EDITORIAL

With this, the first issue of "The Sunbird" a new era in Queensland ornithology has begun. The first issue of any new journal always elicits interest, but in the case of "The Sunbird" a certain historical note has also been struck as this is the first journal devoted entirely to ornithology ever to be produced in Queensland.

Over recent years the interest in birds both at an amateur and professional level, has increased greatly in Queensland. This is most heartening, and no doubt due, in part, to the overall interest of people in the natural environment and what makes it tick. The Queensland Ornithological Society, although recently formed, has already begun to make an effort to find out what ticks with birds in Queensland, and through the pages of future "Sunbirds", and other means, will be spreading this knowledge as widely as possible.

Any journal is only as good as the material it contains, and a perusal of the pages of this first issue of "The Sunbird" will show the broad spectrum that we hope to keep covering. In future issues, reviews, abstracts, and illustrative material will all find a place. Articles and notes on all aspects of bird study and/or conservation in Queensland will be required for future issues of the journal, and with four issues each year we will be able to publish a large amount of material. Let us have a contribution for the next issue, and also, let us hear your criticisms and comments.

Contents Vol. 1 No. 1. Page

Membership of the Queensland Ornithological Society is open to anyone with an interest in the study and conservation of birds in Queensland. Annual subscriptions as below:-

Ordinary Member	$3 per annum
Family Member	$5 per annum
Junior Member (under 17)	$1 per annum

All members receive the monthly newsletter and a copy of the quarterly journal, "The Sunbird". All correspondence should be sent to the Secretary, P.O. Box 97, St. Lucia, 4067.

Behaviour of the Banded Rail, Rallus philippensis.

by R. R. Dunlop

INTRODUCTION

In the late summer of 1963 I noticed a strange bird in the vicinity of my home, which is on an island in Pumicestone Channel just north of Brisbane. Sometimes it appeared as a white-spotted grey shadow slipping quietly through the grass beside a log, sometimes as a brown flash rising, often with a somewhat mouse-like squeak, from the track in front of me, to skim over the top of the grass for a few yards before pitching into cover.

Eventually one afternoon I saw a family party, two adults and three almost full grown chicks, slip quietly past the front of the house towards the neighbouring mangrove swamp. They spent a considerable time there feeding, mainly on flying insects, which they were taking on the wing, often leaping eighteen inches or so in the air to catch their prey. On my next visit to Brisbane I was able, with the assistance of the then Director of the Queensland Museum, the late Mr. George Mack, to identify the bird as the Banded Rail, Rallus philippensis.

During the following autumn and winter one of the birds gradually settled in and became quite used to my presence. When working at my outdoor bench I would notice it foraging under the other end, or turn round to find it feeding five or six feet behind me. In the spring a second bird arrived, and for about a week the first bird's chief aim appeared to be to chase the intruder. As a result I would commonly see two brown streaks, about eighteen inches apart, crossing the open space in front of the house. After this they settled down together for a few days until the whole matter was repeated with the arrival of a third bird. Finally all three settled

down amicably together.

It was soon apparent that the birds had very different personalities, so much so that I found myself thinking of them as, "Boldie", "Halfshy", and "Timid", (it was not until a year later that I started an individual marking scheme). Their reactions when first photographed showed their different characters quite clearly. As the shutter clicked Boldie hardly bothered to look up, Halfshy merely stared around for a few seconds, while Timid reacted strongly by performing a two foot vertical leap, without wing assistance, then landing on the same spot and glaring in all directions for about half a minute before resuming feeding.

Although the birds appear to be quite strong fliers, they seldom take to the air except in the face of sudden danger or in pursuit of a rival, and then they merely skim over the top of the scrub or grass for about ten or twelve feet before diving into cover. The longest flight I have observed would be about 60 yards by two birds, one in pursuit of the other, over a rather open area.

One of the most noticeable things about these birds is their quietness. Except when alarmed or skirmishing among themselves, every movement has the appearance of being carefully soundless, either in the long grass or out in the open, where they are seldom seen during periods of high winds. Possibly they find it difficult to detect approaching danger under such conditions. Several times I have noticed a bird feeding in the open when a strong wind has suddenly arisen, immediately it would become uneasy and soon disappeared into the long grass. If anything suspicious should attract a bird's attention, it will stretch to its full height in order to get a better view, in the same way as a domestic fowl does. A very young chick, however, will lower its head to the ground and peer upwards in a manner which gives it a

most reptilian appearance.

SEXES NOT DISTINCT

I could never notice anything, either in appearance or behaviour, to indicate the sex of a bird, and only inferred it in copulating pairs. What seemed to be mated birds shared the job of looking after the chicks. One, possibly the female, seemed to do the larger share of mothering the chicks, occasionally allowing its mate to take a titbit intended for them; also it had the duty of dealing with any intruders into its area. When the chicks were very small, and sometimes during the hatching period, one bird would occasionally carry away large pieces of food; beetles, bread etc. evidently intended for the family.

COURTSHIP AND MATING

I have seen little of what could be regarded as courtship behaviour. Sometimes a bird in the feeding area will hang about on the edge of the grass as if courting a chase. Perhaps mating is a question of chase and capture.

On one occasion two of my residents stood face to face for about a minute, each in turn nibbling at the face of the other, with short spells of mutual preening between nibbles.

One mating sequence was first observed on August 29th. Two birds were feeding together when one stood erect and uttered several throaty "coos". The other, presumably male, fell in behind, followed for a few paces and attempted to mount. However, the female slipped him, then turned around and nibbled his throat and face for a few seconds before trotting away. The male followed for a few steps but gradually lost interest. That afternoon the female was feeding when the male suddenly dashed up and chased her in close circles until they disappeared in the grass.

On September 12th the female was feeding when the male arrived with a large insect which he offered her; she snatched it and trotted away with him following. A couple of days later I saw the female tugging vigorously at something, probably a root, in a small hollow. She then sat down in the hollow and squirmed around as if trying it for size as a nest. The male promptly rushed her and grabbed her by the back of the neck, but she jumped clear and ran. When copulation takes place the female does not crouch but merely bows forward slightly to balance the weight of the male. Within five or six seconds of mounting the male slips off and after a quick shake both birds resume feeding.

BREEDING SEASON

The breeding season appears to be from late September to early February, often with the first brood about the 12th October and succeeding broods at intervals of two months. In the 1963/4 season birds arrived with chicks about two to three days old on October 24th; four chicks ten to fourteen days old on December 22nd; four chicks three to four days old on February 8th.

In the 1965/6 season they arrived with chicks about three to five days old on October 13th, December 16th and February 11th. In 1966/7 there were two broods and the assumed hatching dates being about November 12th and January 3rd. On May 12th a parent arrived with a chick approximately three weeks old. Both the 15th and 16th May were very cold days and the chick simply stood around in a hunched position too cold even to eat. I never saw it again so presumably the cold was too much for it.

In the 1967/8 season on December 8th a female arrived in company with five chicks, apparently four or five days old, and on the next day she and her mate appeared with six chicks, the largest

family recorded since observations started. This family was the tamest I have known so far. From their arrival I was able to move quietly about indoors in full view without causing panic, and by the time they were half grown, all except one, as well as both parents, were regularly coming indoors. Although the male remained more or less with the family he soon lost interest in the young.

I have only once found a nest. Apparently the bird had simply squatted down in long grass under the partial shelter of a banana leaf, pulled a couple of grass stalks around her, and laid. The eggs were about an inch and a quarter in length, somewhat roundish, off-white in colour with large irregular chocolate blotches at the thick end. The incubation period would appear to be about two weeks. I found the nest with three clean eggs on September 31st and they hatched between October 10th and 19th.

CHICK SURVIVAL

From one to six chicks are hatched at a time, of which one or two sometimes die in the first couple of weeks. In the first few days a chick will die suddenly without any apparent cause. Later a chick may be sick for two or three days before disappearing. The main symptom of ailing is a tendency to spend much time sitting down, even while feeding, although appearing quite active between times. Also, a sick chick will often climb into a shallow saucer of water, which normal chicks seldom do.

When a chick is sick, a parent, presumably the female, usually drives the sufferer away. I was able to watch such an expulsion in 1965. On February 3rd. when the chicks were about a fortnight old and partly fledged, I noticed that one was smaller and less developed than the others. During the next two days it spent a good deal of time alone, staying behind when the others wandered away,

and frequently sitting down. On the morning of 5th February it was feeding with the rest of the family when it sat down. A parent bird promptly walked over and gave it several hard pecks on the back of the head. This happened two or three times during the morning. In the afternoon it stayed alone while the family foraged elsewhere. The following day everything appeared normal, but on the 7th it was feeding with another chick and a parent when the latter suddenly attacked it and chased it for some distance. A little later it was between the parent's legs getting fed in the normal way. On the 8th it was definitely under sentence of banishment, the hen attacking it whenever she saw it. It made repeated efforts to join the others. At one time, after hovering forlornly on the outskirts of the family for some time, it crept up behind the hen and slipped quietly into the "baby position" between her legs. For two or three minutes she accepted this and even gave it a couple of seeds, then suddenly she seemed to realise which one it was and pecked it savagely. The little one ran two or three feet and crouched down under one of the other chicks.

The hen lost sight of it and so started to search. First she stood on tiptoe to have a good look around and then she circled the area a couple of times. Failing to spot it she went a short distance down one of the paths, came back, and went down the other path. The male (?) followed her, but met her coming back. He retreated at high speed and skidded around a corner, letting out a loud squawk, and disappeared down the other track. The hen, after another good look, seemed to calm herself and resumed feeding.

Meanwhile, the chick had slipped away and for the rest of the day hung around on the outskirts of the group. The following day it was around whenever the coast was clear, seemingly quite active and

alert, but about a week behind the others in development. It took care to disappear whenever the family arrived. I never saw it again, although for a couple of days I think the hen was still watching for it.

CHICK DEVELOPMENT

The chicks develop quite rapidly. At first they are coal black, with either a grey eye stripe or, more usually, a grey cheek patch. The first feathers begin to appear about the end of the second week and at two months they are fully grown, but lack the final brilliant colouring on head and neck and the white spots on the back. These develop during the next two or three months. With some families the orange breast appears with the first feathers, while others do not acquire it for four or five months.

The chicks appear to be very independent quite early in life, foraging alone for long periods after the first week. When feeding with a parent the favoured position is between the older bird's legs. The adult does not actively feed the chicks but from time to time will pick up a seed, or other titbit and stand still, cooing softly, while the chick reaches up to take it. If there are a pair of adult birds they often divide the family, each shepherding part of the brood. The resident pair usually did this. One of the parents, presumably the male, seldom offered food to the chicks and occasionally, if the female did so and no chick responded immediately, he would take it from her.

The young are generally so independent that they would probably have a good chance of survival if orphaned when a week old. On a number of occasions I have seen unfledged chicks chase trespassing adults away, as well as honeyeaters and Peaceful Doves. It seems a rule that the chicks should be allowed to dominate the parents for the first two or three weeks, although there are exceptions. For

instance, one morning, a chick, seeing a stranger in the feeding area, dashed in to attack, only to find itself facing a sharp beak point, seeing which it stopped so suddenly that it skidded its own length, then stood looking uncertainly at the intruder.

Another time a small chick had quite a thrilling fight with an adult and it was very amusing to see this tiny ball of black fluff bounding into the air in an effort to reach its opponent's face, while the larger bird delivered a shower of downward blows all around it, but obviously taking good care to strike well clear of the tiny target. When the chicks are about half grown the parent birds decide that it is time to teach the young their place and so a charging chick often receives an unexpected peck which is sometimes delivered with enough force to tumble it over.

VOICE

These birds seem to regard a voice in the same way as a wing, something only to be used when really necessary. For a long time the only sound I heard from them was a sharp squeak uttered when surprised. Gradually, however, I discovered that they have a vocabulary of about half a dozen different sounds. They begin to "talk" early in November.

There seem to be three basic sounds, "squeak", "kuk", and "coo". The "kuk" seems to be a warning to other birds to keep away. Another variation of this is more nearly described as "chik". When a bird has, or is about to have chicks, it often keeps up a very soft "coo-ooo". The same sound can also be used with a very angry intonation, as a challenge or call of defiance. Fighting birds keep up an angry cooing between bouts.

Once when a bird succeeded in driving a rival off a disputed feeding area it spent a good deal of time during the next couple of

days in parading around uttering a challenging "chi-dik", "chi-dik". When surprised by an enemy a bird will utter a sharp squeak as it dashes away; one can hardly regard this as an alarm call as the birds are far too individualistic to bother about warning others of impending danger.

Occasionally when one of a pair with chicks has been feeding alone, the other, hidden with the chicks in the nearby grass, will set up a call something like a braying donkey,"coo-aw-ooo-aw-ooo-aw". This seems to be a signal to bring the straying mate back to its domestic duties for it will set off in the direction of the family upon hearing the call. Sometimes a bird will go through a remarkable performance which I am inclined to believe may be a mating call. Standing on tiptoe it will point its beak skywards and with a sudden shoulder shrug literally jerk out a sharp squeak, repeating this at intervals of perhaps fifteen to twenty seconds, and between squeaks the bird will wander around as if looking for something.

FOOD

Food seems to consist of small seeds, insects and small forms of aquatic life, for which the birds often hunt among the mangroves at low tide. They show no interest in large seeds, such as maize or sunflower.

One puzzling factor over the years has been their ability to live with little or no fresh water. There is no natural fresh water on the island, and the birds fly so seldom that it seems unlikely that they leave the island to drink. When I am at home I keep a small bird bath filled for them, from which they drink several times a day. One summer I was away for three weeks, during which time there was only one shower and doubtfully any dew formation, yet when I returned they, (and a couple of bandicoots), did not seem to have suffered in

any way, although for the first few days they certainly drank a good deal more than usual.

PAIR FORMATION

By May in 1964 two birds had settled in to the southern side of the house and evidently regarded that area, and the space in front of the door, as their territory. Another bird, which did not seem to be mated until 1966, had settled in to the banana patch to the west of the house, and as it refused to keep away from the feeding area there were continual skirmishes as one of the residents tried to enforce ownership. This third bird appeared with four chicks in January 1966, and took possession of the feeding ground until the chicks were about a month old, when the resident birds reasserted themselves.

But pairs are not always established so early. In July 1968 I had four birds, a male which had been with me since 1964, a male hatched about the beginning of 1967, a female hatched about October 10th of the same year, and a youngster from the January 1968 brood. At first the birds acted quite independently, chasing or being chased, whenever they got near each other. These chases, noted also in other years, have a curious, almost formal, sameness. The pursued bird runs about five or six yards, then swerves suddenly and stops about a couple of feet from the turning point. The pursuer carries on straight ahead for a couple of yards, then stops, stares about in all directions for perhaps half a minute, then dashes off in the opposite direction, while the pursued bird often returns for a few more beakfuls of seed before its protagonist reappears to repeat theperformance.

On one occasion early in July the female and one of the males were quietly feeding side by side when the male turned on the female and gave her several hearty pecks till she ran off for a few feet,

when he uttered a series of throaty "kuks". He then ran past her and stopped just in front while she in turn ran past him giving a quick peck in passing, then continued into the grass with him in pursuit. These two formed a partnership to attack the single male, but it was a temporary arrangement for by October 21st the tables were turned and the female mated with the second male, driving the other one away.

PRECEDENCE AND TERRITORY OWNERSHIP

By the beginning of March there is much skirmishing among parents and offspring; birds often give sudden little jumps or quick aimless dashes, seemingly just for fun. It is not unusual for a bird to dash suddenly into a group, scattering them left and right, but without attacking anyone. Gradually, however, what seems to be games develop into serious arguments as to who shall leave home; it is usually the offspring. In spite of a pair of my residents having produced about three dozen chicks over several seasons not one of the offspring remained. Four is the most that have spent the winter with me, either solitary or in a group.

Although fights occasionally take place most questions of precedence are settled without actual blows. Two birds will stand face to face a few inches apart. After staring at each other for fifteen or twenty seconds one bird will begin to get uneasy and finally withdraw; occasionally the withdrawal will be accelerated by the other bird. Sometimes there are brief fights, beak to beak and claw to claw, but they seldom last more than a few seconds.

On one occasion an adolescent, apparently tired of being kept in its place, challenged an adult. On the first round the adult routed the youngster and for seven or eight minutes paraded in front of the house, obviously daring all comers. The youngster reappeared

and the adult charged, but this time the young bird stood its ground and for the next minute or so there was a first-class stand up scrap; beaks, wings, claws all working overtime. At the beginning, the young one had the older bird down and got on its back and then savaged the back of its head. The latter broke free and managed to return the compliment; but mostly the birds faced each other, rising into the air together and striking vigorously with beaks and claws. Between bouts they kept up an angry cooing.

Some birds show considerable initiative in dealing with rivals. A bird which is chased away at approximately the same time each day will change its feeding time. After two or three days its rival, missing the daily chase, will begin to arrive at unusual times until contact is re-established. Ambush tactics are also sometimes used. There appears to be quite a strong pecking, or rather chasing order. A bird finding an "inferior" in the feeding area will usually charge immediately, whereupon the latter will run or, if hard pressed, fly without argument.

Aggressiveness is not confined to members of their own species. They will drive away from the feeding area other birds such as doves and magpies. A bird will often feed quite peaceably with other species for a time then suddenly make a quite vicious attack on them. At times they take on even larger game. During 1966 a rather ancient bandicoot used to come to the house each evening to be hand fed and when autumn came it started to arrive a good deal earlier. I have recorded that on May 28th the bandicoot and a bird arrived at the same time, four o'clock. Eventually the bird came to within four feet of the bandicoot, who kept facing it warily. Suddenly it turned and fled, and the bird, coming up behind, administered a good hard peck just where it is supposed to do most good. The bandicoot shot forward about two yards

with the shock, swung round to see what had happened, then, after glaring at the aggressor for a minute, started to feed its way back. The bird, hunched up, stood fast, giving way a couple of times when the bandicoot came close, till at last the aggressor spotted another bird in the background and, set off after an easier victim.

In March there may be as many as eight or ten birds, most of whom met on my "feeding ground" for breakfast each morning, when for about an hour there is often an exciting "free for all". By the end of April at the latest most of the birds have left and only those few who intend to stay for winter remain.

BEHAVIOURAL NOTE ON EASTERN WHITEFACE AND SPECKLED WARBLER

by Mrs. C. Bevege.

In early February 1969 I noticed a party of Speckled Warblers, Chthonicola sagittata, in the garden. There were two adults and three young obviously not long out of the nest, as their tails were only half an inch or so long, and they appeared to be fed entirely by the adults. The adults were feeding on the ground, and two of the young were side by side in a nearly open shrub, making begging calls.

A couple of Eastern Whitefaces, Aphelocephala leucopsis, were in the general vicinity and one of them approached the two young warblers and proceeded to hop about barely out of pecking distance, for several minutes. Then the Whiteface sat beside one of the Warblers, which gaped at the Whiteface. The Whiteface then mounted the young Speckled Warbler in a manner resembling copulation, causing confusion as the Speckled Warbler struggled to keep its balance with much wing flapping. The Whiteface then flew on to another twig. This general pattern of behaviour followed for five minutes.

The Whiteface kept moving about very close to the Warblers

which, throughout the whole incident, did not move from their position; the young Warblers gaped at the Whiteface, and what looked like several clumsy attempts at copulation occurred. The last attempt ended in the confused Warbler losing its balance and swinging upside down on its twig before falling to a lower twig. The Speckled Warblers then flew to another tree; the Whiteface followed, but almost immediately lost interest and flew to the ground to feed.

It is difficult to know what caused this aberrant behaviour. It might be speculated that a call similar to the begging call of the Speckled Warbler and/or gaping, may form part of the Eastern Whiteface courtship behaviour.

Mrs. Carole Bevege,
Thalgarrah,
Armidale, N.S.W. 2350.

The Vocabulary of the Noisy Miner, Myzantha melanocephala

by A. C. Cameron

INTRODUCTION

Since the very dawn of ornithology, bird calls have been recognised as of prime importance, not only to the members of a species who use them as speech, but also to other animals, wild and domesticated, who receive, understand and react to many signals; and of course the patient observer who learns the meaning of even a few bird calls can save himself much time and labour. In wooded country especially, ears have a greater range than eyes.

So far, relatively little has been published in Australia on the significance of bird calls. Smith, Craig, Mayr and Moynihan in America; Thorpe, Tinbergen and Lorenz in Europe, and many others, have already done valuable work, greatly assisted by the use of equipment such as the tape recorder and sonagram. Some preliminary observations are now presented in relation to an Australian honeyeater, the Noisy Miner, Myzantha melanocephala.

Honeyeaters form the largest Australian family; 69 species. No less than 53 can be found in various parts of Queensland with 11 of them restricted to the State. Probably none is better known, or more numerous within its habitat than Myzantha melanocephala. It has various affectionate nicknames, the most widely used being Micky and Soldierbird. Its most remarkable characteristic is its vocabulary, comprising at least 20 words, possibly many more.

Quite early in Australian history the Noisy Miner achieved a measure of unpopularity with sportsmen. There are numerous references in literature to its habit of giving "warning" calls when an intruder, (meaning man), was sighted. The immediate effect was to warn other animals, which either freze into immobility, and therefore invisibility,

or left in a hurry. These references are based on two premises; the first, that Noisy Miners had a call, or series of calls, denoting alarm; the second, that these alarm calls were recognised by other animals. Both premises are sound.

The Noisy Miner is found principally in the eucalypt forests of the interior, but it is also widespread on the coastal strip east of the Great Divide. Most of its food is procured among the leaves and outer branches, and several calls are associated with feeding. Broadly, Noisy Miner vocabulary can be divided into six principal groups.

CONTACT CALL

The contact call is used mostly by juveniles for some time after leaving the nest, sometimes by adults. It consists of a single note, sounding like "wick", repeated ad lib at one second intervals. A complete brood of young birds, out of the nest but still receiving most of their food from parents, will often perch close together and call continuously, even through the very hot midday period, when most other birds are silent. Its meaning is quite clear; "Here I am, feed me". It seems to have a stimulating effect on the food gathering efforts of the parents, so its survival value to the young birds is evident.

A variation is employed by adults, when a number of birds are feeding in the same general area. Sometimes only two birds are involved, giving the impression of a mated pair. This is the most simple word in the Noisy Miner vocabulary, and the first to be learned by juveniles.

CONVERSATIONAL CALLS

Unlike most of the larger honeyeaters, Noisy Miners are not quarrelsome. In fact, they seem to enjoy the company of their kind, without being quite as gregarious as their relative, the Bell Miner,

Manorhina melanophrys. On occasions quite a large number may be present in an area moving around individually. Then a call by one bird will be taken up and repeated by others. A close-knit flock develops; 20 or more birds may crowd into a space of a few square feet, often packed so closely on a branch that they are actually in contact. This proximity triggers off a jumble of sound, with all calling at once. It is accompanied by a type of posturing that is not used at other times; the body is depressed onto the perch in a squatting position, head and bill pointed almost vertically, tail raised and fluttered. This "corroboree" is over as suddenly as it began. Individuals drift off in all directions and resume feeding. This type of communal display oftens follows the mobbing of an owl, which will eventually seek the sanctuaryy of a hollow branch. The frustrated tormentors sit round the entrance to the hollow, peering in and giving their "owl" alarm call until it is obvious that the owl is not going to emerge. They then seek a high branch and the corr corroboree commences.

It is difficult to avoid anthropomorphism here - an enemy has been seen and routed; the all clear has been sounded; there is a juicy piece of news to be passed on to the neighbours! The summons is sent out, received and accepted, full discussion takes place, and the incident is over.

MATING CALLS

Often the first indication to an observer that nesting is about to commence, or is already under way are the mating calls. Since Noisy Miners may nest in any month, mating calls are an indication of the state of the bird's metabolism. With small variations the call sounds like "beauty", the first syllable inflected downwards, the second upwards. Simultaneously, the bird launches itself upwards at

a steep angle, in a series of loops. A few rapid wingbeats coincide with the call, followed by a short glide with the wings, and mouth closed. The display flight rises to a peak at about 50-100', and is followed by a swift silent dive back to the trees below. A very beautiful performance incorporating the Noisy Miner's most musical call. It is worth noting that several other birds use a similar display flight, with or without a special call.

TERRITORIAL CALLS

Territorial calls can be heard at all times of the year, varying widely in pitch and intensity from time to time. They probably reflect the strength or weakness of the breeding urge, which has less relation to season of the year than with most birds. Even when the territorial instinct is strongest, most of the bird's aggressive behaviour is directed towards intruders of other species. Fights among themselves are rare and of short duration.

DAYLIGHT CALL

The daylight call is a clear, high pitched whistle, audible over a long distance, and used only between daylight and sunrise, in clear weather. Its purpose and meaning are rather obscure, but a reasonable inference is that, after this early morning session, each bird knows the direction and distance of all its neighbours. With other partly gregarious birds this is important, and has an obvious survival value; several other large honeyeaters have the same habit.

ALARM CALLS

Alarm calls are a Noisy Miner specialty, comprising at least 12 distinct "words". I use the term with some confidence, since each one of them is capable of exact translation into human speech. The difference between these words lies in the pitch, intensity and speed of utterance, rather than in the sounds themselves. They are

understood instantly and completely, not only by every Noisy Miner within earshot, but by most birds, and many other animals, including kangaroos, wallabies, dingoes, dogs, horses, and even, if he is sufficiently interested, man. They range from extreme panic, through varying degrees of fright, resentment, anger and defiance. Some are merely querulous or reproachful, others merely indicate caution. Most of them are used for one enemy only, and they vary little through the bird's entire range.

No bird is more feared by Noisy Miners than the Brown Goshawk, Astur fasciatus. It catches its prey, not by speed through the air, after the manner of the hunting falcons, but by a swift, surreptitious dash through a tree or bush, where it is often not detected until too late for evasive action. The first Noisy Miner to see a Goshawk presses the panic button, and this is taken up and repeated by every Noisy Miner within a radius of half a mile. Other birds get the message and react according to their size. The smaller ones, potential Goshawk victims, become silent and motionless if under cover. If in the open, they dive for cover at maximum speed, with no effort to check the alarm for accuracy. Even domestic fowls react in the same way; a Goshawk is quite ready to attack an adult fowl.

Nevertheless, Noisy Miners are aware that the Goshawk does not hunt in the vicinity of its nest. I have seen a Goshawk perched on an upper branch within 50 yards of its nest and eggs, with a flock of Noisy Miners feeding peacefully just below, and paying no attention to it at all. In conjunction with both these alarms is one which, for want of a better term, I have called the "fore" alarm.
This phrase was coined by the Luftwaffe during World War II, to indicate that enemy raiders were approaching, but not yet in the immediate area. The Noisy Miner's fore alarm, a very high pitched,

thin whistle, is easily recognisable as such, but does not indicate the precise nature of the threat.

The presence or approach of numerous other enemies is signalled with equal accuracy. Separate words are used for Wedge-tailed Eagle, Crow or Raven, (apparently the Noisy Miner can't tell the difference) Currawong, Kookaburra, Owl, Cuckoo, Goanna, Man, (or dog, cat, or fox with slight variations), and Crested Hawk. It is worth noting that some other species have distinct warning calls for some of these - e.g. Magpies say "Wedge-tailed Eagle" unmistakeably, and both Grey and Pied Butcherbirds have a special call for "Owl", another for "Goanna". Domestic dogs react vigorously to the latter, no matter which species of bird it comes from.

As far as is known, these "words" are used for one purpose only. For example, Noisy Miners have frequently been heard calling "Crested Hawk", although no such hawk was readily visible to the observer. A thorough search has always turned one up. Crested Hawks often sit for long periods, close up under the leaf canopy, searching the leaves and branches around them for stick insects, tree frogs and cicadas. A short flight, a snatch with talons, and the bird is back on its perch, where it proceeds to a leisurely meal. Little notice is taken by the Noisy Miners until it flies, though they may be feeding a few feet away in the outer canopy. As soon as the Crested Hawk is airborne, it is recognised by the first few alarm notes. The panic subsides, however, almost before it has begun; a few plaintive, scolding notes follow, then peace reigns again.

With regard to the "Cuckoo" call, I have no record of any Cuckoo using the Noisy Miner as a host, though its relation, the Bell Miner, is parisitised regularly. Yet, somewhere along the chain of evolution, Noisy Miners have learned that cuckoos must be driven out

of the nesting area.

Doubtless, further details and refinements of the Noisy Miner vocabulary could be learned with practice. Many calls are so much alike that it is impossible to explain the difference, however obvious it may be to an experienced ear. Some of them vary according to circumstances. Goannas on the ground, for example, are noted with every indication of dislike, but no more. As soon as they start up a tree the clamour becomes so great that other birds join in. If the tree contains a Noisy Miner nest the demonstration becomes frenzied.

Only one attempt has been made to test the accuracy of these deductions. A "Hunting Falcon" alarm call was taped, and later played back to an audience of wild and domestic birds some miles away. Not surprisingly, they reacted strongly. An unexpected bonus was provided by the local Noisy Miners, who took up and repeated the alarm call as long as the tape was being played. Clearly, there is ample scope for much more detailed work in this area.

SUMMARY

The Noisy Miner has a wide range of calls. Each has a special meaning, whose significance is apparent to other species of animals. Many contain warnings of danger, others are associated with the bird's semi-colonial habit. All have a particular survival value to the individual and the species, and provide evidence of complete adaptation to the environment. Much further study is necessary.

REFERENCES

Craig, W. 1943. The song of the Wood Peewee, Myiochanes virens, Linnaeus. A study of bird music. N.Y. State Mus. Bull. 334. 1-186.

Lorenz, K.Z. 1952 King Solomon's Ring. Crowell Pub. Co., New York.

Mayr, E. 1958 Behaviour & Systematics. pp. 341-362.

Moynihan, M. 1955 Types of hostile display. Auk 72: 247-259.

1962 Hostile and sexual behaviour patterns of South American and Pacific Laridae. Behaviour, Supp. VIII 265 pp.

Smith, W.J. 1963 Vocal communication of information in birds. The American Naturalist. XCVII: 893, 117-125.

Thorpe, W.H. 1961 Bird-song. The biology of vocal communication and expression in birds. Cambridge Univ. Press, 143 pp.

Tinbergen, N. 1959 Comparative studies of the behaviour of Gulls (Laridae): a progressive report. Behaviour 15: 1-70.

Letter-winged Kite, Elanus scriptus, in South West Queensland

by H. G. Rabig

Although well within it's geographical range, the Letter-winged Kite, Elanus scriptus, is not well known, nor often seen in south-west Queensland. A visitation in 1950, (during a native rat plague), was reported to me but not confirmed.

On 10th December, 1969, a flock of eighteen birds arrived at an earth tank on Cuddapan Station, where they remained for at least nine days when observations were discontinued. The tank is in Lat. 25° 46'S. Long. 141° 20' E., and is surrounded by a stock proof fence enclosing several acres. Outside the fenced area about 700 head of cattle come to water at the trough and consequently, the country for about 1½ miles around is well trampled and denuded of vegetation. The fenced area is a little oasis with plenty of water and lush with edible plants, such as blue bush and mimosa.

The birds were first seen on a very hot afternoon perching on fence posts close to the tank. Distressed by the heat they stood with

wings outspread and drooping; the black under-wing markings were clearly seen. From the posts they paid frequent short visits to the water, where some of them appeared to be drinking. Their heads were quite owl-like, appearing too large for their bodies, and their eyes were noticeably large and orange, accentuated by a black orbital patch. Extremely restless and timid, they moved constantly from the posts to circle in the air at about thirty feet, down to perch on the posts for a few moments, then to the edge of the water, and back to the posts. During the remainder of the observation period they did not approach the water again, but spent the days perching in small groups in dead gidyea trees, a few hundred yards from the tank.

The tank enclosure contained a very dense colony of Long-haired Rats, Rattus villosissimus, which had reached starvation point, after finally destroying their own protective cover by denuding the blue bush, salt bush and mimosa. Raptors, including, Spotted Harrier, Circus assimilis, Fork-tailed Kite, Milvus migrans, Whistling Kite, Haliastur sphenurus, Brown Falcon, Falco berigora, and Black Falcon, F. subniger had feasted on the rodents for weeks as they foraged in the vegetation. Now that numbers were greatly reduced the Long-haired Rats had become almost completely nocturnal.

With the approach of dusk each day the Letter-winged Kites would leave their diurnal perches and begin flying in silent, constantly shifting, circles over the enclosed area at a height of about 30-50'. After completing eight to ten circuits the birds would perch for a few moments before taking to the air again. A sudden plunge by one or two birds, as the rats left their daytime shelter, would start the nightly hunting. Apparently the hunting was still good as there was little or no fighting over the first carcases.

It is probable that the Letter-winged Kites hunted all night,

but by first light all but a few birds would be back on their daytime roosts; these also returning to the trees before sunrise. During the observation period the Letter-winged Kites showed no inclination to hunt food other than rats, and did not attempt to hunt at all in the sunrise-sunset period. One possible exception was the neatly picked skeleton of a Barn Owl, Tyto alba, found by the water one morning. It is, of course, possible that the Barn Owl was killed by one of the other predators.

A young adult female Letter-winged Kite was procured with a description as follows: The back feathers were light grey, darkening slightly towards the wing coverts; mantle and back mottled with patches of brown the size of a two cent piece; patch of black on the point of the shoulders; tail feathers bedraggled and soiled from ground feeding; breast and underwings white, with a black line about one inch wide following the bone pattern of the wings giving the impression of two wide V's or a broken W when in flight. Legs, pure white, claws black, beak black and eyes orange with a black orbital patch. The eyes occupied possibly 2/3 of the skull accounting for the owl-like appearance previously mentioned.

White-headed Sittella, Neositta leucocephala, a Plumage and Behavioural Note

by R. Hando

As there would appear to be much conjecture and confusion in the literature relating to head colouring in Sittellae, the following notes may be useful. They were made at "Riverside", six miles north-east of Chinchilla.

A nest containing probably three young was first seen on 30th October, 1969, on which was brooding a bird with a pale grey to

off-white head. A second adult arrived near the nest with some food; the bird on the nest hopped to the new arrival, accepted the food, and in turn fed it to the nestlings. This was noted several times. Head colouring of the visiting bird was mid-grey, somewhat paler than the back. A third adult seen to approach the nest had an off-white head colouring; in this instance the nest was vacated by the sitting bird, while food was fed directly to the young, by the visitor. Both pale headed birds, that is the brooder and the visitor which fed the young, had faint striping on their heads, while all three adults were light underneath, with darker striping on the flanks; under tails being spotted.

This pattern of behaviour was repeated when observations were made on 1st. November. On 4th November, the only change noted was the absence of the brooding bird. Food was being fed directly to the nestlings by one, perhaps more, birds with mid-grey heads, in addition to the two with light coloured heads. Several days later on November 9th, when the young were preparing to vacate the nest, they showed mid to dark grey heads, with whitish throats. On November 12th the nest was deserted.

There is a strong possibility that this was a pure White-headed family, as similar observations were made in the same area during the 1968 breeding season, only then, three young darker headed birds, fully fledged and out of the nest, were being fed by two pale headed adults.

These observations would seem to indicate; (1) a normal darker head colouring for immature White-headed Sittellas, and (2) that offspring of one brood assist in the feeding of young of successive broods.

Notes for Junior Members

by Miss N. Hopkins

Many birdwatching beginners ask - Where do I start? Just where you are; look at the birds in your own garden. Every garden has some bird visitors; and do you know all you might about the House Sparrow, Silvereye or Peewee? When you are able to identify each bird you have really just begun.

Now is the time to start asking yourself questions. What about those Sparrows fossicking in the hibiscus - do you know where they go at night? Do they camp in families in the garden trees? Or do they flock together at special roosting places like the Peewees do?

You can watch your garden birds feeding and find out those which like to feed on the ground, in low bushes or in the tops of trees, or the air, like the Welcome Swallows. You may find that some birds feed in all places. Keep notes on which food the different birds like to eat. Shortly, we will be starting an interesting project to do with the food of birds and you will be able to take part in it.

The following notes on Peewees will show you the kind of information you can put together about the different birds in your garden. Our peewees are back after nesting. There are no large trees nearby so we lose them each year during the breeding season. They return late in summer, and are usually followed around the lawn by two or three hungry young ones, nearly as big as the parents, but softer and downier.

I'm sure you will have seen a Peewee nest - a large open mud bowl reinforced with grass or something similar, often built near water, and therefore near mud. Have you seen them gathering material? I once watched one among banana plants, where shreds of old leaves lay in the mud. With every beak of mud the bird carefully collected a strip

of leaf. Another time a bird gathered dry grass first, then went with it to the mud.

In Autumn and Winter Peewees flock together to roost. You can see them in the late afternoon on wires and roof tops, in little groups that grow larger as dusk approaches. In Townsville, near dusk, I have seen hundreds on the overhead wires near the Causeway. Later in the evening I have heard them settling down for the night, somewhat noisily too, in the mangroves. Who knows of a Peewee roost? Write and tell me if you do.

Apparent Variation in Mangrove Honeyeater, Meliphaga fasciogularis

by J. D. Macdonald

I have been interested to find that the Mangrove Honeyeater at Mr. J. S. Robertson's feeding table at Wellington Point does not show white on the face. My notes on this species are based on a series of specimens taken by the British Museum expedition at Proserpine, all of which have a whitish streak between the black face band, the part behind the eye only, and the grey crown and nape, a feature quite distinct in the field.

Mr. Robertson tells me that no such feature is present in birds in the Brisbane area, and he has seen and handled many hundreds. Nor can we find any reference to it in the literature. Old unlocalised specimens in the British Museum, but almost certainly from southern localities, confirm this, except that some have a few whitish feathers; these specimens also have a few flecks of white in the yellow area below the black face band.

I would like to know if anyone has noted white on the face of this honeyeater, from any locality. The white may be confined to populations in the Proserpine area, but more likely it is a feature

increasing in distinctness towards the north of the range, which terminates about Cardwell. If there is a recognisable geographical race in the north there is a Mathews name available, his brunnescens from (vaguely) "north Queensland", a race which has not been accepted on the basis of browner upperparts and darker underparts.

Increase in Range of the Eastern Silvereye, Zosterops lateralis

by Mrs. H. B. Gill

In Queensland the Eastern Silvereye belongs mainly to eastern coastal districts, from the border to Cape York. It has been found as far inland as Charters Towers. Two adults of this species, which are clearly distinguishable from the Yellow Silvereye, were seen by Brig. Officer and myself on the Nicholson River at Escott Station, six miles west of Burketown on 27th October, 1969. Attention was drawn to the birds because they were calling from a flowering River Red Gum. The increase in range is about 450 miles west.

Pallid Cuckoo, Cuculus pallidus, Feeds Another

by J. & C. Clarke

On Saturday, 25th October, 1969, at about 4.30 p.m., we noticed a male Pallid Cuckoo perched on the top wire of a dividing fence at the CSIRO Pasture Research Station at Samford. Presently it flew to the ground in the fairly long grass and then back on to the fence with a caterpillar hanging in its beak. It called softly, about nine or ten"peeps", and waited, not attempting to eat the food which still hung from its beak. Shortly, a second Pallid Cuckoo flew to the wire below the one on which the male bird was perched, reached up and took the caterpillar from his beak.

A similar performance took place a few minutes later, after which the second bird flew away. This bird had not remained still long

enough to permit identification of sex.

It is notable that the feeding procedure was markedly different from that of a parent bird feeding young. The bird which received the food did not call for it, but rather was called to it. The male bird did not place the food in the other's mouth, but merely allowed it to be taken from him.

INDEX TO CURRENT AUSTRALIAN ORNITHOLOGY

The Field Investigation Committee of the RAOU is attempting to compile and publish an index to current ornithological research in Australia. This will not be a bibliography of published work, but a guide to research, in all phases, now being undertaken. Personal entries will be listed alphabetically by researcher's surname. Indices to species and fields of research will be provided.

The publication should contain sufficient information to enable a reader to determine the species being studied by another, the aspect of life history, and the broad field of investigation. It should enable a reader to determine who is working on what, and give him a means of assessing the relevance of other studies to his own and facilitating correspondence between individuals with common research interests.

Both amateurs and professionals are urged to participate. Details should be sent or standard forms requested from the compiler: Dr. Douglas D. Dow, Department of Zoology, University of Queensland, St. Lucia, Brisbane, Queensland, 4067.

ORNITHOLOGICAL TOUR, 1970

During 1967 and 1969 Ansett Pioneer organised two extremely successful tours for ornithologists to central Australia under the able leadership of Dr. Alan Lendon. This year, with Dr. Lendon again leading, the tour will take in a good number of the many magnificent places for bird observation in eastern Queensland.

The tour itinerary allows participants to take the complete Brisbane-Cairns-Brisbane trip of 19 days or the Brisbane-Cairns trip of 14 days. Both tours will depart from Brisbane on Saturday, 23rd. May. As the tour is organised in Adelaide all enquiries or reservations should be directed to:-

Mr. Allan Tully,
Sales & Agency Superintendant,
Ansett Pioneer,
101 Franklin Street,
ADELAIDE. S.A. 5000.

We would be grateful if any members or friends who take the tour would mention that they saw details of it in "The Sunbird".