Whilst these Tits were building, I had ample opportunity of observing that earth-worms constitute an important article of the diet of this species. These the birds killed by battering upon a post or clod. A stomach which was examined contained insect remains. About the middle of September the two birds to whose spring notes I have alluded commenced to build. On the 19th of the month the female Magpie was collecting flocks of wool wherewith to line her nest of small sticks, built in a blue gum (eucalypt) 40 or 50 feet from the ground. She held each flock down with one foot, and pulled its fibres apart with her beak, before carrying it away. The Yellow-throated Honey-eaters lined their nest with horse-hairs, plucked from the horse's back whilst at work. Two young Magpies appeared with their parents in the open on the 24th of November. The old birds were very jealous of intruders,

and frequently chased other birds from their neighbourhood. On one occasion both of them followed a Raven (or Crow) for a long distance, and tried to hasten its departure by repeated peckings, but the marauder did not once turn upon them. Ground-Larks (*Anthus australis*) were vigorously pursued, but were never overtaken. Whether the Lark ascended in short spirals, or shot almost vertically upwards, or sailed down the wind like a leaf floating down a stream, he left the Magpie behind, and the latter invariably gave up the pursuit and returned to the ground when the Lark had attained the height of from 100 to 200 feet.—J. R. M'CLYMONT.

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MALURI.—A MODIFICATION.—Mr. A. W. Milligan, of his own volition, has been good enough to send for my inspection the Blue-breasted Wrens (the true *M. pulcherrimus* of Gould*), procured on his Stirling Range expedition (an account of which is given in this issue) that have enabled me to modify a portion of my work on the *Maluri*. In "Nests and Eggs," p. 178, I have stated:—"Should there really be a bird in the south-west with an indigo throat, then there is also a black-throated variety between it (*M. pulcherrimus*) and *M. lamberti* in the east." This proves to be a somewhat paradoxical statement—*wrong* in supposing there was not an indigo-throated bird, but *right* in stating there is a black-throated variety between it and *M. lamberti*. For this intermediate variety Mr. A. J. North has since assigned the name *M. assimilis*—see *Vict. Nat.*, vol. xviii., p. 29 (June, 1901). Attention, however, was first directed to this probable third kind in *The Ibis*, p. 11 (January, 1901). For No. 149, or *Malurus pulcherrimus*, in my book, page 177, the "geographical distribution" should be Western Australia only, while North-West and South Australia and Victoria apply to *M. assimilis*, with Mr. North's additional localities thrown in. Consequently, in regard to these alterations, "Observations," &c., under my *M. pulcherrimus* may be construed accordingly.—A. J. CAMPBELL.

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BLACK BUTCHER-BIRD.—Writing from Cairns, under date 28/1/03, Mr. E. M. Cornwall says:—21st December, 1902.—Went to a patch of scrub where I had taken a clutch of eggs last season and had seen the birds at different times during the year. Approaching the place I saw one old bird carrying food, and immediately after the other appeared carrying a grub. I then saw that they were feeding two fully-fledged young, *which were both brown*. Although I have seen very many of both the black and brown Butcher-Birds, I have never noticed the black and brown together. The pairs were invariably either both black or both brown. Mr. W. T. White says he has found the young ones

* The British Museum "Catalogue of Birds," vol. iv., p. 295, erroneously states that the throat is "deep black" instead of indigo-blue.

of the black variety in the nest, and they were both black. Mr. Le Souëf tenders the same evidence. About Cairns it is very noticeable that whilst the brown variety favours the stunted scrubs along the sea shore, and even haunts the mangroves a great deal, the black one prefers the deeper shades of the jungle proper, or the melaleuca swamps. I have hitherto felt quite satisfied that they were two distinct varieties, but after what I saw on the 21st ult. my opinion has been shaken.

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SNAKES ON KING ISLAND.—No account of King Island would be complete without reference to the snakes, both copper-headed and tiger, so frequently met with in moist places. Before a collector has been an hour at work he would have material for several "snake yarns," though the reptiles are not now as plentiful as they were in former years. Credit can hardly be given to the statement that bracken fern is so thickly matted that snakes can travel as easily along the top as on the ground; but a visit to the island, and the meeting with several snakes sunning themselves breast high, will convince the doubter. When hunting about one morning for a Robin recently shot, I found a snake "pointing" the dead bird, possibly contemplating making my prey his. Another sight of which I was witness suggests the probability of there being method in the way a snake procures its food. A number of small birds (Wrens, Scrub-Wrens, and Tits, eight in all), actively jumping about in a bush and scolding their loudest, proclaimed the presence of an enemy. If the snake had not been disturbed from its position on the top of a tussock, it would doubtless have had an opportunity of fascinating or striking at one of the birds when it came within reach.—A. G. CAMPBELL.

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"THE DEVELOPMENT OF COLOUR IN THE DEFINITIVE FEATHER."—When concluding the note on Mr. Le Souëf's paper (*The Emu*, vol. ii., p. 196) the conjecture was put forward that "to arrive at a satisfactory conclusion microscopical research into the structure of living feathers will have to play a large part in the inquiry." Since writing this the news comes that science has taken a prominent part in the discussion of the "moult or no moult" question, and that the microscope has been effectively used to solve some of its problems. In 1899 Dr. R. M. Strong, a thoroughly qualified histologist, began a series of investigations into the development of colour in feathers. As the work was done in the famous Harvard Zoological Laboratory, where every facility for proper observation is at hand, where none but a thoroughly qualified man would be employed, and where everything is under the direction of Dr. E. L. Mark, the results should be reliable. Remiges from living birds, feather-germs, and dry feathers were used. The results are embodied in a technical paper (under the above title) by the investigator ("Bulletin Mus. Compt. Zool.," vol. xl., No. 3, pp. 146-186), and are accompanied by nine plates. Dr. Strong

deals with the various theories put forward, and shows where they fail. Starting with the assumption that a solution of the problem (change of colour without moult) "could not be attained without a thorough consideration of the cause of colour and its development," he arrives at the conclusions that—"The contention for a flow of pigment from the barbs into the barbules, &c. . . . is at once made absurd by the fact that the barbules are pigmented before the barbs are differentiated. Variations in colour patterns are usually correlated with variations in the distribution of pigment in the earlier stages of the feather's development. *When completed the feather is composed of cells which have been entirely metamorphosed into a firm horny substance, and its pigment is imbedded in that lifeless matter.* The cells composing a barbule are fused into a solid, more or less homogeneous structure. The pigment of one portion of the barbule is as effectively isolated from that of another as is the colouring in a piece of agate. Likewise in the barb and rachis pigment is definitely and permanently located either in the solid cortex or in effectively separated cells of the medulla, and *there are no pores large enough to permit the passage of melanin granules.* The characteristic longitudinal arrangement of melanin granules, which one finds at the close of cornification of the feather, is permanent. . . . When the feather is completed the dermal pulp possesses no functional connection with it; *the barbs and barbules are then isolated from the vital processes of the organism, and have no further power of growth.* . . .

"1. Most feather pigments are too resistant to chemical re-agents to warrant belief in their solution and redistribution.

"15. Before cornification has ceased all the pigment which the feather is ever to receive has been supplied to the cells composing its fundament.

"16. Changes in the colour of plumage may take place—(1) by a moult, during which the new feathers may have the same pigmentation as their predecessors or a different one; (2) by a loss of certain portions of the feather; or (3) by physical disintegration in the cortex of the feather as the result of exposure. *There is no satisfactory evidence of a process of re-pigmentation, and the histological conditions of the feather render such a process highly improbable.*"

All who read Dr. Strong's paper will be disposed to agree with the verdict of the editor of *The Auk*, that it is "one of the most noteworthy ornithological papers of the year." But even though the passages I have italicized are so definite in expression that they would hardly have been used by a scientific man who was not absolutely certain as to his premises, one may be pardoned for doubting whether the last word has been said on the subject. The range of birds examined has been comparatively small, and the results of further research will be anxiously awaited.—H. KENDALL.

OWLS IN CAPTIVITY FED BY BUSH BRETHREN.—A very striking instance of sympathy or solicitude has occurred between Chestnut-faced Owls (*Strix nova-hollandiae*) who were enjoying their full liberty and some of their less fortunate brethren who have been confined for some years in a cage in the City Park, Launceston. The occurrence first came under my notice about September last year, when the keeper of the animals drew my attention to the number of young rabbits that the "cats" were bringing home and depositing in front of the Owls' cage, some being left so near that the Owls were able to drag several of the pieces into their cage. After observing this strange occurrence for some days, I could plainly see that the "cat" theory was untenable. A solution of the mystery presented itself soon afterwards. Being in the vicinity of the Owls' cage one evening after dark, the birds seemed to be making an unusual commotion, and attention was attracted to an Owl passing quite close to me, and perching on the top of the cage. I could see it flying about quite plainly by the light from a street lamp at no great distance. I have seen the Owls repeatedly since, and heard them chattering quite close to the cage, but in the uncertain light have not been able to detect them carrying food. There can be no doubt, however, as to the source of the secret supply of food, which consisted generally of the hind-quarters of young rabbits, bandicoots, and bush rats. "Hind-quarters" are mentioned particularly, because there were only three Owls in the cage, and the supply was generally far in excess of their requirements; consequently they were seemingly too indolent to take receipt of all the food offered. Some, therefore, was allowed to drop in front of the cage, elevated above the ground about 2 feet. From the remains found I conclude that the providers had the first dainty morsel themselves, and further that more than one Owl was engaged in this laudable enterprise. One morning in particular I counted the remains of no less than four rabbits, in addition to one whole carcass; there were also the remains of one bandicoot. All these had to be carried some distance after being caught, and taken almost right into the centre of the city, in the full glare of the electric light. The occurrence is more remarkable because the cage front is composed of $1\frac{1}{2}$ -inch mesh wire netting. Indications showed that generally the food was passed in about half-way up the front of the cage. The feeding (which I attribute to the pairing and nesting season) has now (April) almost ceased.—W. M'GOWAN, Superintendent Public Reserves, Launceston.

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OTWAY DISTRICT.—Rufous Bristle-Bird (*Sphenura broadbenti*).—This bird was plentiful, though more often heard than seen, from Forrest down to Apollo Bay. In all its habits it suggests the Coachwhip-Bird. I found a nest in a "cutting-grass" tussock in a small glade on the side of a scrubby gully at the back of Krambruk (see *Emu*, vol. ii., pl. 12). There was a

young bird just hatched and an egg that would have hatched next day. Local residents had no distinctive name for the Bristle-Bird, and few of them seemed to have ever seen it.

Flame-breasted Robin (*Petræca phœnicea*).—We saw at least eight pairs of this species in a walk from Forrest to the coast (25 miles), and not one of the Scarlet-breasted birds (*P. leggit*). At Apollo Bay there were a few of the latter, but the "Flame-breasts" were still in an easy majority. There is not the slightest doubt in my mind that they breed throughout this forest. I saw old birds feeding what seemed to be this season's young on several occasions, though I did not discover any nests.

Sooty Oyster-catcher (*Hæmatopus unicolor*).—Two or three pairs were seen at the Elliott River. They are not common west of Port Phillip, and on the long stretches of beach between the Heads and Lorne have never been noted, so far as I am aware.

General.—We noted 62 species in five days' observation.—C. F. BELCHER.

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CAIRNS NOTES.—When reading friend Hall's theories *re* reversion of colours, I was reminded of a set of Kingfisher (*H. macleayi*) eggs I got last year. The nest was in a white ants' nest, in a tree, and when I put my hand in to feel for the eggs I pulled it out very quickly, having felt something slimy and cold, like a snake. Having broken up the nest, I found a great green frog quietly sitting on a clutch of four eggs. Whether he had gone in the hole for shelter, or had thought to try his hand at incubating I cannot say; but the frog had made the nest wet, and the eggs when removed were so coated with chocolate mud that, though thoroughly washed, the stains were ineradicable. Some of the markings were in blotches, and really appeared as if beneath the surface of the shell. The eggs have been disposed of in exchange, or would have been forwarded.—E. M. CORNWALL. 16/4/03.

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CLARKE ISLAND (BASS STRAIT) NOTES.—The small islands of Bass Strait are much frequented by that unlucky bird, the Mutton-Bird (*Puffinus tenuirostris*). I call them unlucky because such great numbers are annually taken by the residents for home consumption and the local markets; indeed, to such an extent that it is questionable if they will stand the yearly drain. Persons ignorant of their habits have spoken of the probability of their breeding twice a year, but when studied this will not hold good. If we consider the facts that the birds arrive here in September and commence scratching out their burrows about the 20th of that month; the eggs are generally laid on 25th November, varying a day, and sometimes two, either earlier or later, according to the state of the weather—when stormy earlier, and when fine the reverse; and that the young birds are not able to fly until the end of April and beginning of May, this

would make nearly $7\frac{1}{2}$ months for the bird to rear the first fledgling; this leaves $4\frac{1}{2}$ months, so we must naturally conclude that the bird would not so materially change its habits as to produce another brood in such a less space of time. *Re* the Mutton-Bird laying a second time after it has been robbed, I can only say they have never been known to do so. The theory was that if you robbed a nest when the egg was fresh and examined it again in ten or twelve days' time you would most likely find another egg. This year, to prove what I state, I marked a number of nests after robbing them, and looked at them again after the stated time and also nearly a month later, but in both instances found no eggs. I examined numbers of nests that had been robbed by other people (who had been there and ate the eggs, not being scientifically inclined), with the like result.

A marked decrease is evident in the numbers of the Cape Barren Geese (*Cereopsis novæ-hollandiæ*) in Bass Strait. This year in particular the nests found on the sheep-breeding islands were almost *nil*; it is probable that this is due to the fact that the residents rob the nests so systematically every year that the birds seek more secluded spots in the breeding season, and return to their old haunts later. A curious feature about these birds is that, although web-footed, they are never seen swimming except when wounded or too young to fly. They are very suspicious, and one must be careful not to touch their nests or handle the eggs if wishing to obtain a clutch of goslings from them. People have taken eggs out of a nest and finding them unfit for blowing, &c., have replaced them carefully, and, happening to return the same way, have been astounded to see the parent bird breaking them with great expedition.

The Summer-Bird or Cuckoo-Shrike (*Graucalus parvirostris*) usually makes its appearance in September in flocks of six or eight. Only one clutch has been found, on one of the principal islands, which shows that they do not breed here to any extent.

The Wood-Swallow (*Artamus sordidus*) arrives about the same time as the preceding bird, and also seems to prefer breeding elsewhere, although its eggs have been found once or twice. In each case the nest was built on that of another bird.

Spur-winged Plover (*Lobivanellus lobatus*) lays in October, but it is difficult to find the eggs of this noisy bird. The nest is simply a slight depression in the ground, and the eggs are apt to be mistaken for small stones, particularly as their colour resembles the surroundings to a greater or lesser extent.

The Large-billed Ground-Thrush (*Geocichla macrorhyncha*) is also a rare bird. It constructs its green moss-made nest generally in a hollow stump in a thickly wooded gully and almost invariably near water. It is a very shy bird.

The Black-cheeked Falcon (*Falco melanogenys*) is not plentiful. It is generally found nesting among cliffs or rocky gorges, the eggs being almost similar to those of Brown Hawks (*Hieracidea*).

The Black and Pied Oyster-catchers (*Hæmatopus unicolor* and

H. longirostris) lay in numbers along the coast. The eggs are much alike in size and colour; still one can usually tell the different species. The Pied Oyster-catcher's eggs are rounder, and the deep brown spots larger and less numerous than on the Black bird's. The latter bird lays either among the seaweed, well above high water mark, or on the mesembryanthemum in the clefts of the rocks, while the Pied species prefers the sea beach.

The Hooded and Red-capped Dottrels (*Ægialitis cucullata* and *Æ. ruficapilla*) lay to a considerable extent along the coasts. The Hooded merely scratches a hole in the white sand overlooking the beach. The nest is easily traced by the numerous marks of the parents in the vicinity. It occasionally lays in the coarse gravel, where the eggs are very hard to locate, owing to their similarity to the surroundings. The Red-capped Dottrel generally lays close to the sea amongst *débris* cast up by the waves, and occasionally on the bank.

Mountain Ducks (*Casarca tadornoides*) were known to breed on Clarke Island many years ago, but appear to have gone elsewhere. A pair occupied the hollow top (about 30 feet from the ground) of a dead gum tree, and if one struck the tree the beautiful bird would fly off, to return later when the coast was clear.—J. D. MACLAINE. 27/12/02.

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TAWONGA. (VICT.) NOTES.—5th July.—The smaller insectivorous birds are somewhat scarce on the flats. The customary number of "Fire-tails" (Finches) and Buff-rumped Tits came as usual; but the Robins, which came towards the end of April, disappeared again, and now are represented by a few birds.

12th July.—Last Sunday I noticed a Water-Hen among the rushes on the roadside at the foot of Creamer's Hill (Dederang). It seemed to be nesting. Ducks are plentiful in the lagoons. A few Cockatoos visit Tawonga Reserve at long intervals.

26th July.—During the week a flock of White Cockatoos visited a newly-sown paddock. Until now few "Cockies" have been seen, but it seems that fresh earth soon attracts them. They feed in flocks, each with its sentinel in some dry tree, and for such noisy birds they are very quiet. Sometimes birds are caught in rabbit traps set in the paddock and baited with a few peas or some grains of maize. This misfortune does not rid the farmer of the rest of the pests, for they continue feeding in the neighbourhood of the trap. Perhaps there is some truth in the bushman's statement that the Cockatoo never fears what he sees.

2nd August.—Some Ibises which were seen on 5th, 12th, and 19th July, are still about, but make no sign of nesting. The popular knowledge that they are good eating makes them shy. (Do they know that steak is tenpence a pound?)

9th August.—The Plovers seem to be preparing for nesting.

Where individuals were seen, pairs, threes, or fours are common. Nothing is changing among the small migratory birds, but perhaps the backwardness of the season, owing to the want of rain, may account for this.

16th August.—Two signs of spring have to be noted. The full song of a Magpie was heard in the beginning of the week, and about the middle the Swallows, which have been away for some time, returned. Satin-Birds are in flocks. One flock was noted with about a score of green birds and but one black.

30th August.—Swallows have begun to build against the screen of the verandah. As they are building on boards exposed to full glare of the sun, they use horsehair to bind their work. [A break unfortunately here occurs in Mr. Wilson's observations, owing to his illness. This is to be regretted the more as spring migrations were now due.—EDS.]

4th October.—The Swallow's nest on the verandah, according to a little boy, "fell down." It was resting on a planed hardwood "tie," and plastered to painted boards, the latter only half an inch thick. A few Ibises are still to be seen about the swamps.

11th October.—Are the Fantails jackals for the horse? One morning this week a Fantail (Black and White) was noted looking very seriously into a horse's face as the animal grazed. Its position was about 15 inches from the horse's nose, and the quadruped seemed pleased with the biped's attentions. Probably the horse disturbed insect colonies in securing his breakfast, and but for the Fantail's help he would have suffered for his intrusion.

18th October.—Building seems to be the prevailing business of the birds. The body hair from two horses, that had been removed by currycomb, had in a few days entirely disappeared. Combing from manes and tails were not in so much demand, but disappeared later in the week. The birds visited the yard early, while the material was wet. Unfortunately it was not possible to follow them to their nesting-places. One Ibis was seen and heard at different times during the week. Gang-Gang Cockatoos do not seem to be nesting yet. Occasionally three or four are seen flying from the ranges east of the river towards those to the west, about eight o'clock in the morning. They fly high, and sexual distinguishing marks are invisible, but I think the Gang-Gang is at least a bigamist. Indeed, I should not wonder if he were convicted of polygamy.

Attention is called to hens (barn-door) assuming the plumage of cocks. These seem to be, in every case, very old, and their vagaries have been preceded by intermittent laying, the production of small eggs, and finally malformed eggs. These seem to point to exhaustion of reproductive power. The change of plumage is accompanied by other changes. The hen attempts to crow, she walks like a cock, and she shuns her sex. Has she ceased to be an object of desire to the lord of the harem? Does he accordingly cease to protect her? Is she safer from her

natural enemies in borrowed plumes? Apparently she has become incapable of self-defence, and when killed she is found to be "feathers and bones." Crowing hens are objects of detestation in Gaelic folk-lore. The reason seems plain. A hen-wife who permits a fowl to reach such an age as is necessary for the change of garb must be very inefficient. Does the assumption by the female of male plumage take place in wild bird-life? Its analogy is surely seen in the black "death robe" of the Satin-Bird.*

25th October.—On Sunday Jackasses were observed selecting hollows, obviously for nesting. The male seems to perform a sort of dance among the boughs of the dead tree on which his mate sits. On Monday morning a flock of Ibises (about 20) was disturbed while feeding in the swamp. When they rise they fly a short distance into the heads of dead trees, and then set out, in a "follow-the-leader" flight for some other feeding ground. On 26th October a flock of about 40 was noticed feeding *on the flat*, away from the swamp. There has been rain enough to moisten the ground to some depth. The nearest were never within gunshot.

On 30th a Robin was noticed among the bushes by the river. The situation is very quiet, and probably, as he appeared unwilling to fly far, he had domicile somewhere near.

8th November.—Small flocks of Ibises are reported in the district. A large and early immigration of Leatherheads is also to be noted. These birds seem to have difficulty in finding food.

15th November.—A young Wattle-Bird was brought to school by one of the children. It was fully fledged and seemed well nourished. Advice to leave the rest to papa and mamma was given.

22nd November.—The Buff-rumped Tit is noted where the Robin was seen lately, busily engaged picking up a living. I am not at all sure that these birds in an ordinary season breed on the flats, but those under notice seemed to be foraging for others besides themselves.

29th November.—Necessity compelled a journey to Bright. The road winds upwards over a range for five miles. The creeks which cross the road on the east side of the range are still running, and birds were seen at the various altitudes as usual. Near the top a Gang-Gang Cockatoo hen flew past my horses' heads, so near that both shied. On the western side of the range the creeks are dry, and bird life in the upper regions is very poorly represented. When the region of running water in German

* This phase of bird life was alluded to by Aristotle, and some interesting instances are cited in notes to Letter xxxv. of White's "Natural History of Selborne" (Blackwood's edition). There seems no reason why such change should not occur in wild birds, but the analogy given above is a doubtful one. The "death robe" of the Satin Bower-Bird is usually regarded as only the assumption of mature plumage by the male.—EDS.

Creek is reached birds are met with in great numbers. One marked peculiarity is that the Gang-Gangs, both males and females, are to be seen near the river (Ovens), though in the higher regions they are neither to be seen nor heard. As I saw no young birds, and as the hens were flying about at 8 a.m., I conclude that the Gang-Gangs have not bred, and are not now breeding. The dry weather is probably responsible for the birds missing a season.

6th December.—On Wednesday a flock of Ibises, flying high, passed over the school, travelling in a southerly direction. Statements are frequently made that strange birds are to be seen and are breeding here this year. Birds of all kinds seem to be more numerous than usual. One nest was shown to me. It was on the top of a stump about 4 inches in diameter and 2 feet high. It contained two zebra-striped young, scarcely distinguishable from the decaying wood, and proved to be the nursery of the Rufous Fantail. Surely an unusual site.

13th December.—On Tuesday morning, about 7, a large flock of Ibises was seen feeding on grasshoppers on the flat. This was increased by smaller bodies arriving—about 12 in each—for the next hour. As soon as breakfast was over each detachment flew into the dry trees.

This morning, also, about 7.30, the first of the "Bogong Crows" arrived. Before their arrival a few Crows were seen flying north, as if their business was to get out of the way. The "Crows" fly in loose order, and give plenty of notice as to their whereabouts. The caw of these "Crows" is quite different from that of the real Crow. The supply of grasshoppers, &c., is very good, and as the crops are very early it is quite possible that the "Crows" will escape the accusation, only too well founded, of eating the grain.

20th December.—On Tuesday a Noisy Miner hatched out two young ones, and on Wednesday a third, in a tree whose branches touch the building used as a school. The boys took great interest in the nest and the process of incubation, but no sign of violence was shown to the birds.

27th December.—The large flocks of Ibises have broken up into small bodies of from 25 to 100. These are eating up grasshoppers in places missed by the large flocks. For example, the large flocks almost exterminated grasshoppers on the large paddocks, and now the smaller flocks are cleaning up the bends of the river. "Bogong Crows" are associated with the Ibises. These have missed their customary diet of wheat, rye, &c., owing to their arrival being later than usual. A journey to Bright reveals the same condition of things as was formerly noted. The late rains have had no appreciable effect on the water in the mountain creeks.

To 31st December.—The small birds—Wrens, &c.—seem to be more numerous than usual on the flats. They have bred, but by the river, not in the ranges.

The ravages of foxes are complained of. Obviously the supply of small game has given out in the mountains, and Reynard has shifted into winter quarters in the height of summer.—JAMES WILSON.

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ACANTHIZA TENUIROSTRIS (ZIETZ).—EXTENSION OF LOCALITY.—I beg to report that this small species has been found in Western Australia, there being a specimen in the Perth Museum from the Murchison district. As our vice-president has pointed out when describing this new species (Proc. Roy. Soc. S.A., vol. xxiv., p. 112, 1900), it is nearest allied to *A. reguloides* (Buff-rumped Tit), but is a smaller bird, and in addition to other differences easily distinguished by its yellowish-white upper tail coverts instead of ochreous as in *A. reguloides*. It appears to me that *A. tenuirostris* is the western form of *A. reguloides*, or *vice versa*.—A. W. MILLIGAN. Perth (W.A.), 6/5/03.

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WOOD-SWALLOWS EATING HONEY.—Concerning my note on this subject (*Emu*, vol. ii., p. 217), perhaps I should have stated that the stomachs of those birds examined contained not only insects, but also a yellowish sticky liquid, just like honey. The ants did not amount to more than three or four to each bird, but of course one would not expect to find full stomachs at the early hour at which the birds were shot. But, apart from that, the steady, deliberate movements of the bird's head and neck as it buried its beak in each blossom, holding it there a moment while, as I think, it extracted the nectar, all indicated the honey-eater rather than the insect-hunter. There was no peck or quick movement such as you would expect with the latter.—FRED. L. BERNEY. Richmond (N.Q.), 15/4/03.

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BREEDING SEASON OF THE BUSTARD (*EUPODOTIS AUSTRALIS*) IN NORTH QUEENSLAND.—

- 4th January (1902).—Male bird "strutting."
- 17th January (1898).—Nest, two eggs.
- 27th January (1898).—Two nests, one egg in each.
- 30th January (1903).—Male bird "strutting."
- 31st January (1900).—Nest, two eggs.
- 18th February (1898).—Nest, one egg.
- 18th February (1903).—Turkey Bustards "calling" at night.
- 27th February (1902).—Nest, one egg.
- 28th February (1898).—Young bird just able to fly.
- 8th March (1898).—Young bird just able to fly.
- 22nd March (1898).—Nest, one egg, much incubated.
- 4th April (1902).—Young bird just able to fly.
- 16th June (1901).—Nest, one egg, bird flushed.
- 13th July (1901).—Bird shot contained hard-shelled egg; would have been deposited within about a week.

25th December (1898).—Bustards "calling" at night.

26th December (1899).—Male bird "strutting."

With the exception of two instances (16th June and 13th July) all these records point to January, February, and March as the nesting months here. The "strutting" and "calling" are also confined to these months, with the end of December thrown in. I can find no mention made of the "calling" by any authority. It is only done at night, and consequently hard to prove. I may possibly be wrong, but don't fancy so. The "call" is a soft, hollow roar, which one finds hard to describe in words, but it can be produced by contracting the lips to a circle just large enough to insert the point of one's little finger and then pronouncing "who-o-o-o," drawn out by expressing the breath fairly forcibly, so that the sound is produced by the rigid lips and not the roof of the mouth.—FRED. L. BERNEY. Richmond (N.Q.), 15/4/03.

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CASTERTON (VICT.) NOTES.—On two occasions I have noted male birds of Brown Song-Lark (*Cinchorhamphus cruralis*) after the others had left. They were shy and quite songless.

In the latter end of winter last year I found Sparrows (introduced) rearing broods in the deserted homes of the Fairy Martin (*Petrochelidon ariel*).

Two seasons ago saw nest with two eggs of White-browed Sericornis (*S. frontalis*) in a hanging fern in a bush-house. They were finally deserted. This season they reared two broods in a large pampas grass in the garden.

Swallows (*Hirundo neoxena*) in great numbers have remained here this year.

Last year I saw large numbers of Tree-Swallows (*Petrochiledon nigricans*) "camping" on the dry sandy bed of the Glenelg River. They seemed to be simply resting. As the weather was warm, could it be that they were "cooling off"? They were all packed together and when alarmed flew away, only to return in a little while.

16th April, 1903.—Saw first Robin (Flame-breasted).—ERNEST A. D'OMBRAIN. 26/4/03.

Descriptions of a New *Xerophila* and a New *Acanthiza* from Western Australia.

BY ALEX. WM. MILLIGAN, PERTH.

SOME twelve months ago a single skin of a *Xerophila*, obtained at Pindar, in the Murchison district of this State, was submitted to me for identification by Mr. B. H. Woodward, F.G.S., the Director of the Western Australian Museum.

A careful examination disclosed that major specific differences (hereafter mentioned) existed between it and the already described