

cob-webs stuck over with bits of dead leaves and chips, and "exactly resemble the masses made . . . by one of our commonest [South African] spiders. I have more than once seen an inhabited spider's web forming part and parcel of the nest. Whether the nest was built in the spider's web, or whether the spider found it in a convenient place and selected it herself, or was brought in with a bit of web by the bird and then took up her abode and enlarged it, I cannot tell; but there the incongruous allies live."

Many animals which exhibit bright colours are either dangerous or unpalatable. Rainbow⁶ refers to two Australian spiders, *Erioden rubricapitatum* and *Latrodectus hasselti*, which display red as a prominent part of their colour scheme, and comments that although they are common their bodies "are never found in the crops of insectivorous birds nor, so far as I can find, in the nests of wasps."

REFERENCES:

1. *Emu*, vol. xxvi, p. 14 (at p. 18).
2. "Protective Adaptations in the Animal Kingdom," *Smithsonian Miscellaneous Collections*, vol. 85, no. 7.
3. *Emu*, vols. xxxiv and xxxv.
4. *The Biology of Spiders*, p. 130.
5. *Ibis*, vol. vi, no. 3, p. 462.
6. *Aust. Nat.*, vol. i, part iv, p. 43.

Stray Feathers

Frogmouth on the Ground.—A pair of Frogmouths has built in the trees round our home for the last three years: always in some tall fir trees. This season we were interested in the fact that the bird was on the nest for six weeks. When we went out at nights with a torch a bird was always sitting. The site was very high up in the tree so we could not see into the nest. Eventually one young bird hatched out. Lately the family sat every day in a large cherry tree just outside our verandah, one adult and the young one on one bough, and the other parent by itself. One day, after seeing them all in such a position, I was surprised, when I went out about ten minutes later, to see one of the adult birds on the garden path, in the sunshine, with its wings at full stretch. I thought something must have happened to it, but when I went nearer to look more closely it flew away into a neighbouring oak tree, so I can only conclude it was sunning itself. I mentioned this to Dr. O'Ombrain, and he suggested that I should send a note to you about it.—(MRS.) A. M. LAWRENCE, Glen Innes, N.S.W., 8/2/40.

Eggs of the Australian Dotterel.—On page 155 of the January *Emu* (vol. xxxix) I refer to the unusual green colour of eggs of this species. Looking through my volumes of the *South Australian Ornithologist* I now notice that in volume v, at page 51, Mr. McGilp, in an article on the species, says that "the eggs, when freshly laid, are of a

greenish colour, but this changes to yellowish-brown after a few days." Evidently I was extremely fortunate in having my bird return to such fresh eggs.—C. E. BRYANT, Melbourne, Vic., 5/2/40.

The Ground Parrot.—I had an opportunity recently to visit Fraser Island, off the coast of Queensland, in search of the Ground Parrot. It was recorded there some years ago and was observed by Mr. A. H. Chisholm, who wrote, in *Birds and Green Places*: "We were riding (three foresters and myself), spread out, through one of the broad, banksia-skirted dry swamps that abound on the island, when there came a call that two parrot-like birds had risen and dropped again. Following, we soon flushed two birds, which rose with an eddying, zig-zag, swallow-like flight, alternately gliding and beating the wings rapidly, travelled some fifty yards, and then dived into the grass. There was a display of mottled green and yellow as they flew." Mr. Chisholm flushed Ground Parrots in the same locality on two other days. Weather conditions and other circumstances limited to a single day my time for seeking this bird, and that I was able to succeed in my quest is due entirely to the assistance of an aboriginal who knows the island well and the wallum country which is the favoured habitat of the Ground Parrot. "Wallum," my guide informed me, is the aboriginal name for the banksia, or native honeysuckle.

Going ashore at the back of Moon Point, we groped through a belt of mangroves, traversed a stretch of lightly-timbered country, and came at last to level plains covered with grass and low shrubs and made beautiful by a profusion of pink and blue flowers, among which boronia and some graceful ground orchids were conspicuous. In parallel courses we intersected this country for some time, and I had stopped in a clump of banksias to view some Honey-eaters at close quarters when I heard a call from my companion. He pointed to a spot from which he had flushed a Ground Parrot, and said it had dived to the ground about seventy or eighty yards away. Having reached a point beyond the place where the bird had alighted, we approached it carefully, and had the satisfaction of seeing it rise between us and fly swiftly for some distance with a zig-zag motion like that of a Snipe, until it disappeared behind some banksias. I had travelled over 800 miles intent on seeing the bird, and even a fleeting glimpse of a single specimen made the journey worth while!

A fisherman who used to be employed on the island informed me later that seven or eight years ago Ground Parrots were "fairly plentiful" in the wallum country, while three or four years ago my aboriginal guide found a nest containing one egg. However, dingoes, snakes and lizards are numerous on the island, and it seems certain

that even in this remote place the Ground Parrot is failing to hold its own and will be exterminated some day. No doubt its natural enemies existed when numbers of aborigines inhabited the island, and it is not easy to state precisely what kind or degree of interference with a previous balance has caused the numbers of these Parrots to decline so greatly.—N. L. ROBERTS, Beecroft, N.S.W., 3/10/39.

Notes on the White-faced Heron.—In a day's walk in almost any direction around Bendigo, the White-faced Heron (*Notophoxya novæ-hollandiæ*) may be seen, whether it be at small dams in the pasture areas, along the water-courses draining the city's storm water, or around the numerous small water storages that are the reservoirs to supply the irrigation of pasture land around the district. Usually the Heron is found singly, but at the Epsom swamp, which is a proclaimed sanctuary, situate about five miles north-east of Bendigo, several birds may be found feeding in close proximity.

While visiting one of the small reservoirs in August, 1939, for the purpose of observing the Black-fronted Dotterels which were then nesting, I was startled by a Heron leaving her nest hurriedly, causing a great disturbance as she beat her wings on the foliage of the tree. The nest, about forty feet from the ground, was built on top of a partly-dead mistletoe growing on a grey-box tree. On climbing to the nest I found four chicks a little more than a week old, all sitting together and forming one compact ball of blue-grey down. On the ground below I found the pieces of the egg shells which had survived the fall from the nest, two of them being more than half of the complete shell.

The next day I visited the nest for the purposes of photography, and, after setting up the camera and fixing cotton to a vantage point about fifty or sixty yards from the tree, I went for a walk around the reservoir, keeping sight of the parent bird. After a time the bird under observation flew to a tree near the nest tree, and apparently remained in it all the remainder of the morning—about two hours. At the end of that period I returned to the tree incautiously, when I was surprised to see the other parent bird standing on the nest platform watching me. I made an exposure, but on development I found the bird had its back to the camera and its head twisted at a peculiar angle, while watching me.

A week later when I visited the nest the chicks were covered with pin-feathers and were standing up in the nest in a very defiant attitude. As I reached my hand to them they darted their bills forward and made throaty noises in an effort to drive me away. While standing with

their mandibles agape the lower mandible seemed very elastic, so much so that with the light behind the bird and while the throaty noise was being made, about an inch of neck was visible through the back of the throat.

During this performance the parent bird returned to the neighbouring tree and made croaking noises similar to the notes they usually utter when disturbed while feeding, but did not attempt to attack or drive me away. One chick was smaller than the other three, whilst another chick, probably a male, was bigger and lustier than all others. Two exposures were made, the first taken about twenty minutes after setting up the camera, when apparently the male, which had been away gathering food, flew from a great distance, alighted on the nest platform and began feeding the young without noticing the camera. But when the camera clicked he stood watching. The picture showed movement in both the parent bird and young. I had to wait about an hour before the male returned to feed the young again and during that time the hen sat in a nearby tree. The next exposure was not made until after the young were fed and the bird faced the camera, though unfortunately with a portion of his beak behind a limb. The photograph accompanies this note.

A week later, on visiting the nest again, the smallest chick had died and was trampled into the nest. At that stage the nest generally was very dirty, but the three remaining chicks were very healthy and clean and made a great show of defence, during which, one by one, they regurgitated a pellet of food about two inches long and three-quarters of an inch thick, all the while backing away until finally they were perched on the limbs about the nest. When the camera was focused on to the nest platform the chicks were away out of the picture.

M. S. R. Sharland, writing of the White-faced Heron in *The Emu*, vol. xxx, page 268, stated that the clutches he had noted in Tasmania never exceeded three eggs, and although I have been able to climb to only the one nest to make observations, I notice that L. G. Chandler records in *The Emu*, vol. XXIII, page 71, a clutch of four eggs,* all of which hatched and reared to fly from the nest, although in his case a weakling was recorded, being unable to fly away with the others.

On examination of the food pellets which were regurgitated, fragments of fresh yabbies were plainly visible, but there was no evidence of small fish.—JOHN C. IPSEN, Bayne Street, Bendigo, 20/11/39.

Birds and the Cochineal Insect.—For the past three years I have been investigating the statement of a friend that

* Four or five eggs form the usual clutch.—ED.



White-faced Heron and young.

Photo. by J. C. Ipsen.

the work of the cochineal bug and the *Cactoblastis* moth in destroying prickly pear (*Opuntia inermis*) was being retarded because birds ate so many of the insects. My friend was very certain on the point, so it seemed worthy of some study. My conclusion is that the number of the insects eaten by birds is negligible, but certain ants, especially the mound ant (*Iridomyrmex detectus*), and, to a much less degree the small black ant (*I. rufoniger*) are certainly responsible for some diminution in the ranks of the cactus-eating insects, more especially in the bug. However, I must admit that I have seen birds actually eating the cochineal bug, but so rare were the instances that they seem to be the exceptions that test every rule. In three years I have only three records of birds attacking the insects, and, strangely, the records were provided by three widely different birds.

On June 17, 1937, I saw a Brown Tree-creeper (*Climacteris picumnus*) pecking at a pad of the pear, and I stole up to watch proceedings. From a distance of about ten yards I was able to see that the bird was really pecking the cochineal from the pad. A few minutes later I frightened the bird by a slight movement, and examined the pear; there were a few of the reddish smears of crushed cochineal on the pad as evidence that the Tree-creeper had raided the colony. Subsequently I revisited the locality on a number of occasions, but was unable to see a repeat performance.

Then, on March 4, 1938, I saw my second bird eating the cochineal. This time it was a Grey Shrike-Thrush (*Colluricincla harmonica*), and again there was definite evidence that the bird was making a meal of the insects.

The third case was on July 8, 1939, at about 5 p.m., and in this instance the bird was a female Rufous Whistler (*Pachycephala rufiventris*) which I watched for some minutes. It did not stay on the one pad, but visited several. However, it then flew into a low *Acacia*, and, although I watched for a time, it did not return to the pear.

Although the foregoing is rather conclusive proof that the insects are preyed on by birds, it seems to me that it is by a very few individuals, which have apparently discovered the secret of the little white freckles on the pestiferous cactus.—P. A. BOURKE, Gilgandra, N.S.W., 12/8/39.

Butcher-bird Mimicry.—As a mimic I find the Pied Butcher-bird (*Cracticus nigrogularis*) an adept, although it is only on rare occasions that the bird indulges in such pastimes. Quite recently I enjoyed the privilege of hearing the bird performing on two occasions (two consecutive days), and I found, as with all, or most, feathered mimics, the "concert" consisted largely of its own clear calls. Next to its own songs it chose to imitate the jubilant carolling of the Magpie. During these performances I noticed that

the bird never became excited and voluble, as do most mimics, neither did it seek an exposed position, but rather preferred a leafy bough upon which to rest whilst it "whispered" the calls and melodies of various local birds. The calls of the Noisy Miner were often repeated, whilst those of the Pale-headed Rosella, Pied Currawong, Galah, Spiny-cheeked Honeyeater and the little Owlet-Nightjar followed.

On one occasion the resting bird began the opening chuckle of the Kookaburra, which appears to be the stumbling-block of many individual mimics. Another interesting fact is that the harsh scream of the Owlet-Nightjar is most usually on the "programmes" of nearly all Australian bird mimics. Perhaps that is because this night-bird's cry is so often heard during the still of the bush nights when the day-birds are resting and not necessarily always sleeping.—N. H. E. McDONALD, Charleville, Qld., 31/8/39.

A Victorian Breeding Record of the Lesser Egret.—After the abnormal 1939 floods of the Murray River system, the Moira Lakes (Barmah, Vic.) were flooded to capacity, including Blacks' Swamp, where an Egret rookery has for many years been established in the red-gum forest, and extending with every wet season.

At Christmas, 1939, several thousands of Egrets were in all stages of nesting, and, although the rookery dried out in January, there were still some young in nests and about the rookery on February 29 of this year (1940). The mortality of young in the Barmah rookery in its last stages was considerable, I am informed by Mr. Geo. E. Clark, of Barmah, as the adjacent feeding areas dried out very rapidly during the hot months of January and February.

The discovery of breeding pairs of the Lesser Egret (*Egretta garzetta*) in the rookery justified a hope that the species would be present. About twenty birds were seen. The superficial similarity to the Plumed Egret (*Egretta intermedia*), which was the most plentiful species in the rookery, may have caused it to be overlooked in the past. Conspicuous features of the Little Egret in breeding plumage—which are lacking with the Plumed Egret—are the two five-inch or six-inch plumes at the back of the head. In addition to a difference in colour of the legs and bills of the two smaller Egrets, the Little Egret appears in the field not smaller than the Plumed, but slimmer and neater, as it does not seem to have as many plumes. A better name than "Little" Egret would be the "Spotless" Egret (Gould named this Egret *Herodias "immaculata"*).

Only two nests were definitely identified as those of *E. garzetta*, one with four young, the other with two eggs and two young, both nests low in trees where Plumed Egrets and White Egrets (*E. alba*) also had nests. Prior to the

present record, the most southern breeding records of *E. garzetta* appear to be those of Dr. W. MacGillivray (*The Emu*, vol. XXII, p. 168) at Lake Cawndilla, seventy miles south-east of Broken Hill, western New South Wales, in February, 1922, and F. C. Morse (*ib.*, vol. XXII, p. 38) in the Moree district, northern New South Wales, in December, 1921.

In addition to the three species of Egrets in the Barmah rookery, there were also breeding thousands of Nankeen Night-Herons, Pacific Herons and Little Black and Little Pied Cormorants.—JACK JONES, Parkville, Vic., 11/3/40.

The S.S. Maheno.—The note and photograph by Mr. N. L. Roberts in the January *Emu* were very interesting to me, as I knew the *Maheno* when she first came out from England. She was put on the run from Hobart to the Bluff, New Zealand, and I was a passenger on the first trip. Everything was spick and span, and it seems a pathetic ending to the career of the boat, that she should be lying on the shore of a tropic island, with the Ravens nesting in her gear.—H. STUART DOVE, Devonport, Tas., 17/2/40.

Red-tipped Pardalotes.—In the Murphy's Creek district, in south-eastern Queensland, the Red-tipped Pardalote is one of the commonest birds. Nesting normally occurs from August to November each year, but occasionally winter nestings take place. For example, in 1937 the breeding season was recorded as extending from May to August. The more-favoured nesting sites are creek and gully banks, but nests frequently occur in cavities in the sandstone of railway cuttings and in cracks between the timbers of bridge approaches. I have never discovered any nesting in trees, although I believe that form of nesting is common enough in other districts, and maybe more so where suitable nesting banks are not available.

The cup type of nest is the most common, but domed nests are frequently constructed. The latter type closely resembles the domed nest of the Spotted Pardalote (*P. punctatus*).

I consider that at least two years pass before the Red-tipped Pardalote develops its full complement of striations on the head and nape. During the period of development, several phases of head markings are recorded in breeding birds. Young birds just from the nest show the red spot on the wing very distinctly, the yellow of brow, throat and breast indistinctly. The head and nape of the juvenile is brown like the body and wings.

Many breeding birds handled have shown heavy striations on the head and nape, but the greater number have lightly striated heads or heads of full glossy black. Odd birds handled have had the head brown mottled with black or

black mottled with brown. These are probably young birds of the previous season's nesting that are breeding in a semi-mature state. The following is a record of birds handled during the years 1937 to 1939 and nests examined over the same period:

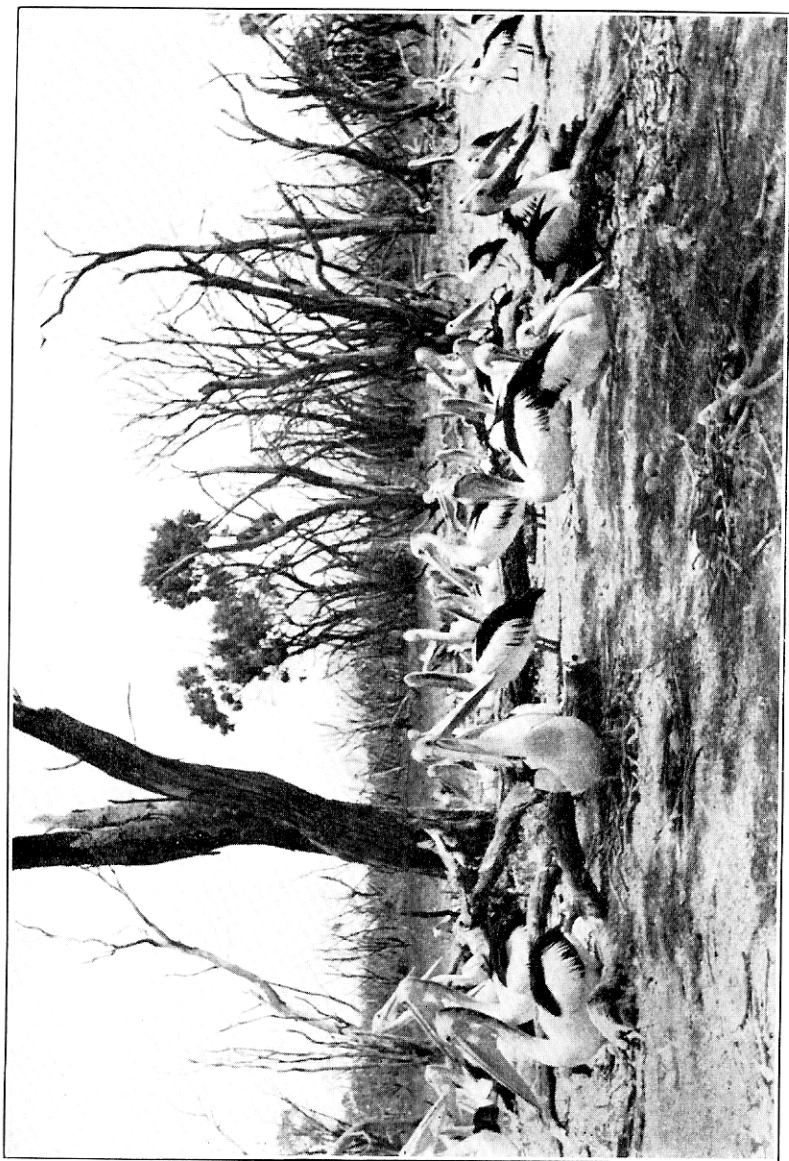
Heads heavily Striated	Lightly Striated	Black	Black, blotched brown	Brown, blotched black
8	11	17	4	1
Nests. Open, cup-shaped				Domed
21				13

In June, 1939, Red-tipped Pardalotes were busy tunneling and many nests were ready for eggs at the end of that month. Unfortunately for the birds, heavy winter rains occurred and all nests became badly soaked. When conditions became suitable the damaged nests were removed and new ones built. The rains interfered with what would have been a winter nesting and brought the breeding season to its normal time.

It would be fortunate for the birds if winter conditions were favourable for continued winter breeding as there is little interference with the nests during the cooler months. With spring nestings there are heavy losses of brooding birds and of young by the systematic raids of "goannas" in the latter part of the nesting season. Only isolated nests escape—those which are in difficult places for reptiles to attack them.

I have often wondered that the Red-tipped Pardalote has not received the attention of the Bronze Cuckoo. Many tunnels are quite large enough to permit the entrance of the smaller Cuckoos, especially where the nests are placed in cavities in railway cuttings. Some of these would permit even the larger Cuckoos to enter.—E. A. R. LORD, Murphy's Creek, Qld., 14/1/40.

A Food Item of the Maned Goose.—In the flooded areas of forest adjacent to the Moira Lakes (Murray River, Barmah, Vic.), one of the commonest aquatic plants was the water ribbons (*Triglochin procera*). Excepting in the channels and deeper pools, much of it did not reach maturity, as the water had receded. On our approaching the remaining marshy places flocks of Maned Geese (*Chenonetta jubata*) were flushed from the nearby dry areas, and inspection showed the fruiting-heads of *Triglochin* to be freshly and cleanly stripped of fruits, obviously by the geese. The heads were lying on the ground, in a withering state, as was the remainder of the plant. The heads were about half-grown, ten to twelve inches long, and contained roughly ninety fruits to an inch, small and closely packed. The vegetation of *Triglochin*, however, is exceedingly poisonous for stock.—JACK JONES, Parkville, Vic., 4/3/40.



Flock of breeding Pelicans.

Photo. by G. L. Lansell.

Pelicans Breeding in Southern Riverina.—The rainfall for 1939 in this district (Moulamein, N.S.W.) was far above the average and an exceptionally good season resulted. Later most of the rivers flooded and the waters filled nearly every lake and swamp, thus providing ideal conditions for almost every kind of water bird and many others. Not long ago I heard of a flock of some forty Pied Geese (*Anseranas semipalmata*) that had been seen on several occasions between Moulamein and Swan Hill, but was not fortunate enough to see them myself.

Recently I had word of Pelicans nesting on the flood waters of the Niemur River between Moulamein and Barham so, on February 1, we went out to see them and took with us cameras and field glasses. After travelling a considerable distance from the main road we came to a very quiet lignum swamp in the middle of which the Pelicans could be seen standing and sitting on the ground. I understand that their nests were on an island at first, but when we arrived the water had dried up to a certain extent and it remained only on three sides. We boated across the swamp and as we approached some of the birds made off into the water, but others remained on their nests till we were only fifty yards away and then very reluctantly waddled away to join their mates which were now swimming about close by.

The colony was comprised of about 150 nests, most of which contained two eggs or one egg and one young. Odd nests had three eggs and quite a number had two chicks just out of the eggs. These young Pelicans made a noise suggestive of hundreds of very young puppies yelping. Some of the parent birds had left large quantities of carp and other small fish on the edges of the nests, apparently for the young birds to eat. While we were there they made no attempt to eat the fish and at their age I should think it most unlikely they could do so. Needless to say a "high" odour was—well, very apparent. The nests were mere apologies—a few sticks or tufts of grass scratched around the eggs, which were on the bare ground. Some had a few large feathers around them, but the majority only had sticks. The nests were four or five feet apart and covered an area of about fifty yards square.

After photographing the nests and young Pelicans we concealed a camera and left it to be operated by a home-made electrical device, in one hour's time, when we hoped the parent birds would have returned. The print accompanying this note was taken by such method. The birds returned in a little over half an hour, so we were able to get another photo. during the afternoon. Not wishing continually to disturb the parent birds, we then set off around the swamp to see what other interesting birds we could find.

The swamp was almost covered with ducks of all descrip-

tions, but Grey Teal and Black Duck were the most common. Probably the most interesting of them all were twelve Plumed Tree-Ducks (*Dendrocygna eytoni*). They are longer in the legs and neck than most other ducks and seem to prefer to stand on the edge of the water rather than swim about. When they fly, the yellow band above the tail and under the wings can be seen plainly and they appear to fly slower than other ducks. Until the last few months I had not found Tree-Ducks here and they are not included in my list of birds of the Moulamein District which appeared in *The Emu* in October, 1933. On several occasions they have been seen about here recently and the foregoing is the third time I have come across them. Other ducks, in order of numbers, on that swamp are as follows: Wood-Duck (Maned Geese), Hardhead, Pink-eared Duck, Freckled Duck, Blue-winged Shoveller and Chestnut Teal.

During our walk around the swamp we also came across a small flock of Glossy Ibis, a Painted Snipe and several Black-breasted Buzzards. Glossy Ibis are never very common in these parts and neither are Buzzards. Painted Snipe are also generally uncommon, but this year they have been more plentiful than I can remember before. I have seen them on six occasions, usually in pairs on the margin of a swamp or stream, and I know of several more that were shot in January. One of them had a well-formed egg inside it, so apparently she was nesting at the time.

After collecting the camera we returned home, but hope to pay the Pelicans another visit before the young birds leave their nests.—G. L. LANSELL, Moulamein, N.S.W., 24/2/40.

Pink-eared Ducks and Maned Geese in Southern Victoria.—The occurrence of Pink-eared Ducks (*Malacorhynchus membranaceus*) and Maned Geese (or Wood-Duck) (*Chenonetta jubata*) in any number in central-southern Victoria is unusual, more particularly the appearance of the former. During the past month (February) in the Werribee-Altona district, huge rafts of ducks concentrated on all suitable areas. Resident flocks of Grey Teal and Black Duck were greatly augmented by more of those species, and with them were numbers of "Pink-ears" and Maned Geese. The influx is possibly due to the reversion of the Murray River system to normal after a year of conditions causing abnormally-prolific breeding. Greater and greater increase of water-fowl in the area forced a spreading-out, causing concentration in southern areas near Melbourne. Concentration in the Werribee-Altona area is seen only after prolific seasons elsewhere, as the breeding capacity of the area is not high, and, during normal seasons throughout the State, the resident flocks, in my experience, vary little, indicating that there is no regular migratory movement either to or from the area.

The Spectacle Ponds, near Point Cook, of about two

acres in extent, carried for more than two months, up to the opening day of the duck-season, a concentration of between five and six thousand ducks (by sectional count). Eight species were present—Grey Teal predominating, Chestnut Teal scattered among the Grey species, and then Hardheads, Black Ducks, Maned Geese, Pink-eared Ducks, Chestnut-breasted Shelducks and Musk Dusks. In addition, the brackish ponds supported many Black Swans, Hoary-headed Grebes and Australian Coots. Without doubt, an attraction was the presence of thick masses of fennel (or sago), pondweed (*Potamogeton pectinatus*) and slender water-milfoil (*Myriophyllum Muellieri*).—JACK JONES, Parkville, Vic., 11/3/40.

Cuckoos and Others.—The first fledged young Pallid Cuckoo this season was noticed on February 14, clinging to an overhead wire and having hard work to keep its balance against a strong sea-breeze. Perhaps on account of the larger size and pretty silvery plumage, we always seem to notice more young "Pallids" in the late summer than the young of any of the other Cuckoos. The adults had left by the end of January, but the young usually remain through February and March.

Owing to the wet, windy weather during part of December and most of January, the Honeyeaters seem to have had a poor nesting season. Now that the poker-plants (*Tritoma*) are in bloom in the garden, one or two "Spinebills" and "White-beards" (*Meliornis novæ-hollandiæ*), and an occasional Brush Wattle-bird (*Anthochaera chrysoptera*) visit the flowers for the nectar and insects, but nothing like the number which are there in good seasons. The "Crescents" and Yellow-throated Honeyeaters we hardly ever see, although previously they were constant visitors to those sweet tubular florets.

A bird which seems to hold its own, whatever the season, is the Spurwinged Plover (*Lobibya novæ-hollandiæ*), the screeching call of which, overhead, has become a very familiar sound during the past few years. In most of the paddocks about the town these fine birds may be seen standing about in their usual state of calm meditation, making an occasional sally of a few feet when some insect incautiously shows itself on the surface.—H. STUART DOVE, Devonport, Tas., 17/2/40.

Plumed Tree-Duck in Victoria.—In December, 1939, six Tree-Ducks were reported at Kotupna, central-northern Victoria. When I visited the district in early January I did not see the birds, but secured a feather taken from one that had been shot—one of the characteristic ornamental flank-plumes of *Dendrocygna eytoni*. Shortly afterwards I received a report from Picola West (a few miles from Kotupna) of a pair of Tree-Ducks with "seven striped young ones with very long legs," and later (February 29), five Tree-Ducks (probably *D. eytoni*) were still to be seen.

near Kotupna. Tree-Ducks (*D. eytoni* and *D. arcuata*) appear to occur more or less regularly, in small flocks, as far south as the Murray River valley, and sporadically south of that, but breeding records in Victoria are so few as to make the above second-hand report worthy of note.—JACK JONES, Parkville, Vic., 11/3/40.

A Reason for the Prolific Increase in Quail during Suitable Seasons.—The twelve months extending from Easter, 1939, to Easter, 1940, followed an extremely dry summer, which terminated two years of bad breeding conditions for Quail. The period under consideration was availed of by the Stubble Quail to recoup the lost opportunities for breeding of the preceding two years, the birds breeding continuously through even the autumn and winter months. During that period a few Quail were collected under permit, revealing one remarkable feature of the breeding of these birds which must largely account for the manner in which they can re-establish themselves in a shot-out area between two consecutive shooting seasons. Most birds in immature plumage obtained at Christmas, 1939, contained eggs in females or had swollen testes in the males, whilst one bird banded as a chick in August, 1939, was shot in November, 1939, while apparently mothering a brood of chicks.

The young of the year are easily discernible from birds of twelve months old or more, and it was, to me, a surprise to see these young birds breeding, as I had never previously noticed it in many hundreds of Quail shot and examined, although never previously had I seen winter-bred Quail.

It is possible that generally these immature females would not produce fertile eggs, although the presence of young birds with an immature female certainly suggested that they were her brood, which, however, cannot be considered as certain.

I had thought, at first, that all immature birds noticed at the end of the breeding season would be the result of continuous breeding of the original adult birds, but, from the observations made, it seems probable that the large number of birds noticeable is due not only to the fecundity of these older birds but also to the breeding of the immature birds. Such results notwithstanding, and including the fact that the gradual increase in numbers, coinciding with the addition of the successive broods, was continually noted in certain areas, I still find it impossible to obtain even consideration for the suggestion that Quail do not suddenly appear or disappear haphazardly. Even the farmers owning the properties where observations showing the large increase by breeding were made, insist that the birds *came there* about such a date (coinciding with the commencement of about the second brood, i.e., about the stage at which the first young would reach adult size).—R. S. MILLER, Melbourne, 25/3/40.