REPORT ON THE BIRD-LIFE IN THE MOUNTAIN ZEBRA NATIONAL PARK, CRADOCK, C.P. 1962-1964

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As a result of the purchase of additional ground in 1963 this Park now falls into two very distinct veld types, each of which has a tremendous bearing on the incidence or absence of bird life.

Firstly, there is that portion containing the deep valleys running up to the Bankberge with its watercourses well-covered with Acacia and other scrub, and with the hills liberally dotted with various scrubby bushes or minor thickets of *Acacia Karoo*.

Secondly, there is the wide open grassveld of the 1963 purchase with very little scrub at all, and then only as scattered shrubs.

These habitats and their effects on the bird-life will be described more fully later. In the meantime, emphasis is laid on their differences because several species of the grassveld birds, such as the bustards and storks, certain chats, the secretary-bird, and so on, are not to be found in the valleys, and bush birds like Boubou and Tchagra Shrikes, Cape Tit-babblers, etc. do not occur in the open veld. On the other hand, some species such as the Dusky-faced Warbler and the Fiscal Shrike occur in both.

Although much of the bird-life is conspicuous both by sight and by sound, and therefore of great tourist value, no species is rare or exceptional on its own, nor of outstanding plumage. But what the park does afford is a constant variety of bird activity at which no passing tourist need cavil. During the first few days of the author's initial visit in March, 1962, 84 species were identified, most of them on the first day or two, and although he was allowed the free run of the reserve, even to the top of the mountain, the tourist, restricted by regulation to the confines of his car, could see almost as many species merely by sitting and watching. Indeed, to watch from a car at selected spots might well be advantageous in view of the way most birds ignore cars and go about their activities unconcernedly.

To those whose idea of the Cradock district is one of wide vlaktes broken by typical steep-sided hills rising suddenly from the flatness, half of the park provides a distinct surprise. The approach across flat country

conforms closely to the above but a sudden narrowing of the hills acts as a poort to the valley which then breaks up into three steep-sided valleys backed by the flattopped Bankberge with an altitude of some 5,800 ft. a.s.l. in contrast to an altitude of about 4,480 ft. a.s.l. at the Warden's house near the entrance to the Park. The whole park has an easterly aspect with an average summer rainfall of about 300 mm. (12") per annum.

The Vegetation.

At the commencement of this investigation it was all too apparent that the condition of the vegetation, despite its greenness and freshness after a good summer and a downpour of rain immediately before the author's arrival, must been heavily over-grazed in the past, both as to its grasses and its shrubs. It was not therefore in a reasonable balance, and although this does not in itself have too diverting an influence on present birdlife it does mean that certain species are not now there, where they would otherwise have been in the past, and that others are present which might not have been there on past occations, or at any rate not in such strength. For instance, the absence of long grass reduces the incidence of long-claws, but encourages the incidence of pipits; and the spread of bush has encouraged the increase of Boubou and Tchagra Shrikes.

In terms of the veld types as set out by Acocks (1953) the park today fits into two categories, False Karroid Brokenveld on the lower reaches, and Danthonia Mountain-veld replaced by Karoo on the mountain top. These terms mean that where today we see, in the first instance, Karoo-bushes and hillside scrub this is not the original condition of the veld but an invasion at the expense of what was good grassveld, the remnants of which are fortunately still there, and, in the second instance, an invasion of similar semi-arid conditions including the baleful Harpuisbos ,*Euryops* sp. on what was once a cover of coarse grass-tufts (graspolle) of the high-altitude grass known as *Danthonia*. Both degenerate conditions are the result of past mismanagement.

From this it is inferred that the park must once have had a predominantly grassy cover on the lower open spaces and on top of the mountain, with the valley bottom well supplied with woody trees and coarse shrubs, some of which occupied areas at the bases of the boulder masses and kranses.

Nowhere is this theory of a previous grassy cover more supportable than on the farm Doornhoek, purchased in 1963, when in March 1964, very little Karoobush or Bitter Karoo was seen.

Today much of the Riverside Scrub growing in the deep alluvium is still there but most of the best types of trees have been felled, especially the Wild Olive, *Olea africana,* Mill, and Camdeboo Stinkwood, *Celtis kraussiana* Bernh., two species which produce heavy crops of berry-fruits much eaten by birds, and not only by fruit-eaters.

Paradoxically, the overgrazing of the grass on the slopes and the resultant encroachment of the bush at the expense of the grass has reacted

in the favour of the bush birds, for at places where Boubou and Tchagra Shrikes, Karoo and Cape Robins, Cape Thrushes and Cape Tit-babblers could never have existed under pristine conditions they are now in some strength. Thus this hillside scrub provides a most interesting environment not only for the bird-watcher but also for the ecologist.

As with the slopes, so with the high-altitude summit, a very restricted area on the watershed where, instead of the encroachment of tall scrub, a short short dense 18" high cover of Harpuisbos, *Euryops* sp, and other coarse shrubs has driven out most of the *Danthonia* grass. Here the effect on bird life is not so great because the bleak, windy aspect of the summit is not one conducive to a bird's comfort, but it has brought in *Prinias* and *Cisticola subruficapilla,* which would otherwise have avoided it.

Without question, this little Park, on the eve of its further development, has great possibilities as a tourist attraction. In view of the necessity for some measure of discipline being maintained over visitors to a park of this nature, the rule that they should keep to their cars has some validity but it is respectfully submitted that, because this park has, at the time of writing, no dangerous animals among its mammals as at the Addo or Kruger National Parks, minor relaxations might be considered by providing adaptations to the park's attractions for the benefit of the bird-watcher.

Perhaps chosen sites within the various habitats referred to in this report might be set aside as places where the tourist may leave his car and wander about; parking bays might be bull-dozed at open vantage-points or hillsides from which the rock- and boulder-frequenting birds could be watched at close quarters; outlook points such as the summit of Babylon Toren might be provided, with pathways along the edge to give full scope to the panoramic view and allow a better study of birds which occur there; and in parts of the riverside bush Nature trails might be laid out to enable the bird-lover to enjoy the charm of the habitat and to see barbets, woodpeckers and the like at close quarters. The 'near-forest' of *Acacia Karoo* up valley from the Warden's house is a place which would lend itself to this treatment.

If, too, the fluitjies-riet in the river below the krans were to respond to protection and re-growth, and if this response were to bring in Red Bishop birds, now to be found only a mile or so below the park's boundaries, their colourful presence, in addition to the Masked and Cape Weavers already there but in rather restricted numbers, would make a first-class summer attraction. Indeed, other results might well emerge from a richer source of riverside vegetation.

Of necessity, all such places would have to represent a very small part of the park's potential and primary object as a preserve of the fauna. The local disturbance which would come to the mammals in the immediate vicinity would be compensated by the larger area in the rest of the park where more stringent regulations are enforced for the benefit of those who come to see mammals as opposed to birds.

The Habitats.

The habitats, as they affect the bird-life, are:

A. *NATURAL HABITATS.*

1. Riverside Scrub.
2. Hillside Scrub.
3. Acacia veld.
4. Open areas (Karoo or grass or both).
5. Summit of Bankberg.
6. Kranses, boulders and rocks.

B. *MAN-MADE HABITATS.*

1. Homestead.
2. Dams.
3. Disused Arable Lands.

A1. *Riverside Scrub* (with about 77 bird species).

In this, the most significant habitat, the scrub vegetation follows the stream beds of the valleys, as it does elsewhere in the Karoo. The deep alluvial soil produces tall 20-25 ft., well-branched and -foliaged thorn trees of *Acacia Karoo* Hayne which show up in marked contrast to their stunted brothers on the adjoining stony slopes.

Amongst these riverside Acacias many shorter and bushier shrubs occur, notably a *Rhus;* three species of *Lycium* viz. *austrinum, kraussii* and *tetrandrum* (?), the first-named becoming woody and reaching a height of 10 feet in places; *Gymnosporia* sp.; *Royena* sp.; et .etc.

Of these, the three *Lyciums* are perhaps of greatest significance because they provide a steady supply of much-sought fruits and nectar throughout the year and, in addition, their succulent leaves are eaten by mousebirds.

Over and among the shrubs trail *Clematis* and *Asparagus* creepers and, as an undergrowth in good seasons, there appears a species of *Salvia,* a carpet of the saltbush *Atriplex baccifera* and the grass *Cynodon dactylon.* The seeds of both the latter are eaten avidly.

The Acacia trees are heavily parasitised by both *Loranthus,* which provides nectar for sunbirds, and *Viscum* (Mistletoe) whose fruits are enjoyed by mousebirds, bulbuls, barbets and others.

In this riverside scrub an occasional Wild Olive, *Olea africana,* Mill. occurs, perhaps as a relict of a greater number of this species whose fruits are much eaten by birds.

Up river, above a large dam, is a superior community of riverside *Acacias* growing to a height of 30-35 feet and, in so doing, forming a light canopy which may be said to create a light forest condition. It is reasonable to suppose that more such 'forests' were once present and that they stood on the present open spaces which are now relict irrigated lands.

These near-forests should be guarded jealously and the present practice of felling the old dead trees and stumps for firewood should be discouraged or reduced to a minimum, for such actions destroy availability of suitable sites for the drilling of their nest holes by Pied Barbets and Cardinal Woodpeckers. More than that, the secondary hole-nesters such as Grey Tits, Wood Hoopoes, Yellow-throated Sparrows and Wrynecks, which follow the hole-drillers are also denied nesting opportunities, while the Greater and Lesser Honeyguides which parasitise some of these species are also deprived of hosts.

Moreover, most of these species sleep in nest-holes nightly, often in the same holes in which they nest. They may use the same hole month after month, or more. It seems unwise, therefore, to hinder their natural habits by denying them their conventional sites merely for a load or two of firewood which, as is the case in the park, could be obtained elsewhere in abundance, on the scrubbier hillsides for instance, where its felling would be beneficial to the Park itself.

At the picnic-spot, set in charming surroundings, the bird life is that of the riverside scrub; indeed, the picnic spot is set within a cleared area of this habitat and, when the birds have become more accustomed to human activity, as the park becomes more used, their familiarity around the picnic-tables could well provide the park with an added attraction.

A2. *Hillside Scrub.* (With about 90 bird species).

The slopes of the hills rise steeply from the valleys and carry both coarse and fine grasses, mostly in tufts, along with Bitter Karoo, *Chrysocoma* sp.; Renosterbos, *Elytropappus rhinocerotis;* oddOpuntias; many kapokbossies, *Eriosperum* sp.; a little Karoo bush. The south-facing slope of the Toren Babylon hill differs markedly from the north-facing slopes of all the other hills and mountains in that the Bitter Karoo and other lowgrowing shrubs grow more densely and luxuriantly in this aspect. As a result of this, better cover is provided for Grey-winged Partridges, Grey-backed Cisticolas, Prinias, etc. and seems to be more attractive to hovering and passing birds-of-prey.

The slopes are only lightly bushed by comparison with the valley-bottoms. The main plants are: scattered *Rhuses* of three species; a *Cussonia* which occurs chiefly as a stunted shrub surviving in the protruding boulders, and only seldom as woody trees; some *Grewia;* some *Acacia Karoo* Hayne, stunted and scattered; a few *Lycium* bushes of two species; a little *Asparagus* either surviving under the protection of other shrubs or, if alone, heavily eaten. *Cadaba juncea,* also surviving under protective bushes; *Ehretia* sp.; *Royena* (possibly of two species); *Olea africana; Carissa* sp.; *Gymnosporia* sp.; *Euclea* (Gwarri); *Dodonaea.*

A few Camdeboo stinkwood trees occur under the protection of the boulders and in the better soil and moisture which accumulates under some

of the huge, bare slabs of dolerite which protrude through much of this hillside slope.

Berries of all the above play an important part in the food of fruit-eating birds. *Lyciums* provide both nectar and fruit on a considerable scale, and it happened on occasion that a Malachite Sunbird was feeding on the Lycium flowers in the same bush wherein Mousebirds were eating the ripe berries, so well spread is the season of this hardy plant.

Senecios also grow in some parts, providing food, by their achenes, for Bully and Streaky-headed Seedeaters, etc.

Aloe speciosa occurs here and there, also a scandent species of *Aloe* on the rocks, and *Aloe broomi* on the upper slopes. In one place on the hillside above Fontein Kloof *A. ferox* grows in a group. But *Aloes* are really of minor consideraiion in the Park. *Aloe broomi* seems to be facing extermination by physical action of some large beast, prossibly eland.

The whole surface is heavily strewn with flattish stones.

The scrub on the slopes takes second place in importance in the bird economy to the Riverside bush from which it is derived. For about a third of the way up Fontein Kloof the scrub thickens markedly until it is equally as dense as in parts of the Eastern Province Thornveld of the coastal areas. Some bushes grow large, round and dense, ten to tvelve feet high and the same in diameter, with much dead wood around their bases. Some grow straggly. Density of scrub cover increases in the slight hollows which run down the steep slopes to join the main kloofs.

This increased density of scrub bush immediately increases the population of such birds as Karoo Robin, Karoo Prinia, Boubou Shrike, Sombre Bulbul and Cape Tit-babbler. It is also sufficiently dense to bring the Cape Robin, Cape Thrush, Bar-throated Apalis out of the Riverside Scrub below.

And what is of more than passing interest is that even on the slopes under the summit itself, whither the scrub is heading, the advances guard of the scrub birds is going with it. Naturally the density of this scrub varies from place to place but even on those slopes, now almost solely populated by Bitter Karoo but broken here and there by a stunted Kareebos, *Rhus* sp.; a pair of Karoo Prinias or a Cape Tit-babbler will fly out of the rough scrub or dive into a low shrub, while the ubiquitous Bokmakierie Shrike is as regular as ever. The Lesser Double-collared Sunbird finds sustenance in these unexpected places where a dwarf red-hot poker (*Kniphofia* sp.) survives under the boulder masses. Brunsvigias also occur in clusters here and there.

Within the park the effect of the heavy cropping of scrub and shrub by browsing antelopes such as eland, and in the past by cattle, has an influence on bird life.

The two shrubs, Swartstorm, *Cadaba juncea* and *Sutherlandia frutescens* each produce an abundance of flowers filled with nectar on which the various sunbird species feed, often with a host of birds of mixed species

jostling each other for possession. But these plants, both providing splashes of attractive red flowers, have to survive within the protection of the stronger and unpalatable, perhaps even thorny, shrubs. Mere tufts of flower-heads protrude from the tops of the other shrubs, safe beyond the cropping jaws of the mammals. Without the mammals they would grow in greater profusion.

A3. *Acacia-veld*.... (With about 92 bird species).

Here and there, both on the heights above Babylon Toran and in lightly-sloping but sandier spaces between the Riverside Scrub and the Hillside Scrub, thickets of almost-pure thorntrees, *Acacia Karoo* Hayne occur. These represent an intermediate and somewhat indeterminate habitat between the open spaces and the bushed areas. The density of the thickets varies from scattered trees to a few dense thickets and where other bushes occur, these do so lightly, perhaps as the first-comers of a denser invasion yet to come. But here they are of secondary importance.

On top of Babylon Toren hill the surface is heavily strewn with flattish stones, grossly so, with grasses growing weakly through. There is also a little Karoo bush. That grass will grow well here is shown at places where dead trees have fallen and given the grass some protection from grazing animals.

In this habitat is found an overlapping of Scrub and Openveld birds resulting in an increased number of species to be seen there.

A4. *Open areas.* (With about 74 species).

The open veld on the farm "Doornhoek" purchased in 1963 gives to the park an entirely new feature, for here is clean, open, lightly rolling country covered predominantly in a mixture of grasses, and with only the barest minimum of Karoobossies. It is probably a fair, if slightly changed, example of what this veld was in the past, i.e. real grassveld and not the supposed Karoo of the modern Cape Midlands districts.

On the March 1964 visit much of it was knee-deep and in seed, but dry and yellow. Its general aspect was of unbroken grass dotted lightly with solitary low-growing shrubs, a *Lycium* here, a renosterbos, *Elytropappus* there, a *Rhus* occasionally, and so on. Here and there, but seldom, were closer-growing patches of these on a light hillside and, despite the otherwise wide open nature of the surrounding veld, these small patches of a few acres in extent nevertheless carried a few pairs of Karoo Robins which one associates with denser, harsher scrub. And even a flock of six Cape Sparrows was at one such place.

Much of the ground is liberally littered with stones and pebbles which make walking tiresome.

As is always the case with open veld lacking in scrub, these areas are not as spectacular in bird-life as is the riverside scrub but, despite the loss in density and ease of viewing they nevertheless carry a total number of

species not far below those other areas.

If the visitor waits to see the Secretary Bird, the bustards, the korhaans, cranes, coursers and larks and chats, this is where time must be spent. Not that he can be assured of seeing them on each occasion, for many are birds of irregular habit and changing position, but nowhere else in the park will he see them to advantage.

Changes in their habits, apart from the natural one whereby large, strong-winged birds move over long distances, will be influenced by seasonal changes in the condition of the veld, perhaps by heavier grazing by mammals at one place than at another, or by recurrent or persistent droughts, by veld fires and so on. Such will affect different bird species in different ways for where there is long grass there will be longclaws, Stone Chats, Grey-winged Francolins and so on, whereas Crowned Plovers, Temminck's Coursers and Sickle-winged Chats will be where the grass is shorter. The bustards, storks and cranes will not mind whether the grass is long or short, provided their food requirements are met.

There can be no doubt that the purchase of this additional open veld as an adjunct to the bushy valleys of the original park was an act of the greatest wisdom which will help to ensure, in some measure, the continued existence of our larger bustards whose basic need for wide, open and little-disturbed ground is being sorely tried by the development of the country under population pressure and the camping of farms into smaller grazing areas.

Of a decidedly secondary character and influence to the foregoing, but by no means to be ignored, are those restricted areas of openveld here and there in what was, until 1963, the original Mountain Zebra Park.

Where the 'Doornhoek' veld is still a grassy type, these lesser areas are nowadays basically a 'Karoobush' cover. That birds such as the bustards, korhaans, etc. have not been seen there is not due to this fact-indeed, they are seen in this type of veld all over the Midlands — but to their being hemmed in by scrub or by steep hillsides which do not give them the wide expanses they prefer to have around them.

A small area on top of Babylon's Toren, some $\frac{1}{2}$ mile x $\frac{1}{2}$ mile in size, is one of the few relatively open and flat patches in the park. The surface is heavily strewn with flattish stones.

A few widely scattered *Acacia Karoo* trees occur, some of which have been used as nesting sites by Cape Sparrows. Two small catchment dams occur at one side and these could influence bird-life by attracting birds coming in to water, but they would be highly unattractive to wild-fowl, ven as a loafing place. Indeed, they probably hold water but seldom.

Here, the vegetation is a scanty grass cover over the southern half and a fair cover of Karoo bush over the northern sector which carries through the boundary fence.

It seems possible that this area will one day be colonised by more

Acacia karoo coming up from the slopes to the north and east, and from the continuation of the dense acacia-veld bounding the western area, thereby influencing the bird life by becoming less attractive to ground birds and more attractive to bush birds.

On top of the hill behind the warden's house, on an elevation somewhat higher than Toren Babylon but with an aspect much the same, is another open space of very restricted area but with more and better grass, heavily grazed and obviously a favourite feeding ground for the springbok. Only one or two shrubs occur in an area of about 300 yards x 300 yards bounded on one side by the boundary fence and with sheep grazing on the other side.

In the valleys two open spaces of sandy soil containing no Karoo bush and no *Acacias* or shrubs but only short-cropped grass *could* be most attractive to Crowned Plovers, Cape Dikkops, larks and so on, yet none was seen despite a diligent search for them, even at night.

A5. *The Summit of the Bankberge.* (With about 24 species).

This today has developed into a habitat of low-growing scrub-shrubbiness where once it was *Danthonia* mountain veld, now receded almost in its entirety. The area is little more than a long, narrow table some 200-400 yards wide by about $\frac{3}{4}$ mile in length, falling away even more steeply, indeed almost precipitously, to the south than it does on the Park side.

A few patches of *Danthonia* stools persist but for the most part this grass-type has been ousted by dense stands of Harpuisbos *Euryops* sp.; and an 18" high matted shrub through which one walks with difficulty. A fair invasion of *Helichrysum* sp. has occurred, and there are several patches of stonyness and even flat rock. Yet, notwithstanding the severe condition of this bleak atmosphere, a small yellow Aloe and a dwarf Kniphofia (redhot poker) grow to provide some sustenance for any passing sunbird.

From this low-growing coarse shrub, Karoo Prinias, Cape Buntings, Grey-backed Cisticolas were disturbed as well as a lark-like bird too cautious to allow of approach or identification.

On the rocks along the lip of the terrain, Ground Woodpeckers, Red-winged Starlings, Rock Pigeons and White-necked Ravens were quite at home, while overhead in the teeth of a cold wind a Cape Rock Kestrel hovered and swooped hopefully.

The castings of a giant earthworm (probably *Microchaetus* sp.) appeared in the damp soil, and the dessicated body of one was seen on the surface. A small diurnal rodent was seen running between the rocks and the surface tunnels of a mole gave evidence of animal life for the taking, in the bleak atmosphere, by any bird of prey.

A6. *Kranses, boulders and rock-slabs.* (With about 24 species).

Two small stretches of krans along the river above the Warden's house carry Rock Pigeons, Pale-wing and Red-wing Starlings, Hamerkop's nests (one current, two old and used by Egyptian Geese); and lesser krans birds.

On the exposed ridges throughout the mountainous parts, extensive rounded rock slabs and huge boulders provide the park with its very distinctive character. Not only do these induce birds such as Cape and Rock Buntings, Familiar and Mountain Chats, Pale and Red-winged Starlings, Ground Woodpeckers and Rock Pipits but the accumulation of soil at their bases and the run-off of rain from their surfaces, afford scope for the survival of Wild Olive and Camdeboo Stinkwood trees whose fruits are always in demand in season.

B1. *Homestead Environs....* (With about 50 species).

Sheltering the south-easterly side of the house is a row of Cypresses, Firs and Casuarinas. A small orchard of fig-trees draws Red-faced and Speckled Colies, Pied Barbets, White-eyes and Cape Sparrows from the Riverside bush adjoining. A row of Quinces grows near the figs.

A tall date palm, *Phoenix* sp., provides nest sites for Red-winged Starlings and a roosting place for Pied Starlings.

A small lawn attracts a few hoopoes and wagtails, and the stoep draws both Larger Stripe-breasted Swallows and Rock Martins.

The general surroundings of the homestead are conducive to the attraction of the more conspicuous birds.

B2. *Dams and Water Resources.* (With about 24 species).

These are really of little significance at this stage. Most are small, muddy, and unreliable with little or no aquatic vegetation of importance. Many are probably dry for most of the year; some appear to be soil reclamation works.

One large dam above the house takes water by means of a diversion weir from the Pretoriuskraal River, a minor tributary of the Great Fish River. No reeds or rushes surround its banks which ,however, support a scruffy growth of weeds such as Stinkblaar, *Datura stramonium* and a type of coarse Thistle, which latter attracts Canaries and Seedeaters. Doves seem to find sustenance on the ground beneath.

The Treble-banded Plover occurs spasmodically on the mud at the waters. The local pair of Egyptian Geese and occasional vagrant Shelduck feed at the water's edge. Rock Martins and Larger Striped-breasted Swallows fed over the large dam after flood water flowed in as a result of good storms in the upper catchment area but were all gone the next day. Around the dam are the inevitable Cape Wagtails.

Despite a watercourse which runs strongly after rain, reeds and sedges now play little part in the Park's economy. Fluitjiesriet, *Phragmites communis*,

survives along the main river only within the protection of the riverside scrub where no feeding beast can reach it. Here it still grows to full height and density, even for as much as 30 yards from the edge of the river bed. Also along the river, but in the bed itself, are isolated tufts of a sedge, *Scirpus spathaceus* Krauss, which if given a chance might grow longer and denser and even mass into larger clumps. There is evidence that other minor sedge-like plants would do likewise.

If protective fences were afforded the Fluitjiesriet and sedges over a distance of about half a mile up-stream from the Kwagga Bridge below the Warden's house, and if a realistic programme of water conservation were in force in the upper reaches of the valley, this stretch of the river would become not only a sponge of great value in holding back the force of the run-off water, but would form a reedy vlei in which weaver-birds, bishop-birds, reed and sedge warblers, perhaps even crakes and rails, herons and egrets would find sanctuary in a surrounding world of farming country now all too heavily loaded against their welfare. Indeed, if the whole head-waters of the upper river could be controlled, a work of bird conservation and water retention, unparalleled in the Midlands, would ensue.

With the purchase of the farms up-valley, and especially of the farm "Doornhoek", a remarkably strong water-supply from a natural spring may well alter the whole picture of the present poor incidence of wild-fowl and aquatic birds. In general, though, the Park will always have its limitations in the matter of waterfowl as objects of tourist value on any scale.

B3. *Disused Arable Lands.* ...(With about 41 species).

These consist of the small open disconnected patches, each of about an acre, levelled along the river. They were obviously under irrigation at some time in the past, but have gone back to a light cover of creeping Saltbush, *Atriplex baccifera, Cynodon dactylon,* a *Mesembryanthemum* and other succulent plants. There are many patches of bare ground, indeed some 50% of the area may well be without any cover.

Feeding on the ground, probably on Atriplex seeds in most cases, were Cape Turtle Doves, Red-eyed Turtle Doves (often in 12's or so), Laughing Doves, Rock Pigeons, Cape Sparrows, Cape Wagtails and Pied Starlings.

As explained under the section A (Riverside Scrub) these areas must once have been under a good *Acacia karoo* and Scrub bush cover, to which they will soon revert if left to their own devices.

The introduced ostriches find much to their liking on these patches.

SEASONAL INFLUENCES ON THE BIRD LIFE

At the commencement, it was planned to time the visits to the Park to coincide with the four chief seasons of the year. In the event, this was only partially successful due to the exceptionally severe drought of 1962, but as things turned out this proved advantageous in that the status of the Park's birds during both good and bad seasons could be appraised.

FIRST VISIT. Summer, 9th-15th March, 1962.

This took place at the culmination of what had been a fair summer for the district with both grass and bush in good condition, a fact shown by the fine fettle of the various game animals. The climatic conditions therefore provided a good yardstick on which to base an optimum opinion of bird activity, even though the population of migrants and general breeding activity had passed their best. This was to prove of great value when the effects of the severe drought which racked the remaining months of the year were up for comparison.

Pale-winged and Red-winged Starlings were still busy with nesting and feeding of young at the rocky outcrops and kranses. Weed growth around the dam brought flocks of Cape Canaries to its drying seed-heads. The sudden filling of the large dam in an overnight storm brought flocks of Larger Striped-breasted Swallows and Rock Martins to feed over the surface, only to disappear almost entirely within 24 hours.

Large parties of Malachite Sunbirds fed over the *Lycium* flowers along the kloofs as did Lesser Double-collared Sunbirds. Cape Sparrows were everywhere in flocks, especially over the open disused arable lands. The calls of Red-eyed and Cape Turtle Doves in the trees at the Warden's house were quite striking in their insistence, as were those of the Cape Thrush, Pied Barbets, Red-eyed Bulbuls. The three Colies (Speckled, Red-faced and Cape); Cape, Rock and Lark-like Buntings and Cape Robins, were in good numbers everywhere. Tchagra and Boubou Shrikes were also well represented but Neddickys, Namaqua Prinias and Sombre Bulbuls consisted of little more than two pairs each. Guineafowl were also scarce, and then only in 2's and 4's.

But the impression gained each day was of a general well-being expressed both visually and vocally in all habitats. It was quite striking even to the author, whose life is spent daily amongst birds in the wild state.

SECOND VISIT. Winter, 18th -21st June, 1962.

The whole aspect of the Park had changed to one of dead Karoo-bossies and dry grass, but the scrub bush was still green in the valleys and on the hillsides.

The winter cold of the Park can be intense. To some extent this is increased by the surrounding hills which prevent the morning sun reaching the valleys until late, and which bring early shadows down the slopes in the afternoons.

So cold was one such morning at 9 a.m. during a so-called 'black' frost that the shutter of the author's camera, which had been in his room overnight, refused to respond when the release was pressed. Yet, the local bird life was not obviously discomforted.

It became immediately apparent on arrival that the bird life around

the caretaker's house had decreased, especially in its reduction of Red-eyed and Cape Turtle Doves to sleep in the firs. In the veld, a first impression tended to confirm this but was not borne out by closer contact. The bush birds were no fewer and, indeed, both Boubou and Tchagra Shrikes, by their more frequent calling, advertised themselves more often than they had done in March.

A noticeable feature was the flocking of certain species, notably Mountain Canaries in 50's strong; Cape Sparrows in large flocks and Scaly-feathered Finches in 20's. Cape Canaries were not strongly represented, only in numbers up to 12 and were not nesting in the trees as had been anticipated after the March visit.

Whereas flocks of Red-headed Weaver-finches, Red-billed Queleas and Lark-like Buntings were seen on the flats below the park, none occurred in the Park and, in fact, no Lark-like Buntings were seen there at all, whereas in March they had been fairly common, if not in parties.

Guineafowl were in troops, one of 21 having four half-grown birds amongst its number. Another, in dense bushveld near the northern entrance to the Park, numbered nine birds.

The Pale-winged Starlings were in parties of 5's to 12's on the rocky slopes and kranses but no really large flocks were seen. Nor were any flocks of Red-wings seen, only odd couples.

A most obvious near-absence of Lesser Double-collared Sunbirds (only one was seen or heard) cannot be attributed to an absence of food because the long-tubed *Lyciums* were still in flower. Neiiher were Malachites seen. Unfortunately the aloes had not yet come into flower.

All other birds occurred in the same areas where they had come to be known in March. Cape Buntings may have been fewer in number, Rock Buntings certainly were; in fact none was seen in June.

This winter visit co-incided with the full moon at its brightest and with an all-night incidence, yet at no time of night was either a South African Nightjar or a Cape Dikkop heard; nor an owl.

The occurrence of two adult Black Eagles confirmed a March suspicion that an immature seen then was of this species.

THIRD VISIT. Spring, 21st-24th November, 1962.

This proved to be a most significant visit because, since the June winter visit, the state of the veld had deteriorated disastrously due to a drought said to have been the worst for 25 years, a fact which could well be believed. For that reason this visit is dealt with here in some detail.

On the author's arrival the veld showed a tinge of green where the grasses and bushes were beginning to sprout after a series of light rains amounting to 2.22 ins. (56. 8mm.) which had fallen between 8th and 21st November but this proved deceptive because each fall had been too light to do more than moisten the surface of the soil and force the shooting of

leaves already long overdue. Many scrub bushes on the hillsides, notably *Rhus erosa* Thunb. had died back leaving brown patches dotting the hills. Thorn-trees, *Acacia karoo* Hayne growing on the hillsides were still dry and leafless but those along the dry stream-beds were unaffected, as was the case with other shrubs growing there.

Because the drought was so severe the monthly rainfall figures for the whole year, kindly supplied by the Warden, are given:-

1962	January	— 1.78 in. (43.18 mm.)
	February	— 3.00 in. (76.20 mm.)
	March	— 1.52 in. (38.10 mm.)
	April	— 0.75 in. (17.80 mm.)
	May	— 0.00 in. (0.00 mm.)
	June	— 0.00 in. (0.00 mm.)
	July	— 0.00 in. (0.00 mm.)
	August	— 0.18 in. (8.80 mm.)
	September	— 0.00 in. (2.80 mm.)
	October	— 0.25 in. (6.3 mm.)
	November (to 21st)	— 2.22 in. (55.8 mm.)

These figures show that the first visit in March occurred in a good spell, and one preceded by good summer conditions, and that, from April, the drought set in. In the subsequent months up to the end of October the total fall was only 1.18 in. (29.4 mm.) in amounts that could have had no value to the veld whatever. And, in four of those months, no rain fell, one being September when an early Spring precipitation could be expected.

While some of these months would have produced little or no rain in any year during the naturally dry months of winter, the early spring brought more desolation than the average and at a time when plants have the natural urge for growth.

The drought's effect on the vegetation was reflected in the depleted condition of the antelopes, more especially among the springboks and rooi ribboks, who suffered, and were still suffering, heavily. The picture was a sorry one. But such was by no means the impression gained of the bird-life. The Park seemed to have returned to that fullness of sound and activity which had been so much its character in March, when the season was really good. Numbers were strong everywhere, as far as could be seen, and 12 new species were added, with four others, three of them birds of prey, undetermined.

Four of the species recorded on previous visits were not seen, the Scaly-feathered Finch, the Lark-like Bunting, the Red-faced Coly and the Sombre Bulbul. Perhaps none were far, but none were in places well suited to them. The Sombre Bulbul is never strong here but its callnotes would always give it away.

Red-wing and Pale-wing Starlings were noticeably fewer in numbers, and so were Sunbirds, but the latter's absence is explained by the lack of

suitable nectar. Only a few *Cotyledon* plants, scarce enough not to matter, and an occasional bush of Swartstorm, *Cadaba juncea,* had anything to offer. All the *Lyciums,* with few exceptions, and then out on open hillsides, were flowerless.

It was the species whose numbers had increased which emphasized the drought's minor influence on bird life. At least five pairs of Namaqua Prinias occupied the riverside scrub from the Warden's house to the boundary. Cape and Speckled Colies were in flocks of 10's, 20's and more, in marked contrast to the absence of Red-faceds. There was more food than they could consume in the heavy crop of berries of Rhus erosa on the hillsides and *Rhus lancea* in the valleys. Nor were they inconvenienced by the absence of *Lycium* fruits which occur so abundantly on any of the three species of this very common plant; they ate the succulent leaves of this useful shrub.

The Rock Pipit's song was more in evidence than ever and, if the singing birds were advertising their territories as their conservatism of call-sites suggested, there could well be 15 or more pairs in the Park.

Cape Thrushes were extremely common, a fact not only acknowledged by their song. They were conspicuous. The same applied to Tchagras, and where only two pairs of Neddicky Cisticolas had been found before, and that at widely separated points at the edge of the riverside scrub, many pairs were found, even up on the hillsides among the scrub. And, by virtue of its increased song at this time of year, the Grey-backed Cisticola was seen to be very common.

Seed on the surface of the ground may well have been scarce. For two days hardly a Cape Sparrow was seen. At places where they had been striking features, notably on the open fallow land below the Warden's house, they were absent, but eventually they were found at the edge of and inside the Riverside Scrub near the entrance to the Park.

Laughing Doves fed in small parties of 3-5 birds and Cape Turtle Doves even less, and the presence of 4 Namaqua Doves, not seen before, indicated that conditions could not have been too bad.

The above shows how the food supply of birds at such a place in a really severe drought is able to contain the bird-life there. Naturally there will be fluctuations and these will vary for reasons, perhaps not apparent, but if this drought is taken as the worst the Parks Board need allow for, there is little cause for concern over the welfare of the birds. For this, the habitat here referred to as Riverside Scrub is the chief salvation. The trees and woody shrubs are largely independent of surface rains and can come into leaf, flower and fruit according to their natural schedules. *Gymnosporias, Royenas, Rhuses, Viscums* and *Acacias,* among others, were doing this in November. That *Lyciums* were not, may have been due to an especially heavy drain on them at the worst time of the drought because their palatability is enjoyed not only by the recognised fruit-eaters such as

barbets, mousebirds and bulbuls, but also by thrushes, robins, tchagras and the like.

It was not possible to assess the incidence of insect food. Had it not been sufficient, would so many of the insectivores have been there? Perhaps the light rains had had their influence on the emergence of insect life by then. At all events, Willow Warblers, Cape and Karoo Robins, Paradise Flycatchers and so on were seen collecting food with very little difficulty.

Where the Riverside Scrub had yet to come into its fullness was in the growth of herbaceous undergrowth. It was obvious that good soaking rains were needed to bring these plants into life.

LATER VISITS

It had been hoped during the planning of this survey to use the month of November as a yardstick of the breeding potential of the Park. The drought nullified an effective result. Apart from the rains having been so late, their meagreness cannot be blamed for the paucity of nests because no previous criterion exists as a check. Was it perhaps significant that no Cape Sparrow was doing more than carry the first pieces of nest material? This most fertile bird is usually a breeder over a long period.

On the other hand, a Masked Weaver had a colony occupied by two females, one with a nest of eggs, the other with a nest of advanced chicks. A Cape Weaver had just started its first nest. Nests with eggs were found of the Cape Thrush, Familiar Chat, Paradise Flycatcher, Rock Martin, Tchagra Shrike, White-throated Seedeater and Hadedah Ibis, while the behaviour of a pair of Egyptian Geese at an old Hamerkop's nest was suggestive of the incubation of a concealed clutch.

Of fully fledged birds, a very young Laughing Dove was seen; also three young hamerkops which had only just left the nest and were still unable to move from the valley below the nesting site on the krans above. To argue that it is no mean achievement for a bird such as a hamerkop, which is so dependent upon frogs and other aquatic life, to raise a brood at the height of a drought, is to argue against the facts. Had the birds been confined to the Park's former restricted boundaries, not only the young but the adults must have starved to death. The dams and the river courses were dry. Only the good spring and the better dams on properties at the head of the valley, since purchased in 1963, were the source of food for these birds, and if the remains of two old nests on the same krans, near the one in present use, is any criterion, these upper watering resources have been used for many years.

Neither Red-wing nor Pale-winged Starlings were nesting in any of the places where they had been so active in March and in no case anywhere in the Park did either species suggest nesting activity.

Apart from the dependence of the hamerkop on outside resources, several other species fed outside the park whilst using it as a roosting base. European Bee-eaters, two pairs at the most, and more often only one, flew

up valley every morning, spent most of the day over the lucerne lands of farms up-valley with occasional feeding excursions over the lower reaches of the Park, and flew down valley and out of the park in the evenings. Red-eyed Doves roosted in some numbers in the trees beside the Warden's house as they had done in March, but where they had been in greatly reduced numbers in June. At least 100 Pied Starlings, as near as could be counted, also roosted in the trees, yet neither of these species was seen in the Park by day. Their evening flight-lines indicated clearly that they fed far beyond the park's fences. Yet in March the Pieds had not roosted here (nor did they do so in March, 1964; they had flown up river, right over the park and found a roosting place on a farm up river. Nowhere in the park is there ground ideally suited for the Pied Starlings' foragings and it is obvious that the farms all round hold more attractions than the Park for the doves, a fact borne out by the movements of the Rock Pigeons to and from their conventional rock ledges.

This is not a criticism of the Park's management. It is an ecological factor whereby a man-made environment of ploughed and sown arable lands; of accumulated weed-growth within fences; of stored crops near farmsteads; of the influence of herded animals by the accumulation of their dung and its influence on the fertility of the soil, creates more favourable circumstances. The Park, slowly reverting from what once was a series of farms to a more balanced natural economy has lost these artificial oases and the winged mobility of birds enables them to pass the park's fenced barriers and take food where it is most easily found, a privilege denied the springbok and rooi ribbok etc. who must needs perish in the drought, unable to roam the country in search of better conditions as they did of yore.

This droughty month of November added 12 new species to the list, and by no means only migrants.

Perhaps the most interesting of these was the Cape Dikkop. Its absence on the two previous occasions and for the first two days of the November visit seemed unnatural. Not even bright moonlight had stimulated the calls as it always does. When the bird was seen eventually it was flushed no more than 400 yards from the Warden's house at a place thoroughly typical of the species. And once it had been flushed it was both seen and heard there regularly. There is little doubt in the author's mind that this species was absent from the park and that this represents a new arrival, perhaps after only a short absence.

Subsequent visits in summer and autumn months gave no reason to change the opinion that the Park's bird-life is not unduly disrupted by seasonal vagaries. The absence of one species, say the Lark-like Bunting, is compensated by an influx of Blackheaded Canaries and so on.

That such variations give food for further investigation by a resident ornithologist is exemplified perhaps by a species such as the Ground Woodpecker which, numerous on one occasion at the abundance of rocky places over much of the park, is not seen at all at another visit.

But as if to emphasize the general trend in bird stability the visit of 7-9 April, 1963, coming immediately after a spell of quite exceptional rains, not only in the Cradock district but over the whole of the Eastern Cape when almost a year's average rainfall fell in the month of March alone, showed no marked increase in the bird life. Nor were any spectacular population increases, as a result of this, revealed at a later visit.

THE STATUS OF THE SPECIES

The following list presents those species certainly known to occur, and gives brief remarks on each. In addition, comments are made (with the bird numbers given in brackets) on absentee species whose future recording is highly probable.

A report of this nature can be compiled more satisfactorily by a resident ornithologist who is in a position to note the arrival of the exceptional species. Although these are interesting from a distribution point of view, they are not of great ecological moment, and even less of tourist value. It is the hard core of resident species which identify a Nature Reserve.

At the time of writing, there is no way of knowing how future developments in the Park, now that it has assumed an enlarged status, will affect the general vegetation. The present farm fences are to be removed; water supplies will assuredly be altered, developed and increased; a different big game stocking policy may affect certain aspects of the veld, and so on.

Therefore it has seemed wise to set out a general picture at this stage to give future workers on the bird-life of the Park a background on which to work.

The identification of all species has been done by field recognition at the request of the National Parks Board, who did not want disturbance of the birds by shooting.

The probable and possible occurrence records of these birds, which were not seen but which are listed here, are based on known occurrences of these birds in the Cradock district and their known preferences for certain habitats.

The numbers are those of McLachlan & Liversidge, *Roberts Birds of South Africa* (1957).

1. OSTRICH, *Struthio camelus*

Twelve birds, nine of them cocks. Introduced about 1958. Move about the park, preferring the old 'lands' for feeding.

6. CAPE DABCHICK, *Podiceps ruficollis*

Rare visitor. The dams, except the one beside Doornhoek house, are not suitable for the species.

N.B. (White-breasted and Reed Cormorants *(Phalacrocorax carbo* and *P. africanus)* can be expected as exceptional passers-by ,the latter perhaps more than the former).

54. GREY HERON, *Ardea cinerea*

Very occasional visitor to the dams.

55. BLACK-HEADED HERON, *Ardea melanocephala*

Very occasional visitor, chiefly to the coarse grass edges of the lucerne and other lands of the farm up the valley, habitats which will disappear when these areas revert to a game reserve.

(61.) CATTLE EGRET, *Bubulcus ibis*

Possible irregular vagrant from the Cradock lucerne lands along the Great Fish River.

72. HAMERKOP, *Scopus umbretta*

Nests on krans near Warden's house, drawing its food supply from dams up the valley where frog life at times is extremely abundant.

(76.) WOOD STORK, *Ibis ibis*

Possible vagrant to dams.

79. BLACK STORK, *Ciconia nigra*

Possible vagrant to dams.

80. WHITE STORK, *Ciconia ciconia*

On Doornhoek open-veld with occasional visits to the more lightly covered thornbush-veld.

81. SACRED IBIS, *Threskiornis aethiopicus*

Passing visitors to dams.

84. HADEDAH IBIS, *Hagedashia hagedash*

Newcomers, probably within the past 10 years. Nests in the *Acacia* 'near-forest' of the riverside scrub. About 6 birds.

(85.) SPOONBILL, *Platalea alba*

Possible vagrant to dams.

89. EGYPTIAN GOOSE, *Alopochen aegyptiacus*

One pair at least. Apparently nest in an old hamerkop's nest in the krans. Young seen at the dams.

90. AFRICAN SHELDUCK, *Tadorna cana*

A pair visits the park and nests somewhere near the Warden's house. Young have been seen.

(95.) BLACK DUCK, *Anas sparsa*

Not seen, but dams in enlarged park up-valley could encourage itinerant birds from Great Fish River.

96. YELLOW-BILLED DUCK, *Anas undulata*

A few occasionally. Water not wholly suitable except at one dam.

97. RED-BILLED TEAL, *Anas erythrorhyncha*

A few occasionally.

105. SECRETARY-BIRD, *Sagittarius serpentarius*

On the open veld at times.

106. CAPE VULTURE, *Gyps coprotheres*

Flights soar over from time to time, evidently from known roosting sites to the north and south of the Park.

(114.) LANNER FALCON, *Falco biarmicus*

Not seen, but conditions ideal for this species.

123. ROCK KESTREL, *Falco tinnunculus*

Odd birds in the open veld and light thornveld; one even on top of the Bankberge.

125. LESSER KESTREL, *Falco naumanni*

Fair numbers occur daily in summer in parts of the light hillside scrub, the thornveld and open-veld evidently from the main roosts at Cradock.

130. BLACK-SHOULDERED KITE, *Elanus caeruleus*

In the coarse roughness near long grass.

133. BLACK EAGLE, *Aquila verreauxi*

A pair to be seen over the upper hillside veld and open veld with some frequency. Four were together on one occasion. Also immature birds.

142 MARTIAL EAGLE, *Polemaëtus bellicosus*

An occasional bird soars over the Park.

152. JACKAL BUZZARD, *Buteo rufofuscus*

A pair over the hillside scrub and openveld.

154b. STEPPE BUZZARD, *Buteo buteo*

Summer visitors to the openveld.

165. CHANTING GOSHAWK, *Meliërax musicus*

In the openveld, and open thornbush veld.

171. BANDED HARRIER-HAWK, *Polyboroides typus*

On two occasions a bird flew up the valley feeding in the riverside and hillside scrub.

176. GREY-WINGED FRANCOLIN, *Francolinus africanus*

Small coveys of 5-8 birds flushed in the openveld and in the coarse shrub-scrub. They seemed to prefer the roughage on the southern slopes of Toren Babylon.

189. AFRICAN QUAIL, *Coturnix coturnix*

Prefer the open grassveld. Of irregular and unpredictable incidence.

192. CROWNED GUINEAFOWL, *Numida meleagris*

Chiefly in the riverside and contiguous bush. Troops not strong, up to 20 birds in each.

RAILS AND CRAKES

Conditions in the park at present are unsuitable for these skulkers. Should reeds and sedges be restored by future conservation works species such as—

197 Cape Rail, *Rallus caerulescens,*
198 Corn Crake, *Crex Crex,*
203 Black Crake, *Limnocorax flavirostra,*

might be influenced to stay.

212. RED-KNOBBED COOT, *Fulica cristata*

Infrequent vagrant to the dam at Doornhoek, up-valley. Conditions there too restricted now and prone to disturbance.

216. BLUE CRANE, *Tetrapteryx paradisea*

Flocks of 20 and more in the openveld. One pair seemed attached to the shallow dams on top of Toren Babylon and near the entrance to the Park. Indications are that they nest there.

(217.) KORI BUSTARD, *Ardeotis kori*

Not seen because rare in the district, but would occur on the open grassveld, and even in parts of the upper thornveld.

218. LUDWIG'S BUSTARD, *Neotis ludwigii*

Flocks of 3-6 birds on the openveld fairly often seen.

219. STANLEY BUSTARD, *Neotis denhami*

Two's and three's on the open veld fairly often. This species and Ludwig's can be seen at one and the same time, but in separate parties.

220. KAROO KORHAAN, *Eupodotis vigorsii*

In open country, but not common now.

223. BLUE KORHAAN, *Eupodotis caerulescens*

In open veld in small parties of 3-5.

225. BLACK KORHAAN, *Afrotis afra*

In openveld, especially where there is some Karoobush. Has not entered the thornveld of the upper hills behind Toren Babylon but could well do so.

238. THREE-BANDED SANDPLOVER, *Charadrius tricollaris*

Pairs on the mud of dams.

242. CROWNED PLOVER, *Stephanibyx coronatus*

Not common. A few occur on top of Toren Babylon around the sleeping places of the game animals.

(245.) BLACKSMITH PLOVER, *Hoplopterus armatus*

Around dams.

(*Scolopacidae*. None was seen at any of the dams, but passing birds could put down there. The grassy dam at Doornhoek is suitable for Wood Sandpipers but is now subject to too much human disturbance. The dams generally have nothing to offer wading birds.)

275. CAPE DIKKOP, *Burhinus capensis*

Suprisingly weak, despite continued efforts by day and night to find the species. One bird eventually found at a place near the Warden's house to which it must have been a newcomer because it could hardly have been overlooked there.

(276.) BURCHELL'S COURSER, *Cursorius rufus*

A highly probable visitor to the openveld.

277. TEMMINCK'S COURSER, *Cursorius temminckii*

Small flights of 5 or so birds. Prefer the openveld, grassy or with karoobushes.

278. DOUBLE-BANDED COURSER, *Rhinoptilus africanus*

On the open veld.

307. NAMAQUA SANDGROUSE, *Pterocles namaqua*

Of irregular appearance on the open veld.

311. ROCK PIGEON, *Columbia guinea*

Very common on the kranses and boulders of the Valleys, entering the thornveld to feed at times, but preferring the disused arable lands and flighting out to the neighbouring farms where food in and near arable lands is more plentiful and available.

314. RED-EYED DOVE, *Streptopelia semitorquata*

Known in the Park from its roosting place in the tall trees around the Warden's homestead and on the disused arable lands. Otherwise goes outside the Park to feed. Not many birds.

316. CAPE TURTLE DOVE, *Streptopelia capicola*

Fair number. Roost in trees at the homesteads and in the riverside scrub. Enter most habitats to feed.

317. LAUGHING DOVE, *Stigmatopelia senegalensis*

Not common but numbers seem to fluctuate. In most habitats.

318. NAMAQUA DOVE, *Oena capensis*

Very occasional visitor. Seen on only one visit and then in the open space of the disused lands beside the riverside scrub.

343. RED CHESTED CUCKOO, *Cuculus solitarius*

Very occasional itinerant. In the riverside scrub and the trees around the homesteads.

348. JACOBIN CRESTED CUCKOO, *Clamator jacobinus*

A few usually present in the summer months.

352. DIDRIC CUCKOO, *Chrysococcyx caprius*

A few in the summer months.

OWLS.

None seen or heard. Possible species are:—

359 Barn Owl, *Tyto alba*

367 Cape Eagle Owl, *Bubo capensis*

368 Spotted Eagle Owl, *Bubo africanus*

369 Giant Eagle Owl, *Bubo lacteus.*

NIGHTJARS.

None seen or heard. Possible species are:—

371 European Nightjar, *Caprimulgus europaeus*

372 Rufous-cheecked Nightjar, *Caprimulgus rufigena*

373 South African Nightjar, *Caprimulgus pectoralis.*

Faint sounds as of the Rufous-cheeked Nightjar were heard by Dr. J. M. Winterbottom in April, 1963, as were long-drawn out notes such as this species utter, by the warden, Mr. van Straaten, at a later date.

The absence of the South African Nightjar, is surprising. Special efforts at dusk and by moonlight were made to hear this bird's characteristic call, but without effect. The veld conditions are in its favour.

380. BLACK SWIFT, *Apus barbatus*

Appear irregularly and in fair numbers over all habitats depending on food supply.

383. WHITE-RUMPED SWIFT, *Apus caffer*

Appear irregularly and in fair numbers over all habitats, depending on food supply.

386. ALPHINE SWIFT, *Apus melba*

Appear irregularly and in fair numbers over all habitats, depending on food supply.

386. ALPINE SWIFT, *Apus melba*

Should occur because common in Cradock town.

390. SPECKLED MOUSEBIRD, *Colius striatus,*

391. WHITE-BACKED MOUSEBIRD, *Colius colius,*

392. RED-FACED MOUSEBIRD, *Urocolius indicus*

These prefer the riverside and hillside scrub where there is never a shortage of food even in the severest drought. Troublesome in the soft fruits of the gardens. The Speckled is most numerous both in incidence and

in numerical strength of the parties.

The manner in which these birds change feeding grounds is often illustrated by the way parties are seen flying across open veld, and perching momentarily on lone shrubs before flying on.

KINGFISHERS.

Water conditions are not suitable at the dams, on the whole.

402. BROWN-HOODED KINGFISHER, *Halcyon albiventris*

One bird seen once in the riverside scrub.

404. EUROPEAN BEE-EATER, *Merops apiaster*

Disappointingly weak. Elsewhere strong in the Cradock district, e.g. at Halesowen. A few birds came into the Park from down-stream in the mornings, fed at the lucerne lands at the farm up-river and passed down-river again in the evenings.

418. AFRICAN HOOPOE, *Upupa africana*

Generally one or more at favoured places beside the riverside scrub, on the old lands, beside dams.

419. RED-BILLED WOOD-HOOPOE, *Phoeniculus purpureus*

Small parties in the riverside and hillside scrub or searching about in the *Acacia* thickets.

432. PIED BARBET, *Tricholaema leucomelas*

Very common in all bushed areas.

440. GREATER HONEYGUIDE, *Indicator indicator*

A single bird seen from time to time.

442. LESSER HONEYGUIDE, *Indicator minor*

A singleton seen occasionally. A call-site was found in a small branch of the river above the Warden's house but after one day's use it was abandoned.

445. GROUND WOODPECKER, *Geocolaptes olivaceus*

One of the features of the Park on the many boulders of the hillsides up to the summit of the Bankberg.

450. CARDINAL WOODPECKER, *Dendropicos fuscescens*

Occasional in the riverside, hillside and thornveld scrub.

453. WRYNECK, *Jynx ruficollis*

One in the riverside scrub, a new record for the district apparently.

LARKS.

The valleys are most unsuitable for larks which are birds of the open veld. However, the few open patches should not be overlooked as

occasional visiting places, as indeed they proved to be on occasion.

463 Thick-billed Lark, *Calendula magnirostris*

466 Clapper Lark, *Mirafra apiata*

475 Long-billed Lark, *Certhilauda curvirostris*

488 Red-capped Lark, *Tephrocorys cinerea*

None of these were unduly common, but they could be relied upon to be seen. The Clapper Lark was even taken on top of the mountain.

The following larks might yet be found in the Park—

458 Rufous-naped Lark, *Mirafra africana*

461 Karoo Lark, *Certhilauda albescens*

485 Grey-backed Finch-lark, *Eremopterix verticalis*

486 Black-eared Finch-lark, *Eremopterix australis*

490 Pink-billed Lark, *Spizocorys conirostris*

493. EUROPEAN SWALLOW, *Hirundo rustica*
Comes and goes over most habitats.

495. WHITE-THROATED SWALLOW, *Hirundo albigularis*
Very occasional.

498. PEARL-BREASTED SWALLOW, *Hirundo dimidiata*
Seen twice, single birds on each occasion.

502. LARGER STRIPED-BREASTED SWALLOW, *Cecropis cucullata*
A few dozen present at all times in summer.

506. ROCK MARTIN, *Ptynoprogne fuligula*
Come and go irregularly over all habitats. One pair nests annually on the Warden's stoep.

509. AFRICAN SAND MARTIN, *Riparia paludicola*
Singleton over a dam once.

522. PIED CROW, *Corvus albus*
Comes and goes irregularly.

523. BLACK CROW, *Corvus capensis*
In open veld for preference but not common.

524. WHITE-NECKED RAVEN, *Corvultur albicollis*
Usually a few pairs on the steep hillsides and mountainous areas.

525. GREY TIT, *Parus afer*
In the riverside scrub and the denser hillside scrub. Seldom conspicuous.

531. PENDULINE TIT, *Anthoscopus minutus*
Small parties in the open scrub and thornveld thickets; occasionally in the riverside scrub.

544. RED-EYED BULBUL, *Pycnonotus nigricans*
Very common, noisy and conspicuous at all times.

551. SOMBRE BULBUL, *Andropadus importunus*
Scarce. Possibly at the extreme of its range here.

553. CAPE THRUSH, *Turdus olivaceus*
All along the darker places of the riverside scrub.

559. CAPE ROCK THRUSH, *Monticola rupestris*
Not seen. Yet conditions seemed ideal.

564. MOUNTAIN CHAT, *Oenanthe monticola*
Very common all along on the boulder-strewn and stony hills.

(568.) CAPPED WHEATEAR, *Onanthe pileata*
A very probable visitor to the open veld.

570. FAMILIAR CHAT, *Cercomela familiaris*
Pairs here and there in all habitats.

572. SICKLE-WING CHAT, *Cercomela sinuata*
In the open veld; quite numerous.

575. ANT-EATING CHAT, *Myrmecocichla formicivora*
In the open veld, here and there.

576. STONE CHAT, *Saxicola torquata*
Odd pairs in areas of longer and open grass.

581. CAPE ROBIN, *Cossypha caffra*
Mostly in the riverside scrub but enters the denser hillside scrub.

583. KAROO ROBIN, *Erythropygia coryphaeus*
At the edges of the riverside scrub and in the hillside scrub, especially where this has a dense cover of shrub-scrub between the clump-bushes. Even the open grassveld on 'Doornhoek' where the low growing shrubs of *Elytropappus* and *Rhus* form denser island patches of scrub on rocky outcrops this bird occurs freely.

595. GARDEN WARBLER, *Sylvia borin*
Along the riverside scrub where this tends to be more open and semi-parklike.

599. WILLOW WARBLER, *Phylloscopus trochilus*
In the thorn scrub and among the *Acacia* trees mostly.

600. YELLOW-BELLIED EREMOMELA, *Eremomela icteropygialis*
In the various scrub types. Not common and often difficult to see.

(604.) Cape Reed Warbler, *Calamocichla gracilirostris* and