

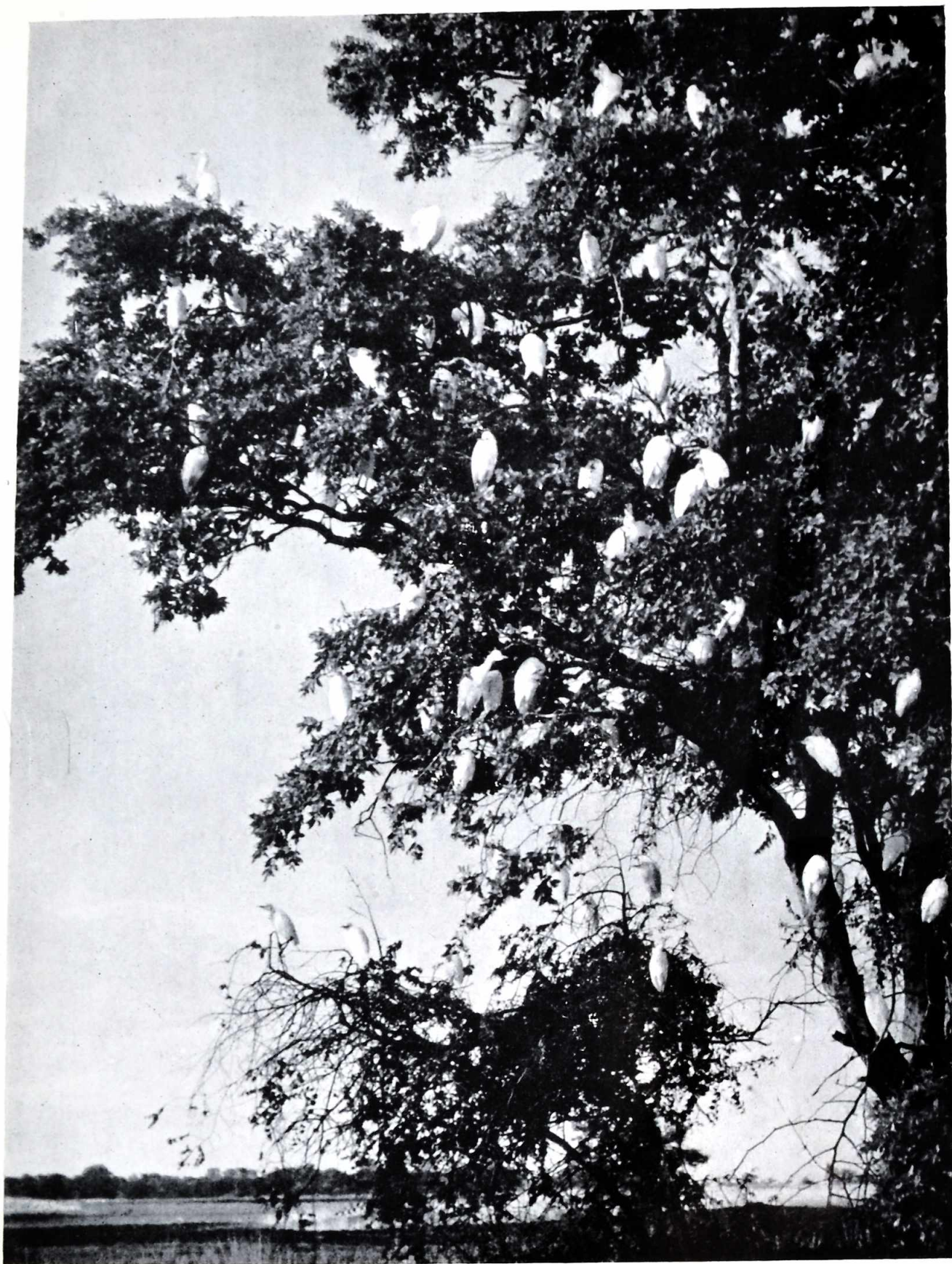
BIRDS AT HOME

*Camera Studies
of
Birds of South Africa*

By
W. T. MILLER



MASKEW MILLER LIMITED
PUBLISHERS
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CATTLE EGRETS gather for the night

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By
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Gwelo, Rhodesia



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PREFACE

I have tried in the following pages to reproduce by photographs some of the best of my experiences with birds. South Africa is so rich in bird life that a fair knowledge of the names and lives of the commoner species should be part of our acquaintance with our own country. Museum specimens, and books which are illustrated from them, have their own part to take in accomplishing this, but they are apt to remove a bird from its surroundings so completely that a great deal is lost. Pose and manner and environment help us to identify and enjoy birds as much as their colouring and their song.

This, therefore, is not intended to be a textbook of South African bird life, but a supplement to those books already in existence. I want to make the birds which I have been able to study with the aid of my camera more real and individual to those who see them here. In every case I have tried to make the bird large enough to occupy the full stage without losing its background altogether.

Many of these photographs show common everyday birds of this country which anyone may find close to his own home. They have been collected here and there, in the Union and in Rhodesia, about the neighbourhood of my own house or in brief holiday visits. For most of them a hide, sometimes of canvas, more often of grass or rocks, had to be built bit by bit over a week or two near the place I wanted to watch. If this was done carefully, the birds proved quite unconcerned. In this way I have been able to get close to even very shy birds, so that a telephoto lens has often been unnecessary. Other photographs have, of course, been taken wherever the opportunity offered. There are many failures, too, about which I keep silent. They have all given me many enjoyable experiences.

In putting these into book form I have no special gospel to preach. I do think that in a country so rich in bird life as South Africa everyone may well want to know something about the birds he sees, and that such information should be easily obtainable. There are excellent textbooks already on the market, with first-class coloured plates prepared from museum specimens. It has been my aim to show here as well as possible each bird in relation to its ordinary environment. Every bird species is a part of the rocks or grass, open veld, mountain or water among which it

lives. Away from these it ceases to be its real self. No stuffed specimen can ever convey the majesty of the black eagles in their mountain eyrie, or the liveliness of the pied kingfisher.

All bird lovers and naturalists will have some of their own happy experiences recalled by these photographs. Others, perhaps, may be encouraged to begin looking for them. It is lots of fun looking.

W. T. M.

[The Author and the Publishers are greatly indebted to Dr. Gill, formerly Curator of the South African Museum, Cape Town, for his kind interest in this book and for much valuable assistance; also to Mr. I. E. Alers of Gwelo for permission to include the photographs of the Bar-Throated Warbler and Swainson's Francolin.]

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CATTLE EGRETS in the evening

1. CATTLE EGRET (OR TICK BIRD)

Height 24 inches

One of the most familiar and striking sights in South African bird life is the friendliness between the flocks of dazzling white egrets and our herds of cattle. Tick birds, these smaller egrets are often called, though that name is already better and more accurately used for the ox-pecker starlings that live entirely on engorged ticks which they pick from the backs of game and domestic animals. Cattle Egrets is a truer name, while the Mashona name *mafudzanombe*, cattle-herders, is still more apt and descriptive.

There are several members of the egret family. This common cattle egret has a yellow bill, with yellowish brown legs and feet. In the breeding season buff-coloured plumes grow on its head, back, and breast. All the egrets grow such ornamental plumes, the most beautiful being those of the great white egret. These are the *aigrettes* and *ospreys* of the old feather trade. For the sake of these the birds used to be killed off every year in great numbers at the very time that they most needed to be left alone. This was in the days before governments recognized the necessity for protecting their useful birds.

Our egrets are more or less migratory, haunting the high veld during the rainy season when insect life is most abundant, and spending the dry months on the low veld or at the coast. They nest generally in large communities (*heronries*) on inland waters, either in reed beds or on waterside trees.

The name "tick bird" is unfortunate when applied to egrets, being both ugly and misleading. These birds do eat ticks—usually dry ones from the grass, which are more numerous than the swollen ones that drop from the cattle; but these form only a small part of their diet. Lizards, locusts, beetles, and all crawling things are food for the egret's table. Their fondness for the company of cattle is probably due to the way in which the animals stir these lowly things from their hiding-places in the grass.

The flocks of cattle egrets return nightly to the same place to roost, gathering sometimes in companies of several hundred. It is a delightful scene when, at sunset, the trees are almost hidden by restless changing clouds of these shining white birds.

[See the Frontispiece for a picture of Cattle Egrets gathering for the night.]

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GREY HERON in a suspicious mood

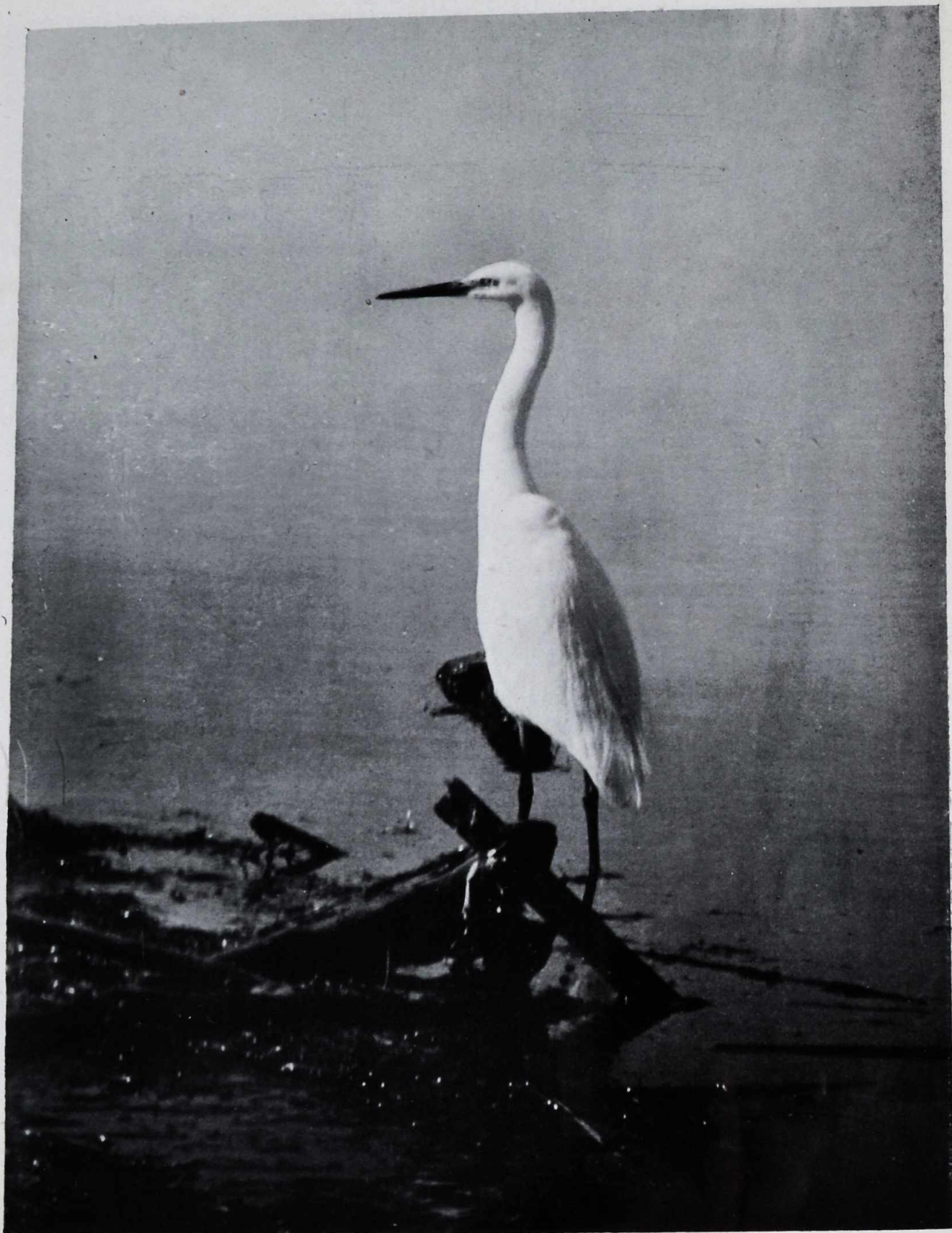
2. GREY HERON

Height 33 inches

This is the common grey heron of our rivers and pans; a grey, ghost-like, wild and solitary bird; a hunter of dark waters and reed-fringed pools. It is a fisherman by trade, but quite ready to turn to a different diet on occasions. I have seen herons pick up lizards and mice. Once I came across one balancing awkwardly on top of a thorn bush, pecking at something under its feet. The "something" proved to be a nest of young birds, of which the grey heron had already swallowed two.

Still, its main interest is in fish. It paces slowly, deliberately, through the water, or stands still with one foot upraised, until a fish swims within the sight of its cruel, intent eyes. Down darts the dagger-like bill; then the impaled fish is brought up from the water, tossed neatly into the air, and caught and swallowed. Sometimes the heron makes a mistake. One I was watching in a coastal lagoon speared a bream of nearly a pound weight, far too big to be swallowed. The heron flew heavily to a sandbank with its catch, and danced and stabbed excitedly as the dying fish flopped about. It took two hours to eat that one fish, after continuous banging and battering. Sometimes the mistake is more serious. W. H. Hudson tells how he found one of these birds with its beak so firmly wedged in a big and bony fish that it could not get free, and was consequently dying of starvation.

This bird has no friendliness for man. It shuns him, seeing before being seen with the help of its long thin neck, which can stretch unnoticed above river grass and reeds. Long before we get near, the heron lifts itself into the air and flies away with slow but powerful wing-beat, its head drawn back on to its shoulders, and legs stretched out behind. The grey and white plumage touched with black points, and the sweeping black crest, tone very well with the light and shade of reeds and water, so that even though the bird is standing in full view it often avoids notice by its stillness.



THE LITTLE EGRET in a characteristic pose

3. LITTLE EGRET

Height 27 inches

This bird is sometimes seen in company with cattle egrets, and is easily distinguishable by its slightly greater height, long slender black beak, black legs and bright yellow feet. Usually, however, it leads a more individual life, except in the breeding season. If one sees a solitary egret exploring the mud of a wayside ditch or pond, it is much more likely to be this species than any other.

The little egret is altogether much fonder of water than any of his close South African relatives except the great white heron. (The considerable difference in size should be sufficient to identify these two separately.) In the coastal lagoons, for instance at St. Lucia or Richard's Bay in Natal, both these birds may be commonly seen wading in the muddy, weedy shallows after small fish and water animals.

I was fortunate enough to watch a little egret at its fishing from only a few yards range. It is an amusing sight. The bird works very slowly through its selected patch of sea-grass. It strides forward deliberately, and each yellow foot as it descends is shaken rapidly to and fro among the weeds. The egret's small eyes watch keenly. As the agitation reveals any small fish or insect, down shoots the sharp black beak. This peculiar shaking of the foot is not visible from any distance unless one is looking for it. I wonder very much whether it is purely instinctive, or whether it is taught by the parent bird to each new generation.

The same heronries where the cattle egrets breed contain the nests of this species, and probably a number of other related birds as well. All the egrets and herons lay eggs of plain greenish-blue. Such colonies—there are several in the Cape Peninsula—are places of exceeding noise and smell; not pleasant places to visit, but still of great attraction to anyone interested in birds.



ABDIM'S or WHITE-BELLIED STORK

4. ABDIM'S OR WHITE-BELLIED STORK

Height 27 inches

Every year about December large flocks of storks appear in South Africa, particularly on the high veld. There are two main species, one white with touches of black which I shall come to later, and the other, much less in size, black with touches of white. This second is Abdim's stork, usually called the black locust bird. It comes from north-west Africa, where it nests in colonies among suitable high trees, stays with us during the summer months and leaves again about April. This is the time when insect life in the grass is at its fullest. Locusts, beetles, grasshoppers, caterpillars are swarming, and the flocks of Abdim's storks do great good in their energetic search after these pests. They like best the places where the ground is firm and the grass not too long, avoiding both long grass and marsh.

As these birds walk about the veld, their general appearance is black with white under-parts. When they fly, their white backs and rumps show between the wings, and make a very attractive contrast. (It is worth noting that combinations of black and white are the colours of all our storks.) At times the flocks of Abdim's storks, after taking to the wing, fly to great heights and then swing in great lazy circles as they slowly move away towards new feeding-grounds. One may see the changing pattern of their colours against the clouds for long distances.

A near view of Abdim's stork quickly dispels the idea that it is only black and white. Their dark plumage is shot with green and purple and copper lights. The beak is green, the legs greenish with red knee-joints, the cheeks blue with a red spot in front of the eye.

I believe this stork is found at times in Arabia, but apart from this it is entirely an African bird.



WHITE STORK hunting for locusts

5. WHITE OR EUROPEAN STORK

Height 45 inches

The white stork (or white locust-bird, as it is locally named) is probably the best-known migrant bird in this country, and certainly the best-known stork. It comes right out of the pages of our childhood's story-books and the tales of Grimm and Andersen. Everyone knows that it nests on rooftops of the farm houses of Holland and Denmark, where the people regard it with great friendliness. When the birds arrive here in our early summer months, they are a little wilder and shyer, perhaps, but still not afraid of us. In this country they spend their time picking up quantities of insects. A veld fire attracts them from afar, and they follow the flames eagerly to gather up the burnt insect life.

The main aspect of this bird is white, with black-tipped wings. Its beak and legs are a bright red. This striking colour, together with its size, makes the white stork one of our handsomest species. They probably look best when one sees them gathered in dozens on a tree at evening. Like egrets, they push and squabble and fight over their places, threatening each other with loudly clapping bills, and only fall quiet after darkness.

Most of these storks leave us to return to Europe about March. A few old or sick birds have always been left behind, but the number of the birds remaining seems to have increased in recent years. There have been several cases of white storks nesting in the Union and in Southern Rhodesia during the past season or two. Whether the opening up of our country is giving them better foraging ground, or whether the turmoil in Europe is driving them away from their old haunts, we do not know. It does appear that the migratory instinct of the white storks is becoming less rigid year by year, and it may be that we shall soon count this most useful bird as one of our regular breeding species.



MARABOU STORK

6. MARABOU STORK

Height 48 inches

It is strange that the stork family can produce our most elegant bird, the Saddle-bill, and also our ugliest, the Marabou. Even vultures are not so unpleasant in appearance and habits as this carrion-eating monstrosity. The black of its plumage is dull and lustreless. Its thick, powerful neck is bare and wrinkled and pink, except in older birds, which have an untidy growth of white bristly hair. The bill, sometimes eighteen inches long, is dull yellow, generally discoloured by incrustations of filth and blood. The legs are leprous with dry excrement. Between the shoulders is a mass of red flesh like a raw wound. At the base of the neck is a bladder, like a pink sausage, which is inflatable, and often dangles in front of the breast. Yet under the breast the fine white feathers lie thick and soft, rising into a ruff at the base of the neck; and under the tail the white feathers are exceptionally fine—the prized “marabou” plumes of the old feather trade.

These birds do not visit the southern parts of the Union now. The veld is too tame. It requires a good deal of carrion to feed a bird of this size. Any stinking old piece of flesh or fish—especially fish—is meat for the marabou. Its beak is not adapted to tearing, and it prefers food that can be gulped down. A six-pound piece of meat is just a comfortable mouthful. Other birds, even the fierce black vulture, are afraid of this great beak, and stand back when the marabous come to feed. Further north, in equatorial Africa, these storks are looked on with awe and protected by the natives, for their scavenging habits help to keep the veld and the outskirts of the villages clean.

The marabou is a sleepy-looking bird. I have never seen it run, or even trot. It walks at a slow, deliberate pace, or stands for hours with its head sunk between its shoulders. When it flies, its broad black wings move with the same slow, easy power.

I have heard marabous, in tussles over a piece of meat, give a hoarse windy croak. This, for me (and see the note on black storks), destroys the generally accepted idea that storks are completely voiceless.



BLACK STORKS (young) in nest

7. BLACK STORK

Height 45 inches

Anatomists say that storks have no voice, since they lack the necessary syrinx muscles. This conclusion is generally accepted, and it is supposed that the only sound storks make is made by clapping their long bills. Yet I have heard two species of storks with a voice of sorts. One, the marabou already mentioned, I heard when I was only ten yards from the birds. The other was a nest of young black storks, and these I heard repeatedly, when I was within a yard or two of them.

This rare stork is as big as its white relative, with similar red beak and legs; but except for the white belly its plumage is black throughout. It dislikes the presence of man, and breeds in lonely pairs in the most isolated places. The crags of the cold Asiatic and European mountains are the real haunts of the black storks, from whence they migrate yearly to South Africa. It has long been known that some of the birds stay on in this country and nest in the mountains of the Eastern Province. Probably these particular birds have lost the instinct of migration altogether. Among the wild kopjes of the Matopos in Southern Rhodesia I know a pair of black storks that have nested year after year for seven seasons in the same place—a ledge halfway up the face of a bare granite cliff. The young birds hatch in August, and I have twice been able to see them when they were rather less than half-grown. The old birds fly about anxiously as I climb down, but will not come near. The youngsters themselves show considerable resentment. They snap their thick yellow bills (not red like the adult bird's), and attempt to strike, and they voice their anger! It is a hoarse, hollow-sounding cry which deserves no other name but "croak"; but it is truly a voice.

So I wonder, with these two exceptions in mind, whether the family of storks is altogether as silent as has been supposed.



A pair of WOOD IBISES

8. WOOD IBIS

Height to 48 inches

In spite of its name, this bird is really a stork, a near relative of the well-known white European stork and rather similar in appearance. At close view, however, one sees that it is more heavily built, especially about the head. Its beak is exceptionally long and heavy, orange in colour with a downward curve towards the tip. The skin of the face is bare, and of a brilliant red. The general effect of its plumage is white, with a black tail, but the under side of its wings is bright, with shades of rose and crimson. Young birds have altogether sandy brown plumage.

Unlike the white storks, the wood ibis does not go far from water. It depends for its food solely on small water-animals. During the last few years notice has often been made of this bird in South African papers. Once it was a very rare sight, since it is a migrant from tropical West Africa, where it breeds. When Captain Priest issued the first volume of his fine survey of Rhodesian birds in 1933, he had to say of the wood ibis, "it is open to considerable doubt whether a bird of this species has ever been recorded within the limits of this Colony". Such a rarity is past. Since then it has been seen frequently on both inland and coastal waters, and seems to be becoming commoner every year. I have seen a flock of more than thirty, adult and young birds together, on a Rhodesian municipal dam. The photograph on the opposite page, though, was taken at Richard's Bay, in Natal, on a mud-bank which was always crowded with birds. There is a spoonbill in the background, and no such mud-bank would be complete without a good sprinkling of cormorants. The wood ibises were actually much more approachable than any of the other species. Perhaps they were upholding the sociable reputation of the stork family.



SACRED IBIS (and PIED KINGFISHER in corner)

9. SACRED IBIS

Height 36 inches

"Father of the Sickle" is the Egyptian name of this large and handsome wading bird. Perhaps the long curving bill does look like a sickle, but there is more than just that in the name. The whole glory of the once great Egyptian Empire was bound up with the annual Nile floods. Each year, as the rising waters spread beyond the river banks, numerous flocks of ibises appeared to paddle and feed on the new marshy land. They stayed until the receding waters again left the land dry and the crops ready for the farmers' sickles. So a year of many ibises was also a year of good floods and rich harvests, and a year of no birds was a year of drought and famine. No wonder the Egyptians held the ibis in great veneration. Even their god Thoth, the deity of wisdom and of the calendar, is given in Egyptian pictures the head of an ibis.

The flocks of ibis for which the old Egyptians looked so anxiously came from the great marshes of the Upper Nile, where they still live in countless numbers. They are common also on the coastal and inland waters of South Africa. The bare black neck with wrinkled skin like the leather of a shabby old glove, and the dark drooping tail feathers, make it an easy bird to recognize. At close quarters the tail is seen to be shining with metallic blues and purples. In flight, in their favourite open line formation, a flock of ibises with outstretched black heads and black-fringed silver wings makes an admirable sight.

Water insects and shellfish are the main ibis diet, obtained by quiet wading in the shallows and probing the muddy bottom with their sensitive beaks. Audubon, the great naturalist, describes how he watched ibises select crab-holes near the water's edge and drop into them small pieces of clay. They stood quietly by until the crabs came up to remove the obstructions, when they deftly picked them up and ate them.

These ibises nest in South Africa, in coastal swamps or rocky islands not far from shore, in colonies sometimes of several hundred birds. Their nests are rough, untidy structures, masses of sticks and weeds thrown together and lined with grass. The eggs, usually three, are chalky white, spotted with rusty brown.

The second bird in this picture is the Pied Kingfisher, looking rather bigger than it should because of its nearness to the camera.



GREATER FLAMINGO—swimming

10. THE GREATER FLAMINGO

Height 54 inches

A flame is the literal meaning of the name of this brilliant bird. Such flashing colours as it wears deserve the title. On the shallow bays, lagoons, and river estuaries of our South African coasts, where the flamingoes gather in big flocks, one may see them standing line after line on tall coral-pink legs, wings flaming scarlet and black, bodies gleaming white, with absurdly heavy, bent, pink-and-black beaks at the end of long white necks. As they pace slowly on, the water catches their reflected colours until everything about them is tinged with the same dye of vivid colour. If alarmed, they trot faster ahead, leaning more and more sharply forward until they rise from the water one behind another and wing slowly away, like so many long white wands from whose middle the blood-red, black-trimmed wings wave like flags.

Young flamingoes are born with straight beaks, the strange boat shape of the adult developing later. When feeding, these birds put their heads under water, so that the beaks are upside-down, and scoop in long sweeps among the mud and weeds. They filter their catch through the sides of the beak, keeping and swallowing all the tiny water-insects which are their main food. For this reason they are fonder of salt and brackish water than of fresh, but none the less they often visit inland waters, dams and rivers, though usually only as passing visitors. They are, as their long legs indicate, purely wading birds, but can swim well if the need arises. The one whose photograph is here, for instance, incapable of walking from the effects of a heavy meal and a very hot sun (a state which my native boys tell me occurs quite often), swam across the pan when I tried to get too near.

This large flamingo comes from the south of Europe and Asia and parts of the African continent, but is not known to breed in South Africa. The Lesser Flamingo, a similar bird but only half as large, does nest on some of the big pans in Bechuanaland. The nest is a mound of scraped-up mud, hollowed at the top for the two chalky-white eggs.



REED CORMORANT (DUIKER) at rest

11. REED DUIKER (OR LONG-TAILED CORMORANT)

Length 24 inches

In past times cormorants were as much part of a nobleman's household as his horse or hound or hawk. Nowadays we are inclined to condemn them out of hand as gluttonous fish-eaters. There are several species, the one most commonly seen on inland waters being the small reed cormorant whose photograph is given here.

It will be found some time or other on every stream and dam, swimming with its body almost submerged and its long neck rising like a snake from the water. In every way it is an unattractive bird, ungainly and heavy in flight, its plumage dull and draggled and so thin that the blue leathery skin shows through. The nesting colonies, among reed beds, waterbound rocks, or waterside trees are fouled with dirt and smell abominably.

I once saw cormorants in an aquarium tank. The speed and skill with which they used their feet under water in overtaking small fish was amazing. The final catch was always made by a swift dart of their long hook-tipped beaks, and I never saw a fish so caught manage to slide away from the cormorants' grasp. In a small river pool very little can escape them; but in justice we must say that the reed cormorants swallow frogs, crabs and water insects just as readily as small fish. I have known one to swallow whole a six-inch brown frog (*platanna*). Its voracity gave rise to the Roman name *corvus marinus*, the sea raven, from which our name cormorant comes.

The most curious habit these birds have is "hanging out to dry". After a spell of swimming and diving, their feathers become somewhat waterlogged, and the birds then return to some point—a rock, or stump, or overhanging tree—where they can spread their wings to dry in the sun and wind.



DARTER or SNAKE-BIRD drying its wings

12. DARTER (OR SNAKE-BIRD)

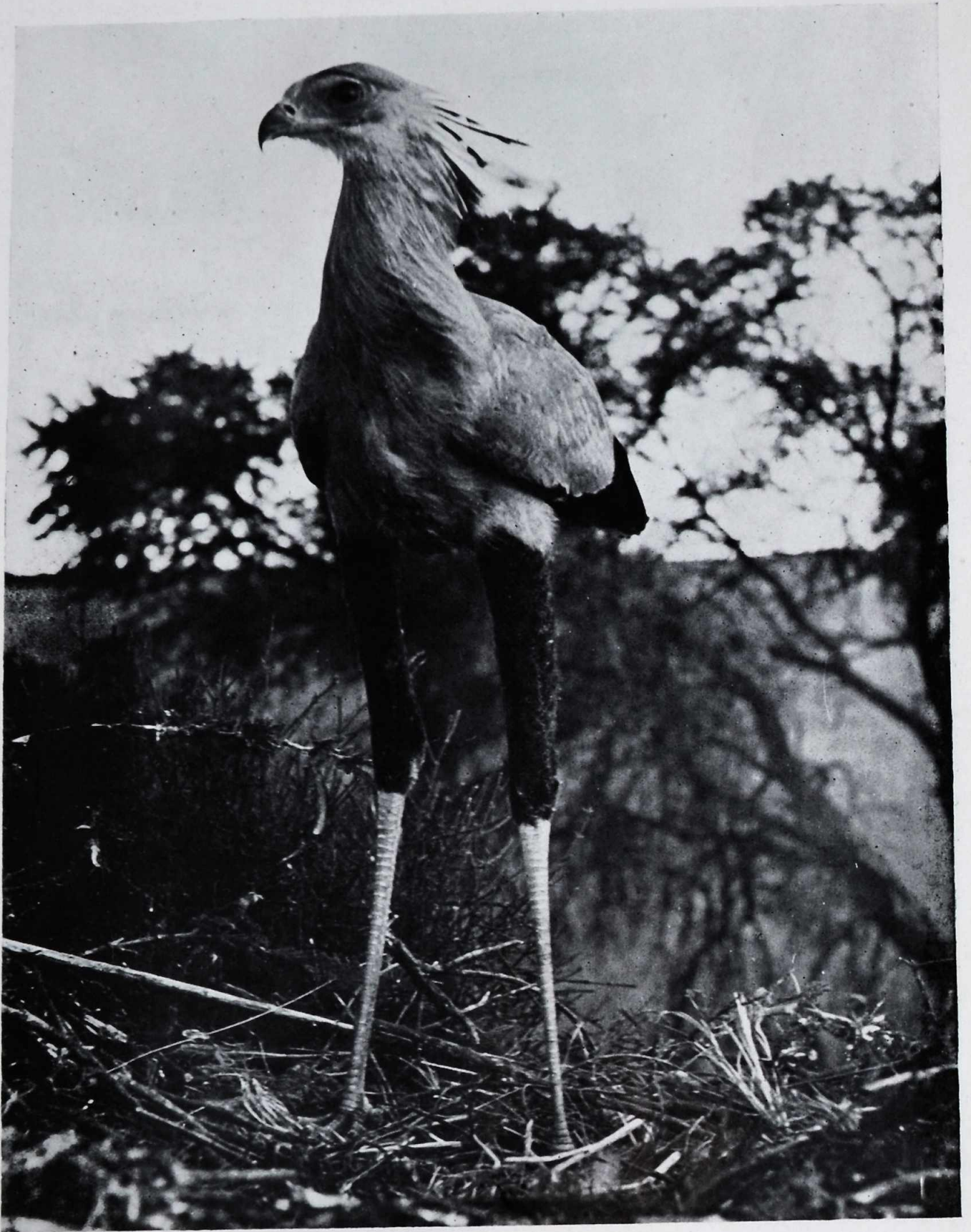
Length 33 inches

On any stretch of inland water or coastal lagoon there are favourite rocks or tree stumps, their tops just above the water level, where day after day cormorants stand to dry out their wings. With them is often a bigger bird, more slenderly built, with long tapering dark neck, small oval head, and slender beak like a javelin. This is the darter, or snake-bird. It is often mistaken for a cormorant. Like it, it dives and swims for fish, and comes out of the water at intervals to dry its water-logged plumage.

There are several points of difference between the two families. The darter's neck is longer, but often at rest does not show its full length. There seems to be a thickening at the base of the neck, which is really a tight S-bend. A special arrangement of the muscles makes it possible for the bird to straighten this bend with great speed and force, which it does when within striking distance of its prey under water. The fish is transfixed by the darter's straight, sharp beak, and held there by backward-pointing serrations on the sides of the beak. I have seen more than fifty fish, small fry between two and three inches long, in the stomach of one of these birds.

Darters are wary birds. They fly from their perching places long before a cormorant will, at the least sign of danger. In the water they are able to swim with bodies completely submerged, so that only the long waving neck can be seen. Hence their name of snake birds. As they swim along, the neck jerks backwards and forwards with every stroke.

The general impression that this bird gives from a distance is of blackness. At close quarters, however, it is only the wings and tail that have this colour. The body is a shining red-brown, the neck dark brown with a white band down the sides.



SECRETARY BIRD—young, 14 weeks old, standing on nest

13. SECRETARY BIRD

Height 42 inches

Africa has many birds peculiar to itself, and of these the most typical one of the open veld is the Secretary Bird. It is very rarely seen in either mountain or forest country, having adapted its way of life to the level grassland where its long legs and unusually stumpy toes (unusual, that is, for a bird of prey) carry it over the ground faster than a man can walk. The bird takes its name, of course, from the trailing crest of black feathers which hang behind its head as the old-fashioned quill pen used to hang behind the ears of clerks a hundred and fifty years ago. It is a picture of elegance. The dove-grey colour, with black thighs and wings, stiff projecting tail and stately stride, remind one of a gentleman in court dress with his sword standing out from sleek coat-tails.

The old Dutch name of *slang-vreter* tells us of its fondness for a diet of snakes, though these reptiles are a very small part of its daily food. Stalking over the veld, it snaps up lizards, locusts, grasshoppers, frogs, mice, tortoises and even hares, attacking the bigger things with powerful kicks and stamps from its blunt, heavy feet, and holding its great wings widely and terrifyingly outspread. It will sometimes use the same method of attacking a man who climbs up to its nest, but so far as I have seen the fiercely curved beak is rarely used in attack. The young birds when disturbed, and the old birds on stray occasions, make a loud, hoarse, croaking noise which seems to be their only voice.

The secretary bird still roosts and nests in trees, generally on the very top of a thick, wide-spreading thorn bush. The nest is a four-foot platform of tramped-down foliage and heavy sticks, almost level, and strewn with coarse dry grass. The eggs are two, large, white and rather chalky, laid about the end of September. They take six weeks to hatch, and the young ones for five weeks thereafter are covered in short white woolly down. The first real feathers to show are two lines of black at the top of the head, which will be the crest. Their food is pre-digested in the mother's stomach and passed by her directly into their mouths—except, that is, in the case of something as big as a hare, which is regurgitated by the mother and flung into the bottom of the nest.

For fourteen weeks the young stay in the nest, and only during the last week of this time do they learn to stand. Their legs, it seems, are too fragile to be trusted earlier, although the birds learn to squat up on their thighs after the first two months. Once a secretary bird has learned to use its legs, it is ready to leave the nest.



AFRICAN HAWK EAGLES at nest

14. AFRICAN HAWK EAGLE

Length 24 inches

These birds are the handsomest of our small eagles, and perhaps the fiercest. They live usually in hilly country, from which they can overlook a wide stretch of territory. As with most eagles, the female is slightly bigger than her mate, but they are alike in colour. The main hue is dark brown, with indications of white on the wing. Under parts are white, the breast being strikingly marked with large pear-shaped brown spots.

The pair of hawk eagles in this photograph nested half-way up the slope of an outstanding wooded kopje, at the top of a big msasa tree. Their home is a mass of thick sticks, slightly depressed in the centre and lined with green msasa leaves. They did not even seem nervous when I built a platform at the opposite side of the tree, but went about their daily business quite freely.

Their two eggs were dirty-white, blotched a little with rusty red. The parents took turns at incubating, and whenever one returned from its hours of freedom it carried back in its beak a fresh leafy spray to be added to the nest lining. The male bird, in fact, used to pay special visits to the nest just to offer his mate gifts of leaves. Sometimes, when he had made a kill, he used to sit on his favourite perch higher up the kopje and scream to her. After a little throaty whimpering and eager twisting of her head she would glide from the nest and go to share his meal; but on these occasions she never stayed away more than a few minutes.

When the young ones were born, covered in thin black down, the parents hunted energetically for them. They killed squirrels, lizards, rats, snakes, partridges, doves and very often fowls from a near-by farm, tearing their prey to pieces at the edge of the nest and feeding the young on tiny scraps. After a while they took to leaving whole carcasses in the nest, which the young birds quickly learned to tear for themselves.

Even when the young birds left the nest, they had not attained the colouring of their parents. They were still light brown on their backs, the under parts suffused with red and streaked with dark brown. Probably not until the following winter (this was an August nest) would they reach their full adult plumage.



WAHLBERG'S EAGLE and young (November)

15. WAHLBERG'S EAGLE

Length 22 inches

I am writing this from the topmost branches of a tall redwood tree, on the shoulder of an ironstone kopje. The earth lies away below me, stretching over acacia-dotted plains to a distant horizon.

On the other side of the tree a young Wahlberg's Eagle is sitting. Its platform is a loose pile of sticks about three feet across, apparently jammed anyhow into a convenient fork, and thinly lined with leaves. The old birds have just laid down a new carpet—a task they do, like most eagles, every day during their occupation of the nest. The young bird, grey-down-covered, gazes constantly across the veld, or searches the tree-tops and sky with already fierce eyes. He takes no notice of my hide. It was built a little at a time, two months ago—in October—when there was only a chalky white, rust-blotched egg in the nest. To him it is part of the tree, which he has seen every day since he first hatched out into a handful of coal-black down.

By the time this youngster is six weeks old it will be the same colour as its parents—all over dark brown plumage, bright yellow feet, and dark horn-bill yellow at the base. This is the plain medium-sized eagle most commonly seen in any part of South Africa.

The eaglet raises itself and whimpers excitedly. Here comes the mother, skimming through the tree-tops. She throws a large green lizard into the nest. Yesterday she had a long-legged crake, and, the day before, a rat. She tears the lizard to shreds, offering it bit by bit in her beak to the youngster and watching carefully to see that it is not too big for him. The lizard has lasted five minutes only. Now the eaglet crouches against his mother's feathered legs, to find shelter from the sun. So the mother stands on the edge of the nest and spreads her brown wings, shading the whole nest. She may stay like that for an hour at least, if nothing disturbs her, while the young one drowns the time away.



YOUNG BLACK EAGLE, practising flying

16. BLACK EAGLE (VERREAUX'S EAGLE, DASSIEVANGER)

Length 34 inches

This magnificent eagle is still fairly common in our mountain districts. In Rhodesia, for instance, one cannot stay long among the wild maze of kopjes known as the Matopos without seeing a number of pairs. As they wheel high overhead in the blue air, it is not easy to realize that, small as they look then, they have a wing span of over six feet, and are capable of carrying a young goat in their yellow talons. The main colour of their plumage is black. Looking up at them one sees a lighter band under the wings, and as they swing and turn the pure white of back and rump flashes into view.

I watched a pair wheeling over my kopje. They both carried fresh green leaves in beak and claw, and I knew they had a nest close by. (This was in July.) It was not the usual eyrie on the side of a precipice, but built in the main fork of a lofty mountain acacia—a massive structure of thick branches, altogether about three feet across. In the middle of this, on a lining of fresh leaves, the one drab-coloured chick looked rather lost. It looked over the edge of the nest at me, then shrank back and crouched, absolutely still, as if expecting to escape observation that way. So long as I was near the nest the parents flew, one after the other, around and over me with shrill screams, threatening attack if I were to climb the tree.

The young bird was quite brown at the age of three months, with light-coloured head. His favourite pastime was to stand on the edge of the nest and flap his already wide wings for several minutes, and make trial flights from one side of the nest to the other, tearing at a dead dassie between whiles. His appetite seemed unending. Like numbers of eagles, he stays a very long time in the nest, and only acquires the coloration of a mature bird after two or three seasons.



YELLOW-BILLED KITE

17. YELLOW-BILLED KITE

Length 21 inches

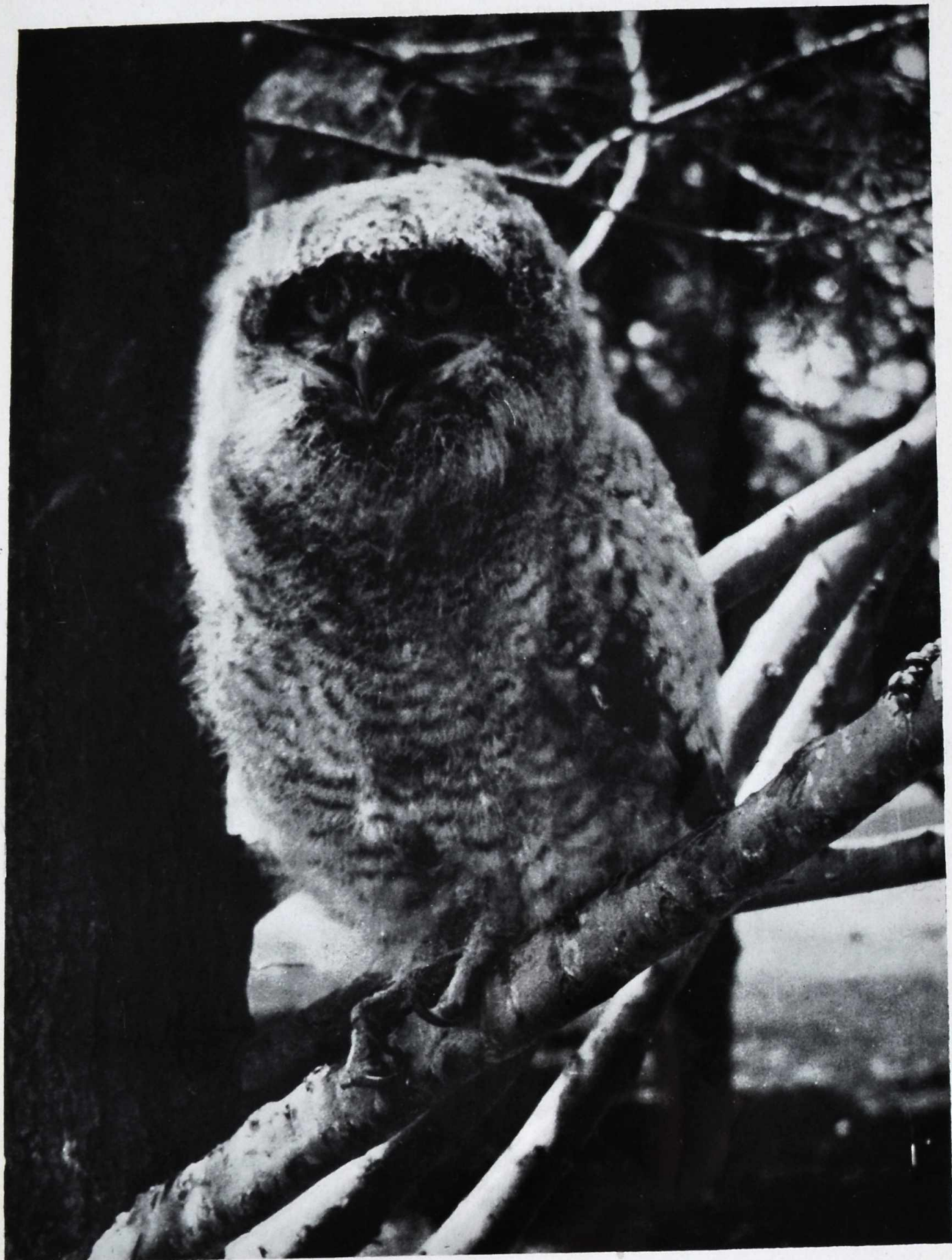
There is no bolder or commoner bird of prey in many parts of Southern Africa than this ordinary "brown hawk". It will visit a poultry run repeatedly to get at young chicks, or alight in the traffic of a busy city street to snatch a scrap of meat. Almost anything will serve it for food—decaying offal, freshly-killed small animals, or insects. Hence it takes a great share in keeping the veld clean, especially in the neighbourhood of native villages.

One or two pairs of these kites seem to reside in most districts, but at times, particularly after the early rains, great numbers suddenly seem to appear. They stay a while, and then just as suddenly move on. I have seen flocks of several hundred gorged almost to helplessness on white ants. Newly-rising swarms of these insects and swarms of locusts are always attractive to kites, which prefer to catch their prey on the wing.

It is a brilliant flyer, and is peculiarly easy and graceful in the air, seldom needing to flap its wings as it moves in wide smooth sweeps over the ground. Its achievement is not in speed but in dexterity. It does not attempt to chase other birds in flight, but will pounce silently and accurately on dwellers in the grass. Frogs, mice, lizards, unfledged birds, are taken impartially.

The kite's long forked tail makes the bird a master of every possible turn and twist. A simple movement of this tail sends the bird banking into a right-about in mid-flight. Sometimes a complete somersault is performed, as the kite suddenly catches sight of a flying insect. It scoops it up with beak or claw, and without a break in the smoothness of its flight returns to its easy circling glide, nibbling at the morsel as it flies.

This forked tail is a readily marked field character for identifying the kite. In adults the yellow bill and legs are also noticeable, but in a young bird the bill is brown.



WOOD OWL

18. WOOD OWL

Length 13 inches

In heavily timbered country through most of South Africa this owl is likely to be found. The coastal bush regions of Natal and the Eastern Province suit it well. Inland it is to be seen only in the forest districts. Because of its liking for the deep shade of bush it is rarely seen, but its cheerful call of "Where-are-you? Where-are-you?" is well known in wooded areas after dusk. On clear moonlight winter nights this call goes ringing back and forth between the trees, as if all the owls in the forest were talking.

A hole in a tree trunk is the place the bush owl chooses for nesting. No owl seems to ask for comfort in a nest, and the white eggs of this species are laid only on the chips of dead wood that collect at the bottom of the hole. I have not yet been able to watch a nest right through the breeding season; but I suspect that, like several other owls, it lays its eggs at extended intervals, instead of close together. Whether this is to lighten the work of feeding such hungry youngsters or not is a matter of opinion. In owls that follow this practice the later eggs are partially incubated by the earlier-hatched owlets.

The wood owl is one of the "earless" species. Its back is dark brown, with white spots. Its under parts are covered with white and brown bars. The young birds are the usual bundles of white down, and even in a well-grown bird the down persists for some time. One of them came down from the kopje to my garden. It was hiding in the cypress hedge, but the toppies and finches and starlings discovered it and set up an indignant clamour. They seemed to have no fear of it in the daylight, and the still immature owlet could only submit with vainly-snapping bill to their excited hectoring.



YOUNG SPOTTED EAGLE OWLS

19. SPOTTED EAGLE OWL

Length 18 inches

Wherever there are rocks and trees, the spotted eagle owl is likely to make its home. This is the large bird so often seen at dusk on roadside telegraph poles, or heard any hour between dusk and dawn with its low husky call *whoo-oo-oo-aw*. Seen in silhouette against the sky, its ear tufts are most noticeable, and serve as a useful distinguishing mark. These so-called "ears", by the way, are merely tufts of feathers growing upwards from the top of the head, and are quite unconnected with hearing. In America similar birds are known as horned owls.

These owls are powerful and savage birds. When wounded they still fight furiously, and adopt a terrifying attitude. They crouch with neck drawn in until the round, staring face seems to be set deep between the shoulders. The wings are half lifted, half spread, so that no gap can be seen between them and the body. Every feather on wing and body takes on a new quality of stiffness, standing out and making the owl seem twice its normal size. The ear tufts stand up like a pair of threatening horns. In the middle of this rigid angry mass the tawny eyes flash and glow. Below them the curved black beak snaps with a continuous *click-click-click*. At intervals the puffed-up bird gives a vent to a malignant hissing, more terrifying than either screech or hoot.

A district will carry several pairs of these birds. They make no real nest, I have seen their eggs laid in shallow scrapes on the ledge of an old quarry. on a cut-away river bank, and inside the dark hollow at the foot of a split tree-trunk. In this last nest the mother could crouch unseen until one walked right up to her. Then she would spring up and drift away, feather-light, to hoot in protest from a near-by tree. The owlets, two bundles of fluffy white, were savage like their parents, resenting intrusion with snapping beaks. Every morning a newly-killed animal was left in the nest for these young ones—a mouse or rat, or, on rarer occasions, a squirrel.



SWAINSON'S FRANCOLIN at nest

20. SWAINSON'S FRANCOLIN (BUSHVELD PHEASANT)

Length 15 inches

The red-necked francolins are well known as the most prized table-birds in South Africa. Their harsh calls carry, for anyone who has spent his time in the veld, memories of cool odorous mornings, the paleness of winter grass, and wide views of thorn veld or kopje country. Always at the time of sunrise and sunset these birds call to each other from the shelter of the bush, harsh and impatient and careless of who hears them. Their voice is a strident crowing, *kwar-kwar-kwar-kwar*, that sounds for several hundred yards, always tempting the hunter to reach for his gun and be after them.

Swainson's is the plainest of the red-necked francolins. On back and breast alike it is a dark brown, a mottled black-and-white collar at its neck; throat and cheeks bare red skin. As one glimpses it among the grass it appears very dark indeed, quite different from the smaller partridges which often live in the same district. It is a bird of the dry veld. The bush around waterholes or along river banks is its favourite ground, but often it is found a long way from any known water. Where there are rocks, it is fond of parading on the highest point morning and evening, as if it could make its voice travel further from such a place.

It is fond of cultivated lands, where it most easily finds the grain on which it mainly feeds. Where francolins are plentiful, indeed, they can be most destructive, scratching up newly-planted mealies and beans and ground-nuts over wide patches of crop. They often linger about old lands to breed, like the one whose photograph is shown. This nest was made in an old mealie land (in April) under the thin shelter of a dead dwarf marigold. It was hardly more than a scrape in the red soil, scantily lined with wisps of grass and a few feathers. The eggs, five in number, were light biscuit in colour. They hatched after about three weeks, and the young birds left the nest almost at once.



NATAL FRANCOLIN

21. NATAL FRANCOLIN (ROCK PHEASANT)

Length 15 inches

On one of my bird-hunting expeditions I had the company of a keen gun-and-dog sportsman. I showed him a kopje from which the constant call of rock pheasants could be heard, and left him to it. For two days he tramped the kopje, getting only one shot in the whole of that time, and gave it up in disgust. For the following three days that we stayed there he did not take his gun from its case.

That kopje is a wall of granite pierced everywhere by narrow clefts, with a long boulder-strewn slope of tangled bush and grass below. At its base are a few tall trees among spreading tangles of briars, and then about fifty yards of level meadow before one reaches a narrow stream. It is ideal for birds, and it is the home of dozens of Natal Francolins. They have no red neck, these birds, but the usual red bill and legs of the family. Their feathers are wonderfully marked, and in colour imitate closely the variable tints of fallen leaves.

My sportsman friend, of course, would not shoot a running bird; and these Natal Francolins gave him no chance of shooting on the wing. They are most elusive. When disturbed, they hop over a rock or into a cranny, or dive over the edge of the high granite cliff, or scurry into the briar tangle. They use their wings as little as possible, and depend on their legs for safety. Not even the assistance of a trained pointer was successful in persuading them to flight.

I have watched a family of six of these birds walk in line into a little group of rocks not more than five yards in diameter, and been quite unable to find them again. Most francolins are adepts at concealing themselves, but this variety most of all. In the evening it moves towards trees, where it perches in the highest and densest branches for the night. Its nest is made on the ground, often among dead leaves. I found one once in the corner of a very old, broken kaffir grain-bin on a rocky slab, with four creamy-white eggs.



LILY TROTTER or JACANA

22. THE LILY-TROTTER (OR JACANA)

Height 8 inches

Wherever there is a dam or quiet lagoon overgrown with weed and water lilies, this fascinating bird is at home. The yellow flowers of the marsh weed and the white, pink or blue lotus blooms are no brighter than the Lily-Trotter's own colours. Its body is maroon red, its breast white shading into yellow, its head black with a blue shield in front and a blue beak, and its legs are green; as the birds paddle over a lily-covered backwater they look like flowers moving.

The Lily-Trotter's toes, which may be seen in this photograph, are extremely long ($2\frac{1}{2}$ inches) and spread widely, so that the bird can find support on thin growths of floating weed. Indeed the lily-trotter prefers walking to any other way of moving, though it can swim and dive well if necessary. In flight its long legs dangle for the first few yards, but eventually are held straight out behind the body. Even when nesting, the bird keeps to the safety of the deeper water, laying its eggs in the middle of a lily leaf, or on a thick pile of weed. There is no attempt at a nest. The coffee-coloured eggs, heavily scrawled with black, lie continually damp, and must be half submerged when the mother sits over them. Perhaps their very high polish protects them from the water. They are usually laid at the end of the rainy season, when the weed is thick and the danger of sudden floods is past.

One may often hear the harsh *krark-krark* of these birds, or a curious rippling call like hoarse laughter, as they wander over the dipping water-plants in search of insects and seeds. Yet when they are still they are most difficult to see. Their red bodies are the under sides of lily leaves curled over by a breeze, their white breasts are lily flowers, their pale blue frontal shields are sparkles of sunlight on the water.

The name Jacana is, I believe, South American, and originally pronounced *ya-sa-na* (accent on the last syllable). Here we use the more obvious pronunciation, but for myself I prefer the name Lily-Trotter, so much more likely to recall to mind the picture of these gay birds and their colourful surroundings.



CROWNED PLOVER, crouching over its eggs

23. CROWNED PLOVER

Length 12 inches

The crowned plover, perhaps the commonest South African plover, is not a water-loving bird like most of its relatives. It prefers the dry open country, especially where there is no bush and the grass is not too long. In such places it tends to live in small communities of a dozen or so, which keep fairly close together even after they have paired off for nesting. I have seen five nests within a hundred-yard radius in an unfrequented corner of an aerodrome. Race tracks and golf courses are often favourite places for them, and they carry on their nesting duties in spite of the continual passage of people.

Their nests are often undiscovered in even the most frequented places. Although the crowned plover chooses such open situations, it is well hidden from ordinary observation at every stage of its life. The eggs, usually three, are clay-coloured, blotched with shades of brown, and are difficult to see. They are laid in a slight hollow, sometimes lined with a wisp of grass in grassy places, but more usually smoothed off with gravel only. The young birds leave this poor sort of nest a few hours after they are born. They are quaint things, long-legged, with heads almost as big as their bodies, covered in brown fluff streaked with biscuit. At the first sign of danger they squat down and refuse to move, their colour giving them ample protection. The old birds have earthy-coloured wing and back feathers, and stand with their backs towards you so that they are hard to distinguish. When they fly they show a contrasting black-and-white pattern on the under side of the wings.

These plovers are the constant guardians of the territory they use. By day or night it is impossible for an intruder—hawk, dog or man—to approach this territory without the birds raising shrill screams of alarm. They fly over the intruder, swooping down viciously as if to strike with their wings.

The name crowned plover is taken from the birds' black cap with its contrasting ring of white.



A pair of BLACKSMITH PLOVERS and nest

24. BLACKSMITH PLOVER

Length 12 inches

How well the eggs of plovers match their surroundings in colour is illustrated by the nest in this photograph. You can see the three eggs in the foreground. The place is a stretch of bare mud, dried and split into innumerable small sections by the sun. Some of these sections had been kicked out by oxen, leaving little odd-shaped hollows. In one of them the blacksmith plovers had made a floor of mud flakes in which the eggs, marked with fine spots of brown, were half buried. A friend of mine was interested to see the nest, and after walking a few yards away from it turned back for a second look. He could not find it again, even though he knew almost exactly where to look. In fact, when I went to help he was standing only four feet from the eggs.

The black and white and lavender grey of the blacksmith plover is unusual in a family that is so noted for concealment. It is surprising, though, how these large contrasting masses of colour hide the shape of the bird, and how, consequently, it remains unnoticed so long as it is still. "Disruptive pattern" is the name given to this type of camouflage. Our blacksmith is a true bird of the water's edge. The nests I have seen have always been a few yards from the water, and it seems that each pair of birds marks off a stretch of shore for itself and fights hard to keep out intruders. Up and down this territory the birds wade repeatedly, hurrying knee-deep in the water, or making a sudden run sideways to get some insect or small water-animal. Their attitude when reaching for a titbit, with head forward and one foot poised, is very characteristic.

The name Blacksmith comes from the single cry they use as they fly, a metallic *clink, clink*, supposedly like the tap of a hammer against an anvil. At other times they use a call *curl-ee, curl-ee*, like a small and breathless curlew piping.



CROWNED CRANES, feeding

25. CROWNED CRANE (OR MAHEM)

Height 36 inches

I have just been looking for a nest of crowned cranes. They are rare here on the high veld, though plentiful on the Zambesi and the eastern coastal areas where there is more of the swamp land which they like. However, they do occasionally breed in the high country, in suitable seasons. There is a flock here on the river flats every winter. About December they break away in mating pairs and spread over the country. For the past three years I have looked for their nests without success. They were drought years, with poor growth of reed and grass, and I think very few pairs, if any, actually bred.

This year (1942-43) the rains have been heavy. Now in May the rushes along the river flat are tall and rank. The cranes, undisturbed except by cattle herds, are nesting freely. Their nests may be seen on tiny islets, on rush-covered peninsulas, or in the middle of sedge beds where the river spreads and loses itself for a while in soggy marsh.

Many of these seem to be experimental. They are only places where the reeds have been stamped flat, and a few scraps of grass pulled together. Some have two or three eggs, plain milky-blue in colour.

One crane sprang up almost alongside me from a patch scarcely fifteen yards square of tall, vivid green flags. Its straw-yellow top-knot, velvet black head and white cheeks, white, black and maroon wings and long black legs were clear to me for the first time without field glasses. I have always found these cranes difficult to approach, especially in their winter flocks. They keep to open ground, picking up insect and small animal life, sometimes breaking off to execute most comical and intricate dances. But some members of the flock are always on the look-out, and before one can get within fifty yards they take to the air, sweeping away in line with slow wing-beats, all bugling their most musical call *kwal kwahli*, *kwal kwahli*.

It is from this bugling that the Afrikaans name of *Mahem* and the local native name of *Mwari* are both taken.



WHITE-FRONTED SAND-PLOVER on nest

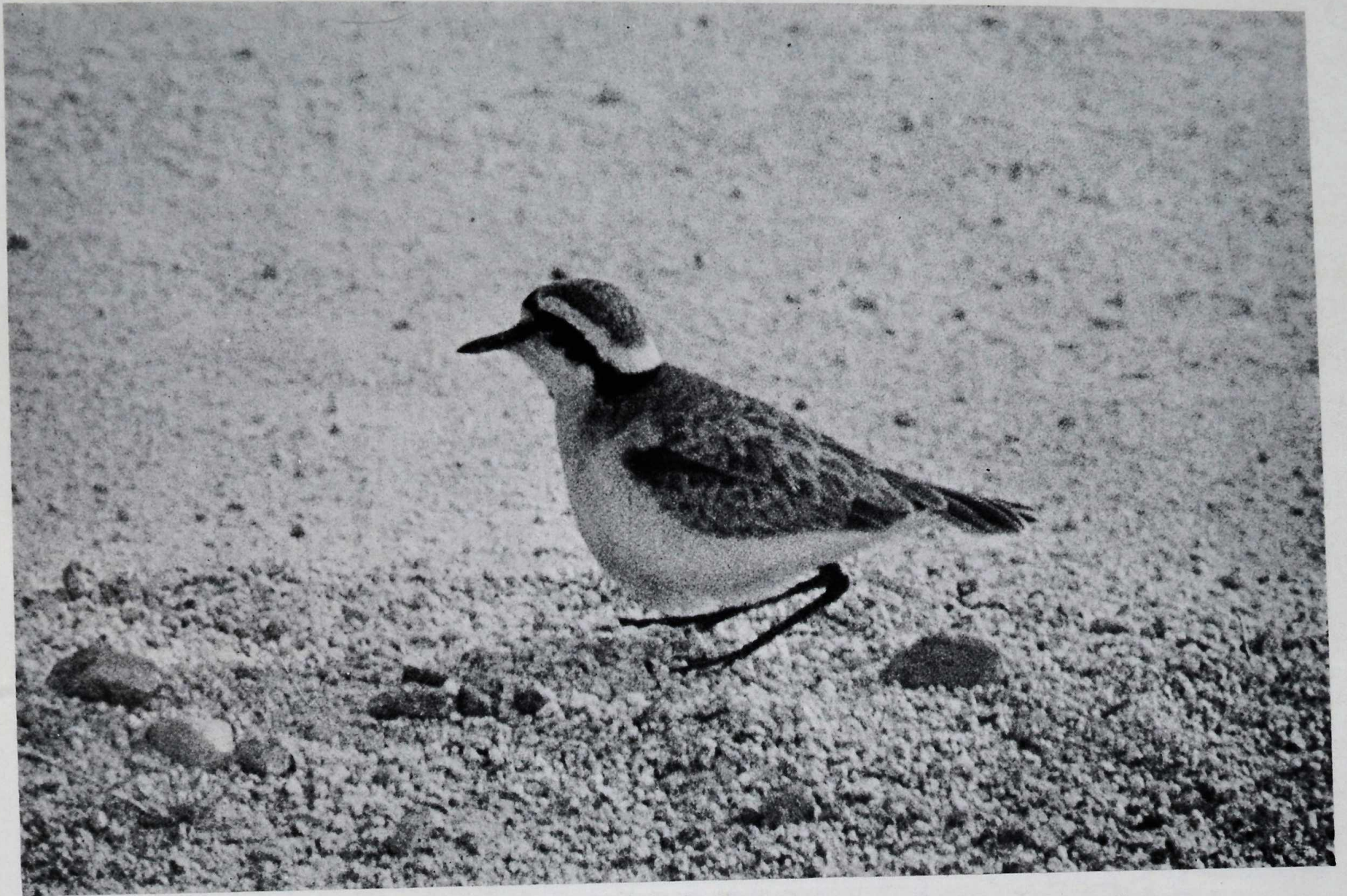
26. WHITE-FRONTED SAND-PLOVER

Length 7 inches

This is a bird of the beaches, although it also lives in small numbers on big inland rivers like the Zambesi and Sabi where there are big stretches of open sand. It wanders about just above the waves, scurrying along the edge of the moving water with a fussy sideways run. More than two or three are rarely seen at once, although several pairs may collect around a suitable breeding-place.

One such place I know is a shelving sand bar across the mouth of a river on the Natal coast. The roar of waves against the sea side of the bank is continual. On the landward side the sand slopes gently to a shallow lagoon. Here it is covered with gravel and old cane stems and the general debris of old river floods. In amongst this debris several pairs of these shore-runners make their nests, little depressions almost filled with shreds of bark and twiglets and gravel in which the three eggs are set, pointed end down, so that only the broad ends are exposed. These eggs are buff-coloured, heavily marked with lines and spots of brown.

From the shelter of a near-by dune it is easy to watch this strip of sand-bank. In the lagoon are white egrets, grey herons and the big goliath heron wading, an osprey and a giant kingfisher diving from the air. On the edge of the water wagtails and sanderlings run to and fro. Someone walks over the dune. There is a swift scurry of feet and wings as the birds move away. Danger past, the birds return slowly to their places. Through the glasses one sees the sand-plovers moving among the flood rubbish, crouching as they go. Sandy-coloured, with no variation except light under parts and a white forehead, they are only seen because they are moving. In and out they run, working indirectly nearer and nearer to the nest. At last they fluff out their feathers, shuffle a little, and settle back in stillness over the eggs.



KITTLITZ'S SAND PLOVER (sitting on nest; eggs hidden under gravel)

27. KITTLITZ'S SAND-PLOVER

Length 6 inches

Our road wound along the shore of a big dam on the high veld—a rough earthen road, with a wide ridge of loose gravel between the wheel tracks. In front of the car a small long-legged bird shuffled crazily on this gravel for two or three seconds and flew off almost under the radiator. It was there again when we returned, doing the same thing. From curiosity I stopped to look at the place, but found nothing to explain the bird's strange behaviour. We passed that way several times and always saw the bird, a small plover, at the same place. Only after several attempts did we find the explanation—a single small yellowish black-scrolled egg half-buried in the loose gravel; the nest of Kittlitz's sand-plover.

This little mud-haunting plover is unique in its family. I watched it later at close quarters, as cars travelled up and down that road. While the road was empty the bird sat quietly over the egg, its light brown back not very easy to see. The white and black bands on head and neck are the best identification marks, different from those of any of the other small plovers. As a car came into sight, the bird stood up and with swift kicks of its three-toed feet—"crazy shuffling" I had seen—scooped the loose gravel completely over the egg, leaving no trace of either it or the little nest-hollow. When the car was past, the bird ran back to the place and settled down again, slowly uncovering the egg while she was sitting. No wonder the nests of these birds are rarely seen. The only method one can adopt is careful watching of the breeding birds from a distance, to find the exact place where they settle.

Kittlitz's sand-plover is commonly seen near any considerable body of water both at the coast and inland. It usually uses sand and gravel banks for nesting, where it is less disturbed than this one was. In the photograph the bird is standing directly over the egg. A faint ring in the gravel is all that marks the nest.



CAPE DIKKOP standing over its eggs

28. CAPE DIKKOP (STONE CURLEW, MOONBIRD)

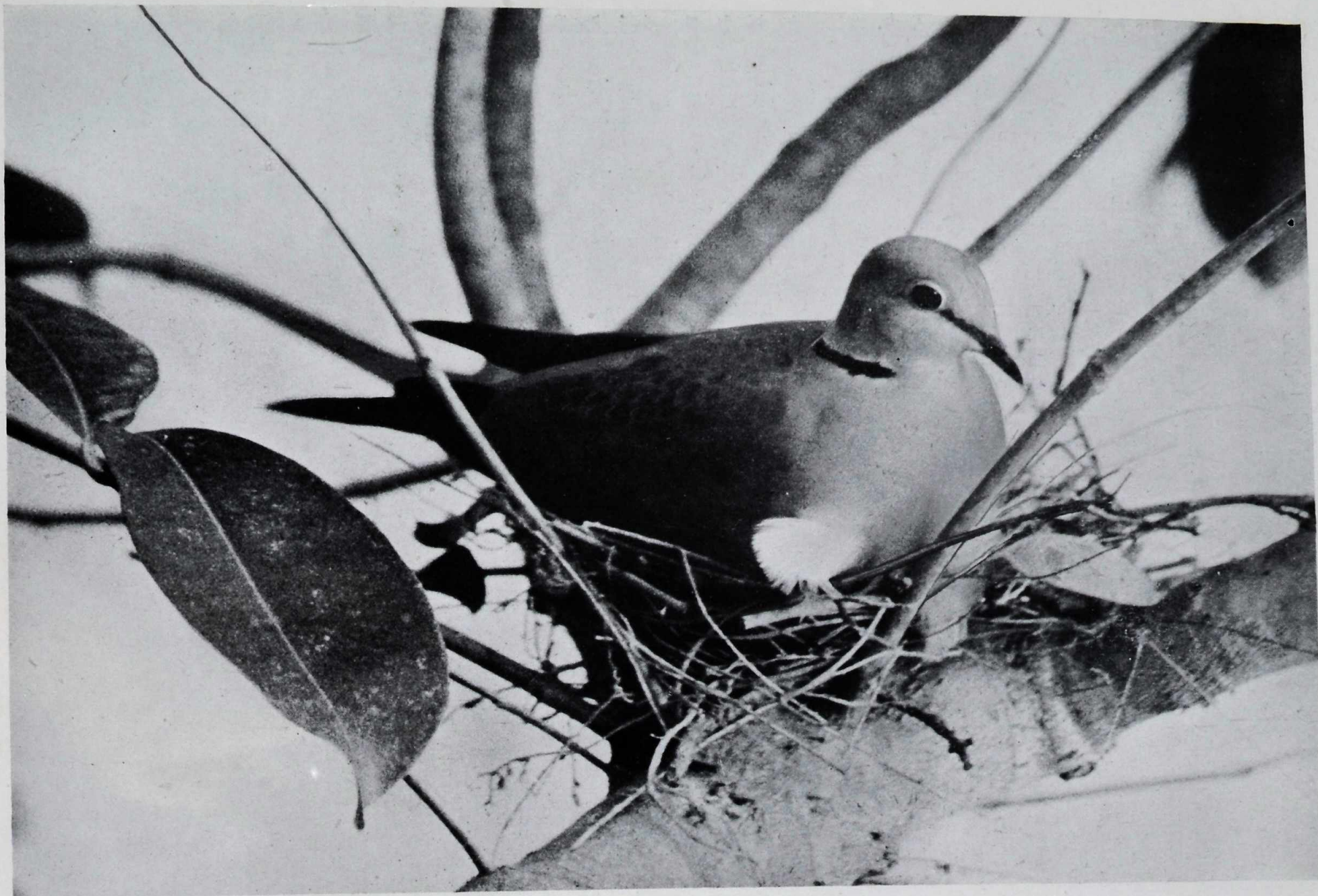
Length 16 inches

The dikkop used to be considered a good table-bird, but has fortunately fallen out of favour in recent years. At the same time our Government has recognized the value of the species and included it in the list of protected birds. It is incredible that dikkop-shooting can have been exciting sport, any more than shooting owls or nightjars would be. That the dikkop is just as much a night bird as either of the others, the largeness of its amber eyes may tell; and it is equally inactive in the daytime.

By day the dikkop escapes observation by its stillness and by the protective colouring of its mottled brown plumage. It likes the shade of thick-leaved bushes, where it will stay until an intruder comes within a few yards. Then it either flits away a short distance, or more often runs—a crouching run, with its thick head stretched low and forward.

After sunset the dikkop becomes active, moving to the nearest water or swampy ground for insects and other small water-life. Its clear whistling cadence is often heard in the darkness. Coming unexpectedly out of the night, it can have an eerie and mournful sound, and is, in fact, often taken as an omen of ill luck by some people.

Open veld and bare stony slopes are the favourite haunts of this bird. My wife and I found a pair, which from their persistent lingering obviously had a nest. After careful watching from a distance my wife marked its probable position. A closer look revealed nothing but stones, burnt roots of grass, and bare earth. So the process was repeated, only to lead us to the same place. Even then, it was some time before a shift of light suddenly revealed the two eggs, lying without any suggestion of a nest among the hillside pebbles. Large eggs, unusually broad, stone grey in colour and heavily marked with shades of brown, they matched perfectly the ground on which they were laid. They are just in front of the dikkop's yellow legs in this photograph.



RING DOVE, on nest

29. RING DOVE (CAPE TURTLE DOVE)

Length 11 inches

The call of doves is perhaps the most haunting sound of our African bush. Even the quiet of the veld night is often broken by the throaty crooning from msasa and thorn trees. The Ring Dove and the Laughing Dove share between them the distinction of being the commonest birds in our country—in some districts one, in some the other.

The soft grey plumage of the ring dove, with black half-collar on the neck and black eye-streak, are well known to everyone. The bird is equally at home in town and country. Its nest can be found in the wildest bush or well-kept garden, in the crannies of a bare kopje or on the ledges of a city building; and at any season of the year, for it has no fixed breeding period. In fact, I have recorded the rearing of three broods by one pair of doves between April and November, and believe that four or five broods in a year may be quite normal.

The Ring Dove's nest takes little building. It is the very flimsiest platform of thin twigs, without lining. One may see the eggs from below the nest, so open is it. After the young are hatched, the parents take little trouble except to feed their young. The Ring Dove is one of the few birds that allow their nests to grow foul during occupation.

The nest shown here was an unlucky one. It was quite close to the house. One day, shortly after the two young birds had hatched out, I heard a furious flapping of wings and agitated dove calls from this gum-tree. When I went to investigate, I found a tree snake in possession. Lit with colour like a living green branch it lay around and over the nest, while the parent doves fluttered and called helplessly near by. One chick was already only a lump in the snake's anatomy and the other was already between its jaws. Seeing me the snake slid away through the branches to the tree-top, its slender head completely hidden by its burden. Slowly its jaws worked over. The loose skin of its cheeks stretched, the lower jaw dislocated, and the dove chick was swallowed. In a few seconds there was a second lump in the green, wisp-like body, the jaw in place again, and the head once more its slender evil self.



LAUGHING DOVE, at bird bath

30. LAUGHING DOVE

Length 10 inches

In the heat of the day, when the Ring Doves are drowsing in the shade, this smaller cinnamon-and-grey dove will often rocket suddenly upwards from the tree-tops and after a brief acrobatic display float down with wide-fanned, white-edged tail to perch alongside its mate. At once it chuckles its low *coo, coo, coo-roo-roo*, the laughing call that earns for it the name of Laughing Dove.

This dove seems to have adapted itself to town life more successfully than other birds of the same family. It feeds on the ground; and around stables and fowl-runs where grain has been scattered it is sometimes so numerous as to be a nuisance. In size a little less than the well-known Ring Dove, it lacks the black collar of that bird. It has, however, a speckly red-and-black collar of its own at the sides and front of its neck. Its back and wings are strongly coloured with cinnamon, easily recognizable.

I often find the *spoor* of the laughing dove in the dry dust of the garden path. Birds which are mainly perchers travel in hops when they come to the ground, leaving their footprints in spaced pairs. Those birds that spend much of their time on the ground have learnt to walk instead of hopping, and, like doves, put one foot in front of the other. Doves, handicapped by short legs, can only achieve this by swaying from side to side, so that their walk is rather jerky. Even then their stride is so short that their footprints touch each other, toe and heel.

Seeds of all kinds are the diet of doves. These must be pre-digested in the stomach of the parent before being fed to the young birds. That is why, watching a doves' nest with young, you may see the curious spectacle of the young birds thrusting their heads into their parents' mouths for food.



SOUTH AFRICAN NIGHTJAR on eggs

31. SOUTH AFRICAN NIGHTJAR (NIGHT HAWK)

Length 10 inches

If you are not able to find the bird in this picture, try looking for the rather oblong eye slit, and the bristles around the base of the beak. From them you will be able to trace the head, and then the whole body. The nightjar is a master of camouflage and is even more difficult to see in natural life than in a photograph. It is a night-flying bird, and spends the daylight lying on the ground under trees, or on the lichened branches of the trees themselves. The autumn tints of its plumage, browns and rusts and greys, harmonize so well with its surroundings that the bird will sit still until one approaches within three or four feet, so confident is it of remaining unseen.

In the dusk and at night the nightjar is sometimes glimpsed hawking silently between the trees, after insects. Its beak is small, but its mouth can stretch very wide indeed. This gape, and the long bristles around it, are its means of catching the moths and beetles that also fly by night. The eerie calls of different species of nightjars, sounding through the darkness, are well known in many parts of the world. The mopoke of Australia and the American whip-poor-will are nightjars whose names are meant to imitate the birds' call. Some of our nightjars have a harsh churring note. The particular species shown here, the South African Nightjar, has a rather pleasant trilling whistle, *whee, whee, whee-ee-ee-ee*.

Nightjars build no nest. They lay their two greyish white, slate-spotted eggs on the ground, among dead leaves. The young are quite as well camouflaged as their parents, even in their earliest down. When a nightjar with young ones is disturbed, it flies only a few yards and settles again with wide-open quivering wings in an effort to draw the intruder aside. Many birds do this, but none that I have seen makes such a distracting show as the nightjar.



BROWN-HOODED KINGFISHERS below nesting burrow

32. BROWN-HOODED KINGFISHER

Length 9 inches

We are apt to think of the kingfishers as birds of pool and stream, flashing their bright colours up and down the narrow waters in their ceaseless hunt for fish. There are some kingfishers, however, which do not hunt for fish at all. They are woodland birds, sometimes seen far from water, and living entirely on insects. Their feathers are not so beautiful as those of the water-loving kingfishers, but they are not by any means sober-coloured.

The commonest of the bush kingfishers is the brown-hooded variety. It shows a liking for open perches, such as outstanding trees and telephone wires, from which it can keep a sharp-eyed watch. It is too heavy a flier to catch insects on the wing, but when it sees them on the ground it drops down as quickly and truly as its fish-hunting cousins do into the water, picks up its prey, and returns to its perch before swallowing it.

Beetles and grasshoppers are its main diet. In the neighbourhood of its nest one often sees the discarded wings and horny legs of these insects in great number. The nest, like that of most kingfishers, is a hole tunnelled straight into a bank, not necessarily in a watercourse. Old gravel pits and quarry sides are frequently used. From the first few inches of such a nesting tunnel I once counted the remains of over a hundred grasshoppers and locusts. That was in November, when the four young birds were well-grown and hungry.

Both parent birds show concern when one is near their nest by perching close by and whistling a brief series of shrill calls. As they whistle, they flutter tail and wings very quickly. Their colours are then most easily seen—the blue wings and rump and tail, black mantle, light brown head, and red legs and bill.



PIED KINGFISHER (male)

33. PIED KINGFISHER

Length 11 inches

Some people are surprised to learn that this black-and-white bird is a kingfisher, their minds being on the brilliant blue and red colours of other members of the family. It is nevertheless the commonest kingfisher in Africa, both in the salt water of the coastal lagoons and in fresh inland waters. I think that there is no stream that is not the home of at least one pair of these noticeable birds, and scores may be seen on the dead mangrove stumps of our river mouths and bays.

When quartering a stretch of water the pied kingfisher hovers for a few seconds in an inverted V, its heavy beak and tail both pointing down and its wings beating swiftly. Then it swings away a little distance and repeats the movement until, a fish being seen, it hurls itself like a bullet into the water. There is nothing half-hearted about this dive. The splash of the impact can be heard for a considerable distance, and the bird is usually completely submerged. If the dive is lucky, the kingfisher flies off to a regular perch with a fish held crossways in its beak. The fish is battered against a log or branch and then swallowed whole, head first.

These kingfishers are cheerful birds, with a loud, shrill twittering call. They often whistle to each other as they fly. When two of them are on a perch together they chatter to each other noisily, restlessly jerking tail and wings all the while. They are fond of bathing parties, dropping into the water, and after a brief splash flying back to their perch without a pause in their excited twittering.

It is much easier to recognize male and female in this species than in the others. The male has two black bands—one thick, one thin—across his breast, while the female has only one, which is usually broken at the middle.



YELLOW-BILLED HORNBILL, passing food into nest

34. YELLOW-BILLED HORNBILL

Length 21 inches

When a pair of birds will not be chased away from a certain locality for more than a few minutes, it is certain they have a nest close by. So I concluded that a pair of yellow-billed hornbills had their family in the trees of a little knoll. I even found a tree under which there was a considerable amount of bird refuse, withered remains of insects, and stones of wild fruit. But nowhere in that tree trunk could I see the outlines of a hole where they might be nesting. Yet the birds were constantly perching in the higher branches of this and surrounding trees, their pied plumage quite unmistakable, and generally with something held in their big yellow beaks.

I hid at a distance and watched through field-glasses. One after another both hornbills hopped lumberingly from branch to branch downwards, working nearer to the suspected tree trunk. Then they flew upwards again and clung to the face of the tree. I saw the tip of a beak come out of a tiny crack, take a grasshopper, and withdraw. The nest was found.

The entrance was a small knot-hole twelve feet from the ground, plastered with a mixture of mud and dung until only a mere slit was left. The colour of the plaster was exactly that of dead wood. How the adult hornbill had ever managed to use that nest I still cannot understand. A hornbill is a large bird, and the knot-hole was not three inches across.

It is commonly stated that the female hornbill, once the eggs are laid, is sealed up in the nest and remains there until the young birds are ready to fly away. In this case that plan had evidently not been followed. Both parents were outside the nest. I often saw them together, so that there can be no doubt. When the young birds were ready to fly, I opened the nest and found three immature birds inside, and the nesting hole quite clean.

We must suppose that some hornbills at any rate leave the nest after the eggs are hatched, and re-seal the entrance until the young are ready to fly. This supposition is confirmed by a leading South African authority.



SOUTH AFRICAN HOOPOE (N.B. Beetle in Beak)

35. AFRICAN HOOPOE

Length 10 inches

The African Hoopoe is a bird of the open thorn veld, where one may often catch the flash of its bright colours as it rises from the ground and flies into the bushy growth. Its double-noted and oft-repeated liquid *hoop-oop, hoop-oop* is a familiar sound from August onwards until March, in which month most of these birds seem to disappear from their usual haunts. There is no mistaking the hoopoe's brick-red colour, with black-and-white barred wings, and the red black-tipped crest which it is so fond of erecting. It is a fearless bird, appearing quite openly in country gardens to probe the lawns and flower-beds with its long delicate beak for grubs and larvae and beetles.

The hoopoe's nest, which is prepared about the end of August, is usually down in the heart of an ant-heap, although occasional birds use holes in rocks or trees instead. In this photograph you may see the opening to an ant-heap at the very left. While the eggs, four or five in number and plain greyish green in hue, are in the nest, one is not likely to discover them. Afterwards, when the young birds are hatched, the parents visit them so often that it is easy to recognize the situation of the nest. The bird pictured, for instance, used an ant-heap not ten yards from the wall of a large new building, but the constant passing of workmen failed to frighten the parents. Both male and female (exactly alike in colour) were busy all day long bringing grubs and caterpillars and beetles, as you see, for the five hungry youngsters. They flew to within twenty feet of the nest, picked about idly for a few seconds, and then walked rapidly towards it uttering a harsh little crow which the young birds answered from underground. They appeared to walk down the side of the hole, reappeared in a moment, and flew off at once from their doorstep. The crest, by the way, was lowered as the birds entered the nest and erected again as they left.

I found the nest, in this case only about fifteen inches down, a most evil-smelling and foul place. There is neither sanitation nor ventilation, and the young when alarmed emit a fluid with an extremely offensive odour, doubtless as protection against intruders. The young ones take on adult plumage almost at once, and the crest, in two lines of feathers, begins to grow within a few days after they are hatched.



BLACK-COLLARED BARBET

36. BLACK-COLLARED BARBET

Length 8 inches

Black-and-white photography fails badly in trying to make a representation of such a bird as this. The contrast of its scarlet face and black nape and collar, which are its greatest glory, is lost entirely. It is actually one of the brightest birds of the drier veld, fond too of little bushy kloofs where it can find the fruits and berries and insects that it loves.

The crimson martengula bushes of the coastal districts and the wild figs of the higher veld are favourite haunts of barbets. I have seen four different barbet species—this black-collared one, Levillant's, the pied barbet, and the yellow-fronted tinker—all busy together on the same bunch of ripening figs. As may be seen, their stout toothed beaks are well adapted for tearing the tougher wild fruits.

Children often refer to the black-collared barbet as the "clean collar bird", from its clear ringing call in which the words "clean collar" are easy to hear. At times it uses another chattering call, very loud and harsh, as it moves about in the protective covering of the trees. For a nest it excavates a hole in a dead trunk, laying its glossy white eggs on the chips and dust at the bottom.

Once, when I was photographing a Wahlberg's eagle, I worked from a platform well up in the top of a mountain acacia. A few feet below my platform was a decaying branch, on the under side of which a pair of woodpeckers were boring out their nest. A black-collared barbet came along one day as the nest hole was almost completed, and after considering it from a distance flew up for a closer look. In spite of the woodpeckers' protests he entered and apparently found it exactly to his needs. From that time the hole was a barbet's nest, and the dispossessed woodpeckers, after lingering noisily for a while, left for new territory.

Little tragedies like this probably take place often, for it is rare to see the black-collared barbet at work on his own nesting hole.

The name "barbet" comes from the little beard of bristles which grow at the base of the beak.



RED-CAPPED LARK, feeding young ones

37. RED-CAPPED LARK

Length 6 inches

Different species in the host of little brown birds are hard to distinguish. Larks, pipits, finches, warblers—many of these are so plain and ordinary that an expert is needed to tell one kind from another; and even the expert fails at times, unless he has the bird in his hands. I doubt whether the red-capped lark can be recognized at a distance from its near relations. They all behave so much in the same way, running in and out between grassy tussocks in search of insects, standing still and depending on their colour to hide them, or flying off a little way if disturbed too much.

At close quarters the red-capped lark is a pretty bird. Its head is ornamented with a chestnut crest underlined by a bold eye-streak, and the wings are handsomely marked in chestnut and brown. It is common everywhere in open spaces, and not too shy. One often gets a chance to see its colours as it lingers by a roadside, or about old cattle kraals.

The nest of this lark is made in the open, in cold months when the grass is at its shortest and deadest. Sometimes it scratches a hollow in the middle of a patch of bare earth, sometimes a cup against the side of a grass tuft. This is padded with grass and grass seeds, the wall being carefully built up level with the surrounding ground. One or two eggs are laid, off-white in colour, freely covered with grey and brown spots.

In spite of its openness this nest is hard to see. The young, when hatched, are even harder. They are not coloured like their parents, being without any of the chestnut-red plumage. Instead they are darker in colour, and their backs are varied with light markings. As they lie in the bottom of the nest this mottled effect makes them almost invisible, unless one knows the exact place to look.



TAWNY PIPIT

38. TAWNY PIPIT

Length $6\frac{1}{2}$ inches

I don't know the difference between a pipit and a lark, except that it has something to do with the scales on their legs. In the museums one may get near enough to distinguish the two families, but not in the field. They are both birds of the grass, sober-coloured, the pipits usually with more streaky plumage than the larks. They are both hardworking insect-eaters, great friends to farmers and gardeners, and fond of open country where the grass is fairly short. Most of us can enjoy watching them without worrying too much about their names. We rarely get beyond the stage of saying "That brownish bird over there on the grass is a lark, I think". Then it begins to swing its tail up and down, and we add, "Perhaps it's a pipit, after all". Which leaves us exactly where we were.

These ground birds hide their nests well. One sprang up from the veld a few yards in front of my bicycle. I marked the place, a twig or two of some creeping plant between two tufts of grass, and went to look over it. No nest. But the following day I purposely went the same way, and the bird got up again. This time I inspected the ground inch by inch, and found the nest. It was a hollow at the roots of a tussock, under a spray of the creeping plant, thinly lined with fine dry grass and hair. Two eggs, their creamy background almost covered by light grey and brown markings, lay inside. (This was early December.) I must have done everything but tread on them the previous day.

Tawny pipits are faithful parents. I have never known one desert its nest. They get used to my hide very quickly and carry out their domestic duties in the ordinary way. Both parents help to feed the young ones. They walk up through the grass and wait a while perhaps four yards from the nest, uttering a piping whistle. (Most parent birds seem to give some sort of signal as they approach the nest.) This chirping was often the first warning I had that the bird was near. Then, having made sure that the coast is clear, they run over to the nest and thrust the insect they are carrying into the yellow gape of a young bird and hurry off for more. On an average, one parent returns to the nest every six or seven minutes.



BLACK CROW

39. BLACK CROW (OR CAPE ROOK)

Length 20 inches

This bird suffers unjustly from the evil reputation which has attached itself to all members of the crow family. None of them are graceful birds, their plumage is funereal, and their voices are harsh. In primitive minds they were symbols of misfortune and death, and even now many folk carry an ingrained, irrational dislike for them.

In the case of the black crow this dislike is quite out of place. It is one of our most useful birds, and worth any farmer's full protection. While its relatives may sometimes become a pest about the farmyard from their fondness for eggs and small chicks, this species keeps closely to an insect diet. It must be admitted, though, that it occasionally varies this with grain, especially newly-shooting mealie plants. Beetles and their larvae, caterpillars, locusts—all come within its range. Often, like the companionable rook of England, it will follow a plough to pick insects from the newly-turned earth.

Unlike the English rook, which nests in large communal rookeries, our Cape Rook lives in pairs. Each pair guards its territory jealously, and is especially determined in keeping its cousin the pied crow away from the same neighbourhood. Tall trees are their favourite nesting sites, though even when these were available I have several times seen them build not more than eight feet from the ground in low thorn-bushes. Their nest is a bulky affair of twigs surrounding a deep root- or hair-lined cup. It is strange that while other species of crows have bluish-green, olive-marked eggs, our black crow alone should lay eggs pink in colour, freely spotted with red and brown.



SOOTY BABBLER, on nest

40. SOOTY BABBLER

Length 10 inches

Here is a famous bird to watch, and a fine musician. In its habitat, its melodious whistle is likely to be heard from any low wooded and rocky kopje. Unfortunately it is not a widely distributed bird; in fact, until recently it was thought to live only in Southern Rhodesia, but later finds have extended its range considerably.

The Sooty Babbler is quite unlike the noisy babblers—the Twelve Apostles, we used to call them—that go about in parties of a dozen or so, chattering harshly at intervals. Instead, in both habits and appearance this bird is much more like the chats, particularly the Mocking Chat. It appears only in pairs, and is very like a chat in shape. By anyone familiar with the birds of Europe it might easily be mistaken for a blackbird.

A pair I knew made their nest within fifty yards of a main road. One could not pass the foot of their kopje without hearing their clear flute-like piping among the trees. At our nearer approach this song turned to an anxious single-noted whistle of inquiry, repeated again and again, from both birds. The female was a sober sooty brown, the male decidedly a darker and glossier bird. Both of them showed a flash of white on wings and tail as they flitted actively from rock to rock, or flew up to the bigger trees where they would together run easily along the wide branches.

Their nest was a shallow cup of fine root fibres set on the ground among dead leaves, under the shelter of a slightly-sloping rock. There were then three young ones in it, barely two days old. They were small, covered with thin black down, and blind, but with enormous bright yellow beaks and gapes. At the sound of a near-by rustle these three yellow mouths would open and rise and wave silently about for a second or two before falling back into the safe shadow where the tiny dark bodies could hardly be seen.

The parent birds brought insects to the nest every few minutes, approaching it by little soundless flights from rock to rock. They never went far away, and it seemed indeed that they hated to go beyond each other's sight.



KURRICANE THRUSH at nest (September)

41. KURRICHANE THRUSH

Length 9 inches

Every garden has its common visitors. Mine has several—doves, toppies, white-eyes, orioles, boubou shrikes among them. The kurrichane thrush is not a visitor, because it owns the garden. Once it used to sneak down from the kopje trees to search our lawn and flower-beds for insects in a hurried, nervous way. Now it goes about the business openly, quite careless even if we ourselves are near; and it has made a nest in the tree just outside our kitchen door.

What a nest! Every rubbish heap in the neighbourhood has contributed to this pile of rags, cotton wool, and ends of string that has been planted in a fork perhaps ten feet from the ground. In the top of this untidy heap is a deep basin lined with thin root-fibres where the three greenish-blue, red-speckled eggs were laid. The mother bird sat contentedly there, although with sharp eyes for our comings and goings. Sometimes she would leave the nest for a while to feed, and always finished her brief rest by chasing in and out of the hedges after her mate, both of them screaming with excitement.

The kurrichane is a plain bird, olive-brown on the back, breast unspotted and tinged with orange, with a bright orange-red bill. The young ones were even plainer, although their gapes were bright yellow. As either parent flew to the nest with an insect in its beak, these three yellow mouths thrust up and waved about beseechingly. When the old birds were away, the young ones shrank into the bottom of the nest, their plumage so dull that one might easily overlook them altogether.

This thrush sings well, in a wild whistling fashion, suddenly bursting forth at any moment of the day. It is not found near the Cape, but from the Transvaal and Natal northwards its lively music is likely to be heard from any place of trees and streams.



CAPPED WHEATEAR

42. CAPPED WHEATEAR (SKAAPWAGTER)

Length 7 inches

The name wheatear has no connection with either wheat or ears. It is our corruption of a Scandinavian word meaning white rump, which is one of the most observable characteristics of this elfin bird of the open veld. It loves the short grass lands; perching on the top of ant-heap or stone, it flirts its wings and tail so that the white of neck, forehead and rump make a continual flicker in the sunlight. In July and August, the breeding season, this black, white and chestnut-brown relative of the robins goes quite delirious with excitement. It indulges in sudden bursts of songs, trilling and rolling its clear whistle in sheer joy, sometimes using its own music, sometimes stealing phrases from every bird of its acquaintance. It can hardly keep still for a moment, and is particularly fond of jumping about three feet into the air and hovering with rapid wings over one spot for several seconds.

In shape very similar to the robins, the wheatear is still often mistaken for a small species of plover. On the ground it runs among the grass in plover fashion, and like them attempts to lead one right away from its nests. Its nest is really quite safe, too. It is built underground, a cup of dry grass and soft material at the end of a tunnel which the wheatear has borrowed from its animal neighbours. The opening of a small ant-heap is sometimes used, but short gerbille (field rat) holes are the most useful places. I once saw a wheatear's nest in the bottom of a goal-post hole, the top of the hole having been almost covered with a flat rock to prevent it caving in.

The wheatear is common throughout South Africa. It is a friendly bird, very often seen along roadsides, or around outspans and sheep kraals—hence its Afrikaans name skaapwagter (shepherd).



KROMBEK on nest

43. KROMBEK

Length 4 inches

One of our most unobtrusive warblers, the tiny krombek lives in the twilight of the underbrush and in the grey world of lichen tree-trunks. Its slaty back and sandy breast are almost unnoticeable as it creeps about twigs and branches after insects, and even its voice, a weak *twit-twit-twit*, hardly awakes attention. Both its names, Krombek and Stompstertjie, point to peculiar characteristics—the first to its relatively long, slightly curved beak; the second to its tail, so short as to seem missing entirely when the wings are folded. This could be a great handicap in flight; but the krombek is not fond of flying, rarely going more than a few yards at a time.

In spite of its retiring ways this little warbler is not timid. One I knew built its nest (in September) two feet from the ground in a clump of wild asparagus fern very close to a path where people passed continually. The nest was a deep bag of grass and moss, cosily root-lined, hanging by one side only to a twig, and decorated on the outside with web and lichens and bits of bark. Odd bunches of spider web and rubbish accumulate in any low scrub, and it resembled those so much that it was never noticed. The mother bird, sitting on her pinky-white spot-ringed eggs, used to raise herself and look over the back of the nest at every passer-by until she was sure that they were really going past. She could hear feet in the path long before I could. At the same time the male bird would leave a neighbouring fig-tree, where he was diligently searching the inside of each separate fruit through the unclosed end, and fly to a nearer thorn-tree where he twittered agitatedly until the intruder had gone.

When the young were hatched, these two pygmies became almost ferocious. Mouse-birds, bulbuls, fly-catchers and doves were chased away from that bush by their furious onsets. Such a pair of fiery giant-killers to live in such sober coats !



BAR-THROATED BUSH WARBLER

44. BAR-THROATED BUSH WARBLER (OR APALIS)

Length 5 inches

The warbler species, both of the grass and of the bush, are most difficult to recognize in their natural surroundings. Here is one, however, a haunter of woods and scrubs, whose black-barred breast is a plain mark that gives the identity of the bird at once, and is readily seen even in dense thickets. Hopping and creeping inside the shade of trees and bushes where its blue-grey back makes it almost invisible, it searches every twig for any kind of insect food. As it moves it sings a clear whistling note alternated with drawn-out churring, in true warbler fashion. Sometimes as it makes a short flight among the bushes one may catch the gleam of white from its breast or from the outer tail feathers.

This warbler's nest is rather variable in material; often a delicate structure of cobweb concealed among true cobwebs, at other times built of fine grass and moss and roots bound up with the grey webs, and lined softly with silken vegetable floss. The nest is domed, with a large entrance hole, usually placed where it is draped by hanging foliage. There is variation in the eggs, too. Though usually pale blue, with heavy spots of chocolate, pinky-white ones similarly spotted are occasionally found. Two or three is the normal clutch, and in some districts it is fairly clear that two broods are raised each season—one at the beginning of summer and another towards the end.

This cheerful little Apalis is particularly fond of the coastal bush of the Knysna district, but may probably be seen in any wooded area. Like all warblers, it is a tireless insect-eater, and a friend to all gardeners and farmers.



RED BISHOP BIRDS at nest

45. RED BISHOP BIRD

Length 5½ inches

In the height of summer these brilliant little birds take possession of any patch of tall open growth. Reed beds, growing maize, and fields of sunflowers are alike favourite haunts of the red bishop bird, where it can wave its slight domed nest about the swaying stems. The female is one of those "inconspicuous brown birds" whose identity is so hard to determine. The male, flaunting his flame-touched scarlet and velvet black, is unmistakable. He chases his dowdy wife noisily through the tall greenery, coaxing or driving her to the flimsy nest he has been a couple of days in building. He perches his little, stumpy, fluffy, brilliant self on the highest grass head and bursts into loud twittering or into a thin wisp of sound like dry seeds rattling in a poppy pod, without caring who sees him. He is never alone. Four or five males and at least twice their number of females seem to make the smallest colony, with perhaps a dozen nests.

Such a colony living among sunflowers in full bloom is a feast of colour. Their nests are hung under the drooping flowers or wide shady leaves, and the birds flit constantly to and fro. They have not far to go to find the small grass seeds which are their main diet, for this bishop bird is not a free flier. His body seems too round and heavy for his short wings.

It seems to be the male bird that builds the nest, of grass or strips of reed blade. It is so flimsy that one can easily see through the trellised walls and roof. The female adds a little finer grass or vegetable down as a lining before laying the two or three plain greenish-blue eggs. They live a careless life, often losing eggs from the too open side of the nest, sometimes having the nest torn away altogether in a high wind. The female in this photograph did not seem to notice when one of her eggs dropped from the nest entrance as she settled over them. That was after she was chased back to duty by her husband, who is standing by in the background.

After the summer, the male bishop bird disappears. He loses his glorious colours and becomes himself only another little brown bird until the next season.



YELLOW BISHOP-BIRD (female) at nest

46. YELLOW BISHOP BIRD

Length 5 to 6 inches

Brightest yellow and velvet black are the colours of the male of this and of the golden bishop birds. The golden bishop bird, however, is almost completely yellow above, including the head, and black below, while the commoner yellow bishop bird shows far more black, the head in this case being completely black. It is a slightly larger bird than the red bishop bird, and, in my observation, not so fond of gathering in big colonies at the breeding season.

Its nest is usually built in thick herbage such as is found near permanent watercourses in the grass veld, particularly in hilly country. This natural preference leads it in some parts of the Union to use the wheat fields as a nesting territory rather than the taller, more open standing maize, which the red bishop birds like. Solitary families are often found, too (that is, a male and four or five females). In this bird the female is again plain, except on very close acquaintance, when the clear ivory-coloured streaks that vary her brownness can be seen. Her eggs are bluish, almost covered with dark brown marks of varying size. The male bird seems to take no part in feeding the young birds. I have watched a nest—the usual flimsy domed nest of dry grass woven in the stems of herbage only eighteen inches from the ground—for days from a grass hide not twelve feet distant. The female bird came every quarter of an hour or so, and since she had nothing in her beak I suppose the young are fed on half-digested seeds. The male never once came near the nest, but at intervals he flew on a kind of patrol over his nesting territory—a slow flight noisy with wing-claps, and accompanied by his song, a curious, not too loud, jerky buzz.

These bishop birds and the red ones often become unwilling hosts to cuckoos, which seem particularly fond of this type of nest.

Once again the glorious colour that the male wears in breeding season fades at the end of summer, to be renewed when the new season opens.



ROCK BUNTING

47. ROCK BUNTING

Length 5½ inches

On granite hills where only occasional patches of fine grass or resurrection plant or odd stunted trees can find meagre support in the decomposing rock, the Rock Bunting is at home. Often it springs up almost beneath one's feet, so that its white-streaked head and cinnamon-coloured underparts are plain to see. At the end of summer its nest, a shallow cup of grass and rootlets snuggled under stone or tussock, will be somewhere close by, with its three or four heavily-spotted eggs. The bird will fly only to the nearest tree or shrub, and begin its plaintive three-noted wisp of song—"I see you, I see you."

This bunting's striped face is an excellent example of camouflage, of the type known as disruptive colouring. One nest I watched was under the lee of a bunch of grass, in deep shadow. The mother bird, after singing her monotonous little song at a distance for some minutes, used to come back to the nest in short runs through the herbage, hop on to a near-by stone, and finally to the nest itself. Once there, with her head turned towards me, the outline of her shape was completely lost. The facial stripes were like streaks of sunshine among the grass. It was so deceptive that, although I was only a few feet away, I often had to wait for some movement to make sure that the bird was still there and had not slipped away while my attention was elsewhere.

I have never been in any country of open kopjes without finding this bird a common resident. It is typical of the granite dwalas of the Transvaal and Rhodesia, thriving in places where birds are comparatively rare. Seeds and insects are equally its food, and if one can find its favourite pool one may watch it daily visiting the same place to drink.



BLACK VULTURE

48. BLACK VULTURE (LAPPET-FACED VULTURE)

Height 36 inches

Gill calls the black vulture "one of the most hideous birds in the world". Its bare red wrinkled face and neck are extremely ugly, but apart from that this huge bird shows the majesty of great strength in every line. Its yellow fiercely-curved beak is massive, its claws terrible. The dark wings, outspread, have a span of over nine feet. On these wide pinions the vulture will sail for tireless hours, without the need for flapping. Once launched in the air, the black vulture sets its wings to catch every current and soars in an ever-increasing spiral beyond our sight. From this high watchtower its keen eyes scan the miles of veld in search of dead game. When a kill is sighted, the vulture drops out of the sky on half-spread wings, the air rushing with the sound of drums from its vibrating feathers.

These birds never gather in numbers like the lesser vultures, but two or three of them appear at most vulture feasts. They stand aloof from the rest of the screaming crowd until they wish to eat. Then they spread their wings wide, and hop clumsily forward in a curious upright posture. As they advance, the other vultures hurriedly get out of their way. They retreat from the torn carcase and gather in groups a few yards away, angry but afraid to approach so long as the black vultures are feeding. I have never seen these birds bury their heads and necks in the entrails of a dead beast, and feed in the filthy way of other vultures.

From the awe in which the common vultures hold the larger black species, they were called King Vultures by the earlier colonists, who saw them more frequently than we now do. The spread of settled farming land has driven many of our bigger birds into the more isolated veld, the black vultures among them. Nowadays they are rarely seen south of the Vaal River.



HOODED VULTURE (the object at the right is the head of a dead donkey)

49. HOODED VULTURE

Height 24 inches

While the bigger vultures are noisily quarrelling and fighting over a dead animal, this smaller hooded vulture walks carefully round the skirts of the throng looking for forgotten pieces. Sometimes it edges quietly towards the main feast and as quietly retires with a prize to be torn and gulped at ease. Its main concern is to remain unnoticed by the other vultures, for which it is no match with beak or claw. The beak of this species is long and slender, quite different from the deep strong beaks of Kolbe's or the black vulture. It is not so useful for ripping flesh, and in fact the hooded vulture is more of an offal-eater than a tearer of carcasses. Like crows and kites, it hangs about native villages and slaughter yards where it can be sure of finding waste scraps of meat. The natives leave these useful scavengers alone, probably realizing how much they help to keep down the plague of flies.

I once watched a hooded vulture trying to get near the refuse pits of a slaughter yard at Gwelo, Southern Rhodesia. A flock of seventy marabou storks were already in full possession of the place. Kites and crows could swoop down on a stray tit-bit and get away rapidly, but the vulture had no such ease of flight. It could only walk disconsolately at a distance. Each time it attempted to move in towards the pits, a marabou strode up quietly behind and gave it a jab with its enormous beak, whereon the vulture retired in a hurry.

I have been struck by the extreme neatness of the set of the feathers in this species of vulture as compared with others. It appears to be a cleaner bird, though still thoroughly verminous, like all vultures. As a race they are particularly unattractive, but probably do a considerable work in keeping the veld free from decaying rubbish.



KOLBE'S VULTURE, in triumphant attitude; it has just driven another bird off the carcass

50. KOLBE'S VULTURE (GRIFFON)

Height 33 inches

This is the common vulture of the South African veld, though replaced north of the Limpopo by the white-backed variety. I once watched a flock of them at the carcase of a donkey. They arrived in twos and threes until more than fifty birds had collected and were perched on the surrounding trees, quiet and watching. By and by one flew heavily to the ground, waited a minute, then hopped to the carcase and dug its beak into the exposed eyeball. At once the others flung themselves down, screeching like harpies, and began to rip and tear. They pushed their heads through the torn skin into the body, gouging this way and that. Their long bare necks came out covered with blood and filth, and other birds immediately pushed themselves into the same place. Again and again a vulture on the outside of the screaming, gorging mob would square up with spread wings and out-thrust beak and hop forward to strike at the back of one nearer the centre of the feast and so take its place, only to be driven away itself a few minutes later. All the while, feeding or standing by, their raucous angry screeching went on without a break. This dry harsh clamour is as repulsive as the sight of their blood-and-offal-spattered bodies.

Vultures are not true birds of prey. Their claws, though large, are not shaped to hold a struggling animal. Yet in seasons when little carrion flesh is to be found these Griffon Vultures have attacked domestic sheep, with sad results. Not practised in the art of killing, they tear wounds with their beaks, from which animals have died. Such acts mean that in future our farmers will treat these birds as enemies, and they will be slowly driven away from our pastoral districts. Even now the Griffons that nest on the krantzes of the Cape mountains are growing fewer year by year.

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