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THE
GAME-BIRDS AND WATER-FOWL
OF
SOUTH AFRICA

THE
GAME-BIRDS & WATER-FOWL
OF
SOUTH AFRICA

BY
MAJOR BOYD HORSBRUGH

MEMBER OF THE BRITISH ORNITHOLOGISTS' UNION AND SOUTH AFRICAN ORNITHOLOGISTS'
UNION; FELLOW OF THE ZOOLOGICAL SOCIETY OF LONDON

WITH COLOURED PLATES

By SERGEANT C. G. DAVIES (*Cape Mounted Riflemen*), M.B.O.U., M.S.A.O.U.

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TO MY WIFE

PREFACE.

IN THIS volume I have endeavoured to give descriptions of the Game-Birds and Water-Fowl found within South African limits—that is to say, south of a line drawn through the Zambesi River from east to west.

I trust that in all cases the illustrations will be sufficient to enable the sportsman readily to identify any Game-Bird he may shoot. It must be remembered, however, that immature birds often differ very much from those in adult plumage ; I regret it was not possible to figure the birds in every stage.

With regard to the habits of many species, I am greatly indebted to Serg. C. G. Davies, Cape Mounted Riflemen, whose excellent field-work has been of the greatest help to me. All notes referring to Pondoland and Griqualand have been communicated to me by him.

My thanks are also due to Dr. J. W. B. Gunning, Director of the Transvaal Museum, Pretoria, and to Mr. Péringuey, Director of the Cape Town Museum, for the loan of many skins otherwise almost unobtainable, which were used by Sergeant Davies to illustrate the work.

Much valuable information has been obtained from the pages of the *Journal of the South African Ornithologists' Union*, whose energetic Editor (Mr. A. K. Haagner) has done so much to further the study of ornithology in South Africa.

Without their ready assistance, so willingly given, the labour of bringing out this work would have been more than doubled.

For the facts regarding general distribution of the birds and the colour and dimensions of their eggs, I am in most cases indebted to Mr. W. L. Sclater's valuable work on the *Fauna of South Africa*, but a certain amount of information was also obtained from Layard and Sharpe's *Birds of South Africa*.

To Mr. W. R. Ogilvie-Grant my thanks are also due for notes on various species, and for kindly looking over some of my proofs.

I should also like to express my thanks to Mr. H. F. Witherby for his practical help on many occasions.

B. R. H.

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C. G. Davies del.

Witherby & Co. imp.

KORI BUSTARD or GOM PAAUW (*OTIS KORI*) Female.

THE
GAME-BIRDS AND WATER-FOWL
OF SOUTH AFRICA.

No 217 (ROBERTS).

OTIS KORI.

KORI BUSTARD.
OR GIANT BUSTARD.

(PLATE 1.)

Otis kori, Burchell, Trav. S. Afr., I, pp. 393-492 (1822); Sharpe's ed. Layard Birds of S. Afr., p. 632 (1875-84); Nicolls & Eglington, Sportsman in S. Afr., p. 112 (1892); Reichenow, Vögel Afrikas, I, p. 242 (1900-01); Selater, Ann. S. Afr. Mus., III, p. 357 (1905); Selater & Stark, Birds S. Afr., IV, p. 308 (1906).

Eupodotis kori, Sharpe, Cat. Birds Brit. Mus., XXIII, p. 324 (1894); Woodward, Natal Birds, p. 178 (1899).

LOCAL NAMES.—“Gom-Paauw” (i.e. Gum Peacock, because it is said to feed on gum found on mimosa trees); “Isemi” of Kaffirs generally; “Kori” of Bechuanas (Burchell).

DESCRIPTION. Length of a male 56 in. and of a female 44 in. They have been shot weighing up to 50 lb., but the heaviest I have ever weighed was 35 lb., and he was a huge bird. The sexes are alike, except that there is an enormous discrepancy in size between them. The bird figured is a female.

DISTRIBUTION. Generally distributed all over South Africa in suitable localities. It is essentially a bird of the wide, open flats, where it can see far in every direction.

Its range extends as far as Southern Angola on the west, and it is also found in Central Africa, and East Africa as far north as Somaliland.

It is migratory, and much more plentiful in some years than in others.

On the edge of the Kalahari Desert west of Vryburg, it is common at the beginning of the winter (May and June).

THE “Gom-Paauw” is not rare in suitable localities, and is generally to be found stalking about on open plains dotted

GAME-BIRDS OF SOUTH AFRICA

with mimosa trees. It is to my mind the finest of all game-birds, and it takes a great deal of hard work and accurate shooting to bring one to bag.

The best way to circumvent this wily bird, is for two people to ride about together until a Paauw is seen ; the sportsmen should then ride, not directly at him, but so as to pass about 200 yards to one side, gradually edging in. A good deal of judgment must be used in executing this manœuvre. If the bird should stop, the riders must edge away until he regains confidence, and the ponies must be kept walking gently on all the time and must not be halted. Then, when you have approached as near as you dare, drop off behind a convenient bush while your companion leads your pony on : let him get well away, as the Paauw will watch him and the ponies carefully all the time. By making use of cover you may creep within range and with a telescope-sight on a small-bore rifle you may score a bull's-eye ; but as you are sure to have your eyes blinded with perspiration and your knees full of sharp thorns, you probably will not.

I have tried driving this bird, but it is so tall and so wary, and has such magnificent eyesight, that I only succeeded once in this, when I shot a bird weighing 32 lb., and, from the crack with which it hit the ground, it sounded like 32 stone.

It is delicious eating, but requires to be well hung.

It has a tremendous gape : a tame bird that was owned by a friend of mine in Potchefstroom could easily swallow whole an Army ration-biscuit, and was always quite ready to do so. This bird was exceedingly savage, and one day fell upon a tame Secretary-Bird that shared his enclosure, and killed it with a few tremendous drives of his bayonet-like beak, in spite of the vigorous kicks of his opponent.

KORI BUSTARD

This Bustard is supposed to be very fond of the gum which exudes from the mimosa, but, although I have examined the stomachs of several and watched many more with powerful field-glasses, I have never seen anything to verify this statement.

Like all the South African Bustards, it lives chiefly on insects such as locusts, grasshoppers, etc., as well as on mice, lizards, and small snakes, with a certain quantity of the green leaves of succulent plants.

Paauw breed on the bare ground, laying two eggs in a slight hollow. The eggs measure about $3\frac{1}{2}$ by $2\frac{1}{2}$ in., and are pale brown mottled with darker shades, but they vary much in the markings.

OTIS LUDWIGI.
LUDWIG'S PAAUW.

(PLATE 2.)

Otis ludwigii, Rüppell, Mus. Senckenb., II, p. 223, tab. XIV (1837); Sharpe's ed. Layard Birds of S. Afr., pp. 636, 854 (1875-84); Nicolls & Eglington, Sportsman in S. Afr., p. 114 (1892); Reichenow, Vögel Afrikas, I, p. 246 (1900-01); Selater, Ann. S. Afr. Mus., III, p. 357 (1905); Selater & Stark, Birds of S. Afr., IV, p. 298 (1906).

Neotis ludwigi, Sharpe, Cat. Birds Brit. Mus., XXIII, p. 299 (1894) Woodward, Natal Birds, p. 175 (1899).

LOCAL NAME.—“ Iseme ” of Natal Zulus (Woodward).

DESCRIPTION. The bird figured is an adult male; length about 39 in. The female is similar, but much smaller, and has no white occipital patch, and the brown round the eye and on the chest is considerably mottled and freckled with white. An individual shot by Butler weighed $7\frac{1}{2}$ lb.

DISTRIBUTION. Ludwig's Paauw is generally distributed over Cape Colony, the Orange River Colony, southern Transvaal and upper Natal, but there seems to be much uncertainty as to its exact range, as it is usually confused with *Otis cafra* (the Stanley Bustard or Veld Paauw).

Like the other big Bustards, *Otis ludwigi* is a partial migrant, and usually visits the south-western districts and the flats near Cape Town during the months of November, December and January only, and I have seen it near Bloemfontein in the months of July, August and the beginning of September.

I have shot it on the Kenia flats in British East Africa, where it is by no means uncommon.

ACCORDING to Mr. Wood this is the only Bustard which visits East London, and he states that it does not come every year.

C. G. Davies del.

Witherby & Co. imp.

LUDWIG'S BUSTARD (*OTIS LUDWIGI*) Male.

LUDWIG'S PAAUW

Ludwig's Paauw feed in the early morning and late evening on locusts, beetles, mice, lizards, and any living food. I have often been told that they lived on grain such as mealies or Kaffir-corn, but although I have offered grain to most species of tame Bustard and have examined the crops of many, I have never found grain in them. They will occasionally eat clover and young soft weeds and grass, and I do not think they would refuse the eggs of any small ground-breeding bird.

In East Africa the males "show-off" at about ten o'clock in the morning or a little before, and sometimes about sunrise. Occasionally in the sunshine a bird would be seen in the distance revolving slowly round and round, his big, white neck glistening and his tail-feathers and wing-coverts stuck up like a frill round him, while he accompanied this performance with his deep humming love-note. The hen bird in the meantime would stalk aimlessly about and apparently pay not the least attention to him.

Like all big game-birds, Paauw fly fast, although they appear to go slowly. They rarely give a chance to the shot-gun, and are generally killed with the rifle, and as they are usually in grass long enough to conceal their bodies, they do not often present an easy target.

Two of these birds are now living in the Zoological Society's Gardens at Regent's Park.

Should a young bird be captured alive the best food for it would be locusts, grasshoppers, etc., until it could be got to eat cooked meat, porridge or any cereal, or boiled potatoes. It must be remembered that a captive bird likes plenty of choice in its food, and it must not be forgotten that the bones of all the Bustards are very brittle, so that these birds

GAME-BIRDS OF SOUTH AFRICA

are not capable of withstanding the least approach to rough handling.

The eggs measure nearly 3 by about 2.18 in., and are pale olive-green faintly streaked with purplish- and yellowish-brown.

C. G. Davies del.

Witherby & Co. imp.

STANLEY BUSTARD or VELDT PAAUW (*OTIS CAFRA*) Male.

OTIS CAFRA.

STANLEY BUSTARD OR VELDT PAAUW.

(PLATE 3.)

Otis cafra, Lichtenstein, Cat. Ver. Nat. Hamb., p. 36 (1793); Sharpe's ed. Layard Birds of S. Afr., p. 634 (1875-84); Nicolls & Eglington, Sportsman in S. Afr., p. 114 (1892); Reichenow, Vögel Afrikas, I, p. 244 (1900-01); Selater, Ann. S. Afr. Mus., III, p. 357 (1905); Selater & Stark, Birds of S. Afr., IV, p. 301 (1906).

Neotis cafra, Sharpe, Cat. Birds Brit. Mus., XXIII, p. 301 (1894); Woodward, Natal Birds, p. 176 (1899).

NATIVE NAME "i-SENE"

DESCRIPTION. Adult male, as in figure; length about 43 in.; weight, according to Ayres, 20 lb.

The female is a good deal smaller than the male; the centre of the crown is ashy-white, finely vermiculated with darker; the bluish-slate of the sides of the face, neck and breast of the male, is replaced by white, closely spotted and vermiculated with brown, in the female (Selater). Length about 34 in., weight (Ayres) 9 lb.

DISTRIBUTION. The Stanley Bustard extends over the greater part of South Africa as far north as the high veldt of the Transvaal. Beyond South African limits it has been killed in southern Angola, the central parts of German East Africa up to Victoria Nyanza and on the Ubangi, a northern tributary of the Congo.

I killed two, and saw many, on the big grassy flats near Mount Kenia in British East Africa.

I HAVE met with this fine bird some few times in the Orange River Colony, but it is by no means common and is nearly always very wild, the old cocks especially so.

In Pondoland it is found in the same localities as Ludwig's Paauw (*Otis ludwigi*), and, like that species, is usually a winter visitant, though a few stay all the year.

GAME-BIRDS OF SOUTH AFRICA

It is said that they can at times be approached by the well-known plan of riding round them, although my informant, Sergt. Davies, has had little luck in obtaining them either by this or any other method. A friend of his, who has shot a good many, states that the largest he shot was a cock weighing $17\frac{1}{2}$ lb. two days after being shot. A larger one killed near Lusikisiki, Pondoland, weighed 25 lb., and was very fat.

I believe these birds feed mostly at night or late in the evening and early in the morning; during the heat of the day they lie up in long grass. They feed on lizards, locusts, beetles, field-mice, and so forth.

Mr. Sclater states that they are rather silent birds, but sometimes make a low, melodious, humming noise in the morning and evening, while during the breeding-season the cock gives vent to a loud, far-resounding "boom," something like that of a Bittern; at this period also the cocks display themselves before the females, expanding their throats enormously and turning their feathers back; they then strut about and utter their booming noise.

Mr. Sclater further writes that Ayres found the eggs generally at the top of a hill and laid in a bare depression scratched out of the earth, though sometimes a wisp of grass was added.

The eggs are two in number and resemble those of *O. ludwigi*; those in the South African Museum are oval and pale brown, washed, rather than blotched, with a slightly darker shade of the same colour; they measure 2.90 by 2.10.

The birds I shot in South Africa were particularly good-eating, but the same species in British East Africa was coarse and tough, with a slight, but unpleasant, flavour.

C. G. Davies del.

Witherby & Co. imp.

BLUE KNORHAAN (*OTIS CÆRULESCENS*) Male.

OTIS COERULESCENS.

BLUE KNORHAAN.

(PLATE 4.)

Otis coerulescens, Vieillot, Enc. Meth., I, p. 334 (1820); Sharpe's ed. Layard Birds of S. Afr., p. 638 (1875-84); Nicolls & Eglington, Sportsman in S. Afr., p. 118 (1892); Reichenow, Vögel Afrikas, I, p. 251 (1900-01); Selater, Ann. S. Afr. Mus., III, p. 357 (1905); Selater & Stark, Birds of S. Afr., IV, p. 305 (1906).
Trachelotis coerulescens, Sharpe, Cat. Birds Brit. Mus., XXIII, p. 308 (1894); Woodward, Natal Birds, p. 177 (1899).

LOCAL NAMES. "Blaauw-Kop Knorhaan"—"Dik-Kop Knorhaan" (pronounced Koraan, i.e. scolding cock).

DESCRIPTION. The bird figured is an adult male; length about 23 in. The female is slightly smaller than the male, which she closely resembles, but has the ear-coverts, sides of the face and eyebrows pale rufous, and the crown is slightly spotted with sandy.

DISTRIBUTION. The Blue Knorhaan is found in Cape Colony, the upper part of Natal, the Orange River Colony, and the southern Transvaal.

BLUE Knorhaan as a rule are found in coveys of four or five on wide sandy plains, and do not seem to care for the heavier grass to which their near relatives the White-quilled Knorhaans (*O. afroides*) are so partial.

In April, 1905, I was lucky enough to obtain; in the market at Bloemfontein, a pair of the Blue Knorhaan.

Neither before nor since have I seen these birds for sale alive, nor have I seen any in captivity, so I conclude that it was an exceptionally lucky chance that brought this latter pair into my keeping. They were then perhaps six weeks

GAME-BIRDS OF SOUTH AFRICA

old, in very rough plumage, and about the size of Red-legged Partridges, only of course longer in the leg.

From the moment that I took them out of the little crate in which they had been brought to market, they proved themselves to be most extraordinarily tame, following my wife and me about the garden from the very first, with a loud querulous cry like that of a young kitten.

From the first they fed better from the hand than in any other way. Their appetite was delicate, and I am convinced that if they had not constantly been coaxed into accepting their food they would not have lived many months.

The blue colour on both of these birds was very pale at this time, and their legs were of a greyish colour; the female was slightly smaller than the male, and her face and eyebrows were distinctly browner than those of her mate. It was quite evident that they had been reared by some woman on a farm, and they had rather a fascinating trick of sitting down on the edge of a skirt whenever they got the chance. The hen was particularly fond of doing this, and always crooned a little song to herself when she was comfortably settled. They loved sharpening their beaks on one's boots, and visitors had always to be warned not to tread on them, as they were always at one's feet, investigating boot-laces.

We built a large run for them, with a nice house in the middle. This latter they inhabited at night, and it was no easy matter for the Kaffir to drive them in every evening. They defied him and mocked him in every way, spreading their wings and skipping about on their agile little legs until the distracted Kaffir—who was not allowed to touch them—had very often to call for assistance.

BLUE KNORHAAN

When they were let out of their run into the garden—which only occurred when there was someone by them to be on the look-out for strange dogs—a favourite trick of theirs was to make a dash for the nearest flat stone bordering the flower beds and to wait beside it, stamping impatiently until it was turned over, when there was a rush for any grubs, beetles or stone cockroaches that lay beneath it; then off to the next stone—over with that and down with a delectable little scorpion!

When the garden was still in the process of making, these two were a serious impediment to the gardener. They thought he was employed to turn over stones for their special benefit, and the unfortunate man could scarcely get his pick under a stone before their eager little beaks were under it too.

Mr. Sclater states that it is rather a scarce bird, but although I have never seen many at a time I fancy it is pretty widely distributed over the Orange River Colony. On the majority of mornings when out on shooting trips the first sound to reach my ears was the clear ringing cry of “Knock-me-down, Knock-me-down, -me-down-me-down!” that the cock bird gives vent to at dawn.

I have seen dead birds for sale at the game-market in Bloemfontein in some numbers. They have generally been killed with a bullet, and this hardly bears out Mr. Millais’s experience that the bird is tame and unsuspicious. Not that I would doubt Mr. Millais’s experience of them, but I found them—in the Orange River Colony at any rate—extremely wild and very well able to take care of themselves.

You may see them and try to stalk them, but at two hundred yards the slim, graceful, blue neck stiffens, the banded chestnut-and-white wings open, and with a mocking

GAME-BIRDS OF SOUTH AFRICA

shout of "Knock-me-down," he is off for ten miles or more.

In May, 1905, the cock of my pair started his wild call-note, to which he always treated us when first let out of his house in the morning. He was an excellent indicator of early or late rising on the part of the Kaffirs, whose first duty it was to let the Knorhaan out into their run.

In December of the same year both my birds had got their plumage in the most beautiful order and were masters of the companions we had added to their run, i.e. some Stanley Cranes and Spur-winged and Egyptian Geese, while a Buff-backed Heron that was flying at *hack* around the garden was always a great source of distraction to them, their object being to keep him on the wing. Like most bullies they were cowards at heart, and a hen with chickens sent them shouting off in very quick time.

It was always an amusement to us to drive them across the garden to the pigeon-house and then to drive the pigeons out of it and straight at them. This invariably caused consternation mingled with horror. The little pair would stand rooted to the ground with wide-open beaks and outspread wings—the hen would utter a loud squawk, the cock would hoarsely shout his "Knock-me-down,"—and then they would turn tail and run, with that mincing, pattering, and amazingly swift gait of theirs.

In January, 1906, when the birds were just under a year old, I observed that their legs were changing to a yellowish colour, and I have no doubt that these birds take at least two years to become fully adult.

In February I regret to say that the hen bird was murdered in the garden by a neighbour's dog. We rescued her just alive, poor thing, and sewed up the dreadful wound

BLUE KNORHAAN

in her breast, but a few hours later she crept on to the edge of my wife's dress and contentedly sat down and died.

I kept the male bird some eight months longer, but when I went on leave to England I left him in the Pretoria "Zoo," where he had for company a Barrow's Knorhaan (*O. barrovii*). Just before I returned he got badly mauled by a Common Heron that shared his big aviary, and I regret to say he lived but a little time after I got him back.

I fed my birds on lean, cooked, chopped meat, lettuce, bread and milk, Quaker oats soaked in water, on locusts when they were about, on chopped lizards (the tails were found most acceptable); and once, when I was drowning some mice in the Knorhaan run, the cock bird ate three little ones in quick succession and seemed to appreciate them very much. In a wild state I am certain that these birds eat practically no grain at all, but live on locusts, grasshoppers, etc., and any odd insects they come across.

I am told Blue Knorhaan are good-eating, but having had the tame birds I could never reconcile myself to the idea of tasting the wild ones.

Eggs have been found by my friend Major Sparrow both in December and in August in the Orange River Colony. In each case there were two, pale brown in colour, with a greenish tinge and darker streaks on them. They measured about 2.4 by 1.6 in.

OTIS BARROVII.
BARROW'S KNORHAAN.

(PLATE 5.)

Otis barrovii, J. E. Gray in Griffiths An. Kingd. Birds, III, p. 304 (1829); Reichenow, Vögel Afrikas, I, p. 250 (1900-01); Selater, Ann. S. Afr. Mus., III, p. 356 (1905); Selater & Stark, Birds of S. Afr., IV, p. 307 (1906).

Otis senegalensis, Sharpe's ed. Layard Birds of S. Afr., p. 639 (1875-84); Nicolls & Eglington, Sportsman in S. Afr., p. 119 (1892).

Trachelotis barrovii, Sharpe, Cat. Birds Brit. Mus., XXIII, p. 311 (1894).
NATIVE NAME. "i-Nkakalo" (Z)

DESCRIPTION. The birds figured are an adult male and female; length about 21 in.

DISTRIBUTION. I have met with this Bustard near Potchefstroom, Transvaal, and am inclined to think it is commoner than is generally supposed; it is quite common in upper Natal.

To the casual observer and sportsman Barrow's Knorhaan and *Otis caerulescens* are generally classed together as "Blue Knorhaan" and doubtless many are thus overlooked. Once, near Potchefstroom, I stopped a Boer who was shooting game for the Johannesburg market and looked through the birds on his waggon. He had eleven of this species and told me he got a good many every week and that they were always sold as Blue Knorhaan.

Those I shot acted and called in a manner exactly like the Blue Knorhaan.

Apparently this species is as easy to tame as the Blue Knorhaan, as I saw a delightfully friendly old male in the Pretoria Zoological Gardens some years ago.

C. G. Davies del.

BARROW'S KNORHAAN (*OTIS BARROVI*) Male and Female.

Witherby & Co. imp.

GAME-BIRDS OF SOUTH AFRICA

They feed chiefly on insects, such as beetles, locusts and white ants (termites).

I have not found them as wild as Blue Knorhaan, except when feeding on burnt "lands" or very short grass, and then all Knorhaan are wild. Butler states that he found these birds wild and difficult to approach, and that when flushed they uttered a note like "Kuk-pa-wow," repeating the cry several times as they flew away.

Ayres states that this species lays two eggs, hidden in the grass in open country, and that they vary considerably in colour and markings.

OTIS VIGORSI.
VAAL KNORHAAN.

(PLATE 6.)

Otis vigorsii, Smith, Proc. Zool. Soc., 1830, p. 11 ; Reichenow, Vögel Afrikas, I, p. 248 (1900-01) ; Selater, Ann. S. Afr. Mus., III, p. 357 (1905) ; Selater & Stark, Birds of S. Afr., IV, p. 296 (1906).

Otis scolopacea, Sharpe's ed. Layard Birds of S. Afr., p. 637 (1875-84) ; Nicolls & Eglington, Sportsman in S. Afr., p. 117 (1892).

Heterotetrax vigorsi, Sharpe, Cat. Birds Brit. Mus., XXIII, p. 296 (1894) ; Woodward, Natal Birds, p. 175 (1899).

LOCAL NAME. "Dik-Kop Knorhaan" of the Dutch, also applied to the Blue and Barrow's Knorhaan.

DESCRIPTION. The bird figured is a male. Although I consider the plate a very good one, I think it is almost impossible to convey in a picture any idea of the beautiful pink bloom that colours this bird in life. Unfortunately in the dried skins the colour quickly fades. Length about 24 in.

DISTRIBUTION. The Vaal Knorhaan is found in open, rolling grass veldt in the Cape Colony, in upper Natal, in the Orange River Colony, and in certain parts of the Transvaal.

I have killed it near Bloemfontein and also near Potchefstroom. According to Mr. Bryden, it extends into Bechuanaland.

VAAL Knorhaan are, I think, the noisiest of a very noisy family. It is impossible to stay in a district inhabited by them, and fail to be aware of their presence: the tremendous "Crack-crack, crack-crack-kahow" added to other startling nasal noises, soon call the attention of the sportsman to them. I have usually found Vaal Knorhaan in coveys up to five or six in number. They seem to prefer the drier,

C. G. Davies del.

Witherby & Co. imp.

VAAL KNORHAAN (*OTIS VIGORSI*) Male.

VAAL KNORHAAN

stonier ridges of rolling country, and are not so fond of old lands and flat grassy plains as their near relatives the White-quilled Knorhaans (*O. afroides*). They are not at all difficult birds to shoot, and will often allow a fairly close approach as long as the would-be shooter does not walk straight at them; they are much more prone to squat than other Bustards as long as a direct approach is avoided.

Once on the wing they fly powerfully and fast, and generally utter their resounding cry as they get up. Like other small Bustards this species feeds on insects, lizards, locusts and occasionally a little green vegetable matter.

Two birds reached the London Zoological Gardens this year (1911), but I did not think they did very well, owing to want of space. All South African Bustards in the wild state take an immense amount of exercise, and the enclosure in which they are kept in captivity can hardly be too large. They also must have some place where they can avoid rain and damp, and if they are forced to sleep on damp and exposed ground their lives will be of short duration. They are worth while taking a good deal of trouble over, as they are most interesting and beautiful, and their habits in captivity have been very little studied.

According to Mr. Selater the eggs are nearly oval in shape, and the ground-colour varies from pale brown to olive-brown, blotched somewhat sparingly with dark brown of several shades. They measure 2.60 by 1.75 in.

OTIS MELANOGASTER.
BLACK-BELLIED KNORHAAN.

(PLATE 7.)

Otis melanogaster, Rüppell, Mus. Senckenb., II, p. 240 (1837); Sharpe's ed. Layard Birds of S. Afr., pp. 641, 854 (1875-84); Nicolls and Eglington, Sportsman in S. Afr., p. 115 (1892); Reichenow, Vögel Afrikas, I, p. 256 (1900-01); Selater, Ann. S. Afr., Mus. III, p. 357 (1905); Selater & Stark, Birds of S. Afr., IV, p. 303 (1906).

Lissotis melanogaster, Sharpe, Cat. Birds Brit. Mus., XXIII, p. 806 (1894); Woodward, Natal Birds, p. 117 (1899).

NATIVE NAME. U-Notunjwa (2).

DESCRIPTION. Adult male and female as in figure. Length about 20 in.

DISTRIBUTION. This bird is widely distributed over the greater part of Africa, from Gambia in the west and Abyssinia and the White Nile in the east, southwards through German East Africa and Nyasaland to the Zambesi.

In South Africa it has been once recorded from Cape Colony, and is not uncommon in Natal, Zululand, and Mashonaland, but does not apparently extend to the high plateau of the Orange River Colony and the Transvaal.

I have not myself seen the Black-bellied Knorhaan in South Africa, but in East Africa it is by no means rare.

I HAVE always found these birds singularly stupid and easy to kill, even in the most open country, so long as you do not walk straight at them. I have never seen more than a pair together. In East Africa they frequent open downs and flats as well as country that is dotted with mimosa thorns, and are quite the most delicious of all the game-birds found there.

Sergt. C. G. Davies writes me: "This is the only Knorhaan found in Pondoland, where it was not uncommon some years ago, but it is rapidly decreasing in numbers,

BLACK-BELLIED KNORHAAN

owing to being continually persecuted both by natives and by whites, and to its own stupidity.

“I have always found it a remarkably stupid bird, and have known one to stand calmly looking at me within 20 yards while I hunted wildly through my pockets and haversack for a suitable cartridge.

“Its favourite method of escape is to lie motionless in the long grass with outstretched neck ; it is then very difficult to see, and it will let you pass quite close without moving. It rises slowly, and being a soft feathered bird, is easily killed.

“It feeds on locusts, beetles, berries, etc., and in winter gets extraordinarily fat.”

Sergt. Davies writes me further to say: “I would draw your attention to the long legs and proportionately long neck in this species, which at once distinguish it from all other South African Bustards. I have not seen this pointed out in any book. This is so noticeable in the live birds that they have often appeared to me to resemble tiny Ostriches.

“Mr. Grant, in the *Ibis*, 1902, in describing *Otis lovati*, figures the wings of both this species and *Otis lovati*, and also both sexes of the latter. I should like to remark that *all* the *adult* males of *Otis melanogaster* I have seen have much more white on the wings than in Mr. Grant's figure, and, if the plate of *Otis lovati* is correctly drawn, that species differs from *Otis melanogaster* in shape, being much shorter on the leg and with a shorter neck.”

An egg found by the Woodward's in Natal was laid on the bare ground. It was cream-coloured, smeared and blotched with dark brown.

OTIS RUFICRISTA.

RED-CRESTED KNORHAAN.

(PLATE 8.)

Otis ruficrista, Smith, Zool. S. Afr., III, pp. 639, 854 (1875-84) ; Nicolls and Eglington, Sportsman in S. Afr., p. 118 (1892) ; Reichenow, Vögel Afrikas, I, p. 252 (1900-01) ; Sclater, Ann. S. Afr. Mus., III, p. 357 (1905) ; Sclater & Stark, Birds of S. Afr., IV, p. 290 (1906).

Lophotis ruficrista, Sharpe, Cat. Birds Brit. Mus., XXIII, p. 291 (1894).

LOCAL NAME.. "Bush Knorhaan" in Bechuanaland.

NATIVE NAME. *Khoara-Khoara* (Ch.)

DESCRIPTION. The birds figured are an adult male and female. This species measures about 20 in.

In life the bases of this bird's body-feathers are suffused with a soft pinkish tinge, but this fades very quickly after death.

DISTRIBUTION. It extends from Bechuanaland northwards through the Transvaal to Benguela in the west, and to Rhodesia in the east.

MOST Bustards are dwellers in the open veldt, but the Bush Knorhaan is usually found in bush country ; it is partial to little, open glades where it can feed, but it also likes cover into which to run if alarmed.

It flies in very similar fashion to our English Woodcock (*Scolopax rusticola*), dodging and diving through the trees at tremendous speed, and giving a most sporting shot. Like most Knorhaan it is a soft bird, and falls to a blow at which a Guinea-fowl would scarcely falter.

Mr. Sclater says that its note is a melancholy "Goo-goo," but I have never heard it utter any sound. It is chiefly an insect-eater.

RED-CRESTED KNORHAAN

Mr. Millais, in his fine work, "A Breath from the Veldt," gives a beautiful representation of a singular habit he noticed in relation to this bird: Every evening towards sunset it rises from the earth, and mounting perpendicularly into the air to a height of from 100 to 200 feet it closes its wings and drops head first to the earth, only opening its wings to break its fall when within a few feet of the ground. I am not sure whether this display is sexual or not, but it is most probably a warning or a challenge to other males in the neighbourhood.

Mr. Selater says that two eggs of this bird found by Ayres in November near Buluwayo were shaped like those of a Plover, being much pointed at one end. They were coloured greyish creamy-white, much spotted and blotched with dark umber. They measured 2.25 by 1.5 in. and 2.0 by 1.5 in. respectively, but I do not think they were normally shaped, as Bustards' eggs are seldom so pointed.

OTIS AFRA.

BLACK KNORHAAN.

(PLATE 9.)

Otis afra, Gmelin, Syst. Nat., I, p. 724 (1788); Sharpe's ed. Layard Birds of S. Afr., p. 641 (1875-84); Nicolls & Eglington, Sportsman in S. Afr., p. 115 (1892); Reichenow, Vögel Afrikas, I, p. 256 (1900-01); Selater, Ann. S. Afr. Mus., III, p. 357 (1905); Selater and Stark, Birds of S. Afr., IV, p. 292 (1906).

Compsotis afra, Sharpe, Cat. Birds Brit. Mus., XXIII, p. 293 (1894).

LOCAL NAMES. "Knorhaan" of the Colonists; "Ikala Kalu" of the Amaxosa (Stanford).

DESCRIPTION. The bird figured is an adult male. The female is exactly like the female figured in the plate of *Otis afroides*, but without the white patch on the primaries. Length about 21 in.

DISTRIBUTION. The Black Knorhaan is only found in the Cape Colony south of the Orange River. To the north of the Orange River it is replaced by its very near relative the White-quilled Knorhaan (*Otis afroides*). It does not extend further eastwards than the division of Albany.

IN its general habits this bird much resembles the White-quilled Knorhaan.

I have not shot much down country and consequently do not know this Knorhaan well. The cock birds when flushed get up with a great fluster and a startling harsh cry, exactly like that of the White-quilled. They then usually fly round in large circles and pitch, and if the grass is long they can be walked-up with the aid of a dog, but they rarely rise in the same place in which they pitched, as they nearly always run after settling; on bare ground they may sometimes

C. G. Davies del.

Witherby & Co. imp.

BLACK KNORHAAN (*OTIS AFRA*) Male.

BLACK KNORHAAN

be seen skulking along at great speed with their heads carried low and taking advantage of every atom of cover. Hen birds are often difficult to flush and as a rule lie closely. On rising they only give a croak, but I consider they should be spared as much as possible, and, as the sexes are so different in colour, it is quite an easy matter to distinguish between them. Some Knorhaan I examined had their crops filled with tiny grasshoppers, and others with young locusts in the "voetganger" stage. Their food consists sometimes of young succulent leaves, such as clover and trefoils, and soft grasses with the addition of any insects they can collect, such as white ants (termites), beetles, etc.; but although they are often shot in mealie and other grain fields, I have never heard of grain being found inside them, and I feel sure they are birds of great benefit to the farmer.

The cock birds are very fond of getting up on to the tops of the small ant-heaps with which the veldt abounds, and they like to use these both as watch-towers and as places on which to sun themselves.

Knorhaan are sometimes very good-eating, but as a rule are rather tough and strong in flavour. They require to be well hung and very carefully cooked. The meat is dark and apt to be dry, but it makes a good addition to game-stew. They should always be skinned before cooking.

Eggs sent to me from Cape Colony were indistinguishable from those of *O. afroides*.

OTIS AFROIDES.

WHITE-QUILLED KNORHAAN.

(PLATE 10.)

Otis afroides, Smith, Zool. S. Afr., III, p. 19 (1839); Sharpe's ed. Layard Birds of S. Afr., p. 642 (1875-84); Nicolls & Eglington, Sportsman in S. Afr., p. 117 (1892); Reichenow, Vögel Afrikas, I, p. 254 (1900-01); Selater, Ann. S. Afr. Mus., III, p. 357 (1905); Selater & Stark, Birds of S. Afr., IV, p. 294 (1906).

Comptosia leucoptera, Sharpe, Cat. Birds Brit. Mus., xxiii, p. 294 (1894).
NATIVE NAME. TATLAOE (CH); see (or le) TATAOE (S.)

DESCRIPTION. The figures represent an adult male and female; length about 21 in.

DISTRIBUTION. The White-quilled Knorhaan is the best known Knorhaan of the Transvaal, Bechuanaland, the Orange River Colony as far west as Damaraland and the northern part of the Karroo. In the Cape Colony its place is taken by the Black Knorhaan (*Otis afra*).

THIS is the common Knorhaan of the Orange River Colony and the Transvaal, and from its conspicuous coloration and noisy habits is one of the best known.

They are spoken of everywhere in the Transvaal and Orange River Colony as “Knorhaan,” and when other species are meant the prefix “Blue” or “Vaal” or “Bush” is supplied.

Knorhaan like, as a rule, wide, grassy flats, with grass sufficiently long to hide themselves in when their heads are lowered, but I have shot them among scattered thorn-bush at the edge of streams and rivers as well as along the bush patches of the Kalahari.

I agree with Mr. H. A. Bryden in thinking that the

C. G. Davies del.

WHITE-QUILLED KNORHAAN. (*OTIS AFROIDES*) Male and Female.

Witherby & Co. imp.

WHITE-QUILLED KNORHAAN

African Veldt would be a dull place indeed if the noisy Knorhaan was non-existent, and I look upon this as one of the most interesting birds to be found there.

A good pointer, or better still two, are absolutely essential to making a bag of Knorhaan. It requires a dog that thoroughly knows his business too, as I have often known Knorhaan to run half a mile or more before they rose. When a hen bird rises she sometimes gives a low croak, but when a cock bird gets up he makes the most extraordinary din, a terrific shout of "Crra-a-ak-de Wet-de Wet-de Wet-de Wet" and so on.

I shall not forget the remark of a certain yeoman during the South African War, when we were trying to catch General De Wet by the usual night march. The yeoman's horse almost trod on a sleeping cock Knorhaan which fairly made the echoes ring with his uproar, and the rider said bitterly, "How can we catch these fellows when the very birds keep shouting out their names all night?"

I cannot help thinking that the unfortunate Knorhaan is badly treated. They breed slowly, laying but two eggs, and have many enemies, not to mention veldt fires, storms, etc. Furthermore the Knorhaan is an exceedingly easy bird to shoot and falls to a blow that a Spur-winged Goose or other tough bird would not flinch at, so that I trust a little mercy will be extended and only cocks killed.

They respond very quickly, however, to a little good treatment. I frequently shot on two huge farms which adjoined each other and we made a rule that hens were never killed. The difference at the end of two seasons between these and other farms in the same district was most marked. Of course what ruins all shooting in South Africa is the fact that game-birds are allowed to be sold for the market.

GAME-BIRDS OF SOUTH AFRICA

African birds are not preserved in any way, and the constant drain by the market-hunter tends to extermination. The following list may give some idea of the quantity of game which finds its way into the markets of South Africa: In Kimberley market alone in the 1904 season, 12,975 head of game was disposed of, realizing £2,752; in the 1905 season 29,119 head of game realized £4,667, whilst in the 1906 season 40,933 head realized £4,829.

Some interesting details of the different kinds of game which are included in the 40,933 head sold in 1906 are given, these were:—

Springbuck, 4025; Duiker, 174; Steinbok, 1415; Hares, 5131; Knorhaan, 3565; Redwing (Francolin), 2957; Guinea-fowl, 818; Paauw (probably *O. ludwigi* and *O. kori*), 59; Wild-duck, 130; Geese, 33; small birds, 22,626.

The item "small birds" would probably include the Coqui Francolin, as well as two species of Sand-grouse, which are, of course, extremely abundant in that neighbourhood.

On land that has been burnt Knorhaan are always very wild, and generally get upon an ant-heap to keep a good look-out. They then give very good sport with a small-bore rifle, the white marks on the wings of the cock-birds making a clear target against the black background.

I have frequently found the eggs, but invariably by accident. The hen-bird slips off long before you reach the nest and hides in the long grass.

The nest is merely a slight hollow in the ground, always in grass, and the two eggs are greenish-brown blotched with darker brown spots. They measure 2.05 by 1.65 in.

C. G. Davies del.

DIKKOP (*EDICNEMUS CAPENSIS*) Male.

Witherby & Co. imp

OEDICNEMUS CAPENSIS.

DIKKOP OR CAPE THICKNEE.

(PLATE 11.)

Oedicnemus capensis, Lichtenstein, Verz. Doubl., p. 69 (1823); Sharpe's ed. Layard Birds of S. Afr., p. 645 (1875-84); Nicolls & Eglington, Sportsman in S. Afr., p. 120 (1892); Sharpe, Cat. Birds Brit. Mus., xxiv, p. 15 (1896); Woodward, Natal Birds, p. 179 (1899); Reichenow, Vögel Afrikas, I, p. 198 (1900-01); Selater, Ann. S. Afr. Mus., III, p. 358 (1905); Selater & Stark, Birds of S. Afr., IV, p. 315 (1906).

LOCAL NAMES. "Dikkop" or "Thicknee" of colonists; "Inquanqolo" of the Amaxosa (Stanford); "Khoho-a-dira," i.e. "Fowl of the enemy," of the Basutos (Murray).

NATIVE NAME. TAPIANE, KHOKHO-BA-LIRA (S).

DESCRIPTION. The bird figured is a male. The sexes are alike. Length about $18\frac{1}{2}$ in.

DISTRIBUTION. This species is distributed all over South Africa from Cape Town to the Zambesi. It also ranges beyond our limits to Angola on the west and through Nyasaland and East Africa.

THE Dikkop is sometimes found on open stony country, but I have usually met with it among the scattered acacia bushes which fringe the course of most South African rivers, and afford excellent cover for many species of birds, both large and small. Like its near relative the English Thicknee (*Oe. crepitans*), it is thoroughly nocturnal, and the curious triple squawking note may often be heard as the bird flies about in the dark, high overhead.

As a rule it squats on the approach of danger, but it can run at great speed and has a powerful flight. Its dark flesh is exceedingly good-eating and is not so dry as that

GAME-BIRDS OF SOUTH AFRICA

of most African game-birds. I have heard it said that the Dikkop is a foul feeder, and certainly it is sometimes found in fair numbers near the village rubbish-heaps, but I believe it is attracted there by the flies and beetles, etc.

The Dikkop utters a curious shrill trilling note—sounding like “Tree-tree-tree” rapidly repeated. A tame bird in the Zoological Gardens at Pretoria would always start calling when whistled to, and would at the same time fan out its tail, slightly droop its wings, and work itself into a perfect frenzy of excitement.

The bird lays two eggs in a slight hollow. They are pale stony-grey, blotched and splashed with deep brown and black. They measure about 2.2 by 1.6 in.

The young are very pretty little things of an ash-grey colour with longitudinal black stripes, and as soon as they are hatched they follow the old bird.

C. G. Davies del.

WATER DIKKOP (*ÆDICNEMUS VERMICULATUS*) Female.

Witherby & Co. imp.

OEDICNEMUS VERMICULATUS.

WATER DIKKOP.

(PLATE 12.)

Oedicnemus vermiculatus, Cabanis, Journ. für Ornithol., 1868, p. 413 ; Sharpe, Cat. Birds Brit. Mus., xxiv, p. 11 (1896) ; Woodward, Natal Birds, p. 179 (1899) ; Reichenow, Vögel Afrikas, I, p. 200 (1900-01) ; Sclater, Ann. S. Afr. Mus., III, p. 358 (1905) ; Sclater & Stark, Birds of S. Afr., IV, p. 318 (1906).

Oedicnemus senegalensis, Sharpe's ed. Layard Birds of S. Afr., p. 646 (1875-84).

DESCRIPTION. The bird figured is a male. The female is somewhat duller in plumage, but otherwise resembles the male. Length 15 in.

DISTRIBUTION. This bird is found all over South and East Africa, as far north as Loango on the west, Victoria Nyanza in the centre and Mombasa on the east. Though widely distributed in South Africa, it appears to be always a rare bird, and is not found on the high veldt, or far away from large rivers or the sea.

I HAVE not met with this bird, and it is said by Sclater to be nowhere very common and is nearly always found in pairs or in small parties about the mouths or along the banks of rivers, where it finds its food, which consists of small insects and crustacea. Ayres noticed that it was only found about Durban Harbour in winter (June and July), and Mr. Shortridge states that he has only seen it on the St. Johns River, some distance from the mouth, in April, and that it is probably partially migratory. Like the Cape Thicknee, it is thoroughly nocturnal, but it can and does see perfectly well at any time of the day and in the brightest sunlight.

An interesting account of the nest of this bird is

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given in the *Journal* of the East Africa and Uganda Natural History Society, No. 2 (1911), by Mr. R. Van Someren, who found it breeding within a few feet of the water of a lake, the nest being a small hollow in the sand with practically no lining to it.

Two eggs of this species in the South African Museum were obtained by Mr. Eriksson on the Cunene River; they were laid on the bare ground within a couple of feet of the water. They are somewhat smooth and shiny, with a very pale sandy-brown ground colour, heavily blotched and spotted with a very much darker shade of brown. They are slightly pointed at one end and measure 1.90 by 1.35 in.

C. G. Davies del.

GREAT SNIPE (*GALLINAGO MEDIA*) Male.

Witherby & Co. imp.

GALLINAGO MEDIA.
GREAT SNIPE.

(PLATE 13.)

Scolopax major, Gmelin, Syst. Nat., I, p. 661 (1788).

Gallinago major, Sharpe's ed. Layard Birds of S. Afr., p. 678 (1875-84); Nicolls & Eglington, Sportsman in S. Afr., p. 130 (1892); Sharpe, Cat. Birds Brit. Mus., XXIV, p. 626 (1896); Woodward, Natal Birds, p. 188 (1899).

Gallinago media, Reichenow, Vögel Afrikas, I, p. 235 (1900-01); Selater, Ann. S. Afr. Mus., III, p. 361 (1905); Selater & Stark, Birds of S. Afr., IV, p. 414 (1906).

Double or Solitary Snipe of some authors.

DESCRIPTION. The bird figured is a male. The sexes are alike. Young birds are more rufous than the adults. Length about 11 in. Weight 8 oz. (Ayres).

DISTRIBUTION. Mr. Selater writes that the Great Snipe nests in eastern and north-eastern Europe and northern Asia from Germany to the Yenesei, while it is only a casual visitor to the British Islands, and that it passes over south Europe and winters in Africa, where, however, it seems to be confined to the eastern and southern portions of the continent, and has not hitherto been met with in the western tropical districts.

I HAVE seen the Great Snipe during nearly every month of the year near Potchefstroom, Transvaal, but have rarely seen more than one or two birds during a day's walk.

They are found on marshes and vleis in exactly the same localities as the Ethiopian Snipe, but they rise in quite a different manner. When the Ethiopian Snipe is flushed it gives vent to the well-known "scape" of the English bird, but the Great Snipe gets up with a rush, attaining a

GAME-BIRDS OF SOUTH AFRICA

terrific speed almost at once, and goes off in silence. Sometimes they will give a quick twist or two on rising, more often they go off as straight as a quail, but they fly so fast that they are by no means easy to shoot, though a very slight wound suffices to bring one down.

They feed chiefly on worms, and doubtless will eat such beetles and other insects as they may happen to come across.

It is not necessary to describe their eggs, as they are never likely to be found in South Africa.

They are delicious birds to eat.

C. G. Davies del.

ETHIOPIAN SNIPE (*GALLINAGO NIGRIPENNIS*) Male.

Witherby & Co. imp.

GALLINAGO NIGRIPENNIS.
ETHIOPIAN SNIPE.

(PLATE 14.)

Gallinago nigripennis, Bonaparte, Icon. Faun. Ital., Ucc. Pl., 43, p. 41 (1832); Sharpe's ed. Layard Birds of S. Afr., p. 676 (1875-84); Nicolls & Eglington, Sportsman in S. Afr., p. 130 (1892); Sharpe, Cat. Birds Brit. Mus., xxiv, p. 631 (1896); Woodward, Natal Birds, p. 188 (1899); Reichenow, Vögel Afrikas, I, p. 236 (1900-01); Selater, Ann. S. Afr. Mus., III, p. 361 (1905); Selater & Stark, Birds of S. Afr., IV, p. 416 (1906).

LOCAL NAMES. "Black-quilled Snipe" of some authors; "Spookvogel" of the Dutch; "Kue-Kue Lemao" of the Basutos (Murray).

NATIVE NAMES.
DESCRIPTION. The bird figured is a male. The female resembles the male. Length about 11 in.

This bird is frequently confused with the Great Snipe, but it can be easily recognised, as it has the outer tail-feathers white, with obsolete spots or bars on them, while the three outer tail-feathers of *G. media* are pure white without spots.

DISTRIBUTION. The Ethiopian Snipe is confined to Africa and extends from Abyssinia through East and Central Africa and Nyasaland to the Cape Colony; it has apparently not been met with in West Africa except in Angola.

THIS is the common Snipe of South Africa and is by no means rare in suitable localities. Furthermore, once a marsh tenanted by Snipe is found, it is nearly always inhabited, for, as soon as the original tenants are killed, fresh birds make their appearance and fill up the vacant quarters. This bird is resident in South Africa, but like the ducks and other water-fowl it is a partial migrant if its haunts become affected by drought, and heavy rains will bring it to places where it was unknown before.

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Ethiopian Snipe are much easier to shoot than English Snipe, and they very often rise and fly off with a heavy flapping flight like a Coot or Water-hen.

In one small marsh near Potchefstroom, not far from my house, I frequently killed two couple—never more—although I made a careful search through the marsh with a keen spaniel. I made a practice of returning the following week and invariably found that four more birds had come in.

During the breeding season these birds “drum” just as the English Snipe do, and may be seen weaving about high in the air, and every now and then rushing downwards, which act is accompanied by the curious vibrating drumming sound. This sound has been cleverly proved by Mr. P. H. Bahr to be produced by the vibration of the web of the outer tail-feathers as they are rapidly drawn through the air. The proof lay in fixing the two outer tail-feathers of a Snipe in a large cork and whirling the cork round at the end of a long string; this action resulted in a sound which exactly resembled the “drumming” of a breeding Snipe.

Ayres found this bird breeding in the swamps near Potchefstroom in August, and on one occasion as late as April.

The nests were placed and formed in a tussock of grass, the centre of which the bird trod well down, while the outer blades formed a shelter from the sun and cold winds.

The eggs are of an olive-buff colour, spotted and blotched, chiefly at the obtuse end, with two or three shades of dark-brown; they have a fair amount of gloss and measure about 1.75 by 1.25 in.

These Snipe are very good-eating and taste exactly like the European bird.

C. G. Davies del.

PAINTED SNIPE (*ROSTRATULA CAPENSIS*) Male and Female.

Witherby & Co. imp.

ROSTRATULA CAPENSIS.

PAINTED SNIPE.

(PLATE 15.)

Scolopax capensis, Linnæus, Syst. Nat. I, p. 246 (1766).

Rhynchaea capensis, Sharpe's ed. Layard-Birds of S. Afr., pp. 679, 855 (1875-84); Nicolls & Eglington, Sportsman in S. Afr., p. 130 (1892).

Rostratula capensis, Sharpe, Cat. Birds Brit. Mus., p. 683 (1896); Woodward, Natal Birds, p. 189 (1899); Sclater, Ann. S. Afr. Mus., III, p. 361 (1905); Sclater & Stark, Birds of S. Afr., IV, p. 418 (1906).

Rostratula bengalensis, Reichenow, Vögel Afrikas, I, p. 237 (1900-1).

LOCAL NAME. "Golden Snipe" of some authors (Sclater).

DESCRIPTION. The Plate represents an adult pair—the female being the bird on the left with the chestnut breast. Length about $9\frac{1}{2}$ in.

DISTRIBUTION. The Painted Snipe is found all over Africa, south of the Sahara, including Madagascar. It is also found in Egypt, southern Asia including India, as well as in China, Japan, the Philippines, Borneo, and Java, and is apparently a resident throughout its range.

I HAVE shot this lovely little bird near Bloemfontein in the Orange River Colony, and also near Potchefstroom, Transvaal. It is a most unsporting little bird and flies very slowly in a straight line, without any of the quick twists of the true Snipe. They always remind me more of Rails than Snipe.

They are nowhere very common, but if a brace or so be shot on any particular marsh their places are generally filled by others within a week or so.

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Sergt. C. G. Davies, writing from East Griqualand in February, 1910, said that the range of this bird seems to be spreading. He stated that when he was stationed in Griqualand ten years previously he never saw or heard of one, but that now the birds were fairly common and that he had shot twelve of them during that year without special search for them.

They apparently breed in Griqualand, as he shot four in February out of a small patch of marsh; two were adults, male and female, and the latter contained eggs almost ready for laying. The other two were a young male and female; probably the young of the above adults hatched in the spring, which looks as if they reared two broods in the year.

Sergt. Davies writes me that a wounded bird tried to frighten him by spreading its wings and tail to their fullest extent, jumping at his hand every time he put it near, at the same time making a kind of hissing noise; but it did not attempt to peck or scratch.

It is generally believed that the male undertakes the duty of incubation in the same manner as the male of the various species of *Turnix* does. I can find no definite statement about this however, as far as South African birds are concerned.

Mr. Sclater states that the most interesting thing about the Painted Snipe is the relation of the sexes, which appears to be reversed from what ordinarily holds good among birds, the adult female being generally larger and more brilliantly coloured than the male, while the young female resembles him.

He also states that the female has a croaking, guttural note, while that of the male is more shrill, this being due

PAINTED SNIPE

to the construction of the trachea or windpipe, which in the female is convoluted and modified, while in the male it is straight and simple.

Layard found this bird breeding in marshy ground close to Cape Town, and describes the eggs as being like those of the Ethiopian Snipe, but with yellower ground and with more defined, darker markings, all of one shade.

Anderson found it breeding near Ondonga, in Damara-land; he states that it makes no nest, but that the eggs are laid near water. Oates gives the measurements as 1.5 to 1.29 $\times$ 1.05 to 0.89 in.

FRANCOLINUS COQUI.

SHWIMPI OR COQUI FRANCOLIN.

(PLATE 16.)

Perdix coqui, Smith, Rep. Exped. Centr. Afr., p. 55 (1836).

Francolinus subtorquatus, Sharpe's ed. Layard, Birds of S. Afr., p. 600 (1875-84); Nicolls & Eglington, Sportsman in S. Afr., p. 103 (1892).

Francolinus coqui, Ogilvie-Grant, Cat. Birds Brit. Mus., xxii, p. 143 (1893); *id.*, Game-Birds, i, p. 111 (1895); Woodward, Natal Birds, p. 160 (1899); Reichenow, Vögel Afrikas, i, p. 492 (1900-1); Selater, Ann. S. Afr. Mus., iii, p. 354 (1905); Selater & Stark, Birds of S. Afr., iv, p. 197 (1906).

LOCAL NAME. "Iswempe" of the Zulus.

DESCRIPTION. The birds figured are an adult male and female. Length about 11 in.

DISTRIBUTION. The Coqui Francolin is found all over Rhodesia, the Transvaal, Bechuanaland and Natal. Its range extends as far up the coast as Damaraland on the west and nearly to the Equator on the east.

I HAVE shot many of these small Francolins in the Transvaal and consider them most sporting little birds. They are hardly ever found far from bush, and like to haunt fringes of mimosa along the flanks of the hills. I have occasionally been able to get them driven to the gun, when they come at a rare pace and require quick and accurate shooting as they dodge through the tops of the trees.

They have the curious habit of going to ground when hard pressed. One day during the South African War I

C. G. Davies del.

COQUI FRANCOLIN or SHWIMPI (*FRANCOLINUS COQUI*) Male and Female.

W. & A. G. P.
Whitely & Co. imp

SHWIMPI OR COQUI FRANCOLIN

was riding with the front line of the advanced guard near Zeerust when a covey of Shwimpi were flushed three or four times. The last time, I saw them run along in front of the horses and three went down a meer-cat hole, out of which I promptly pulled them, and our mess of six officers had half a bird each on biscuit for dinner. This incident I remember well, as an extra guest turned up for the meal, and my Irish batman thrust his head into my tent and demanded: "Will I divide them three partridges into sivin halves?"—which was rather a defeating question.

They are excellent-eating.

Mr. E. C. Chubb, writing in the "Ibis" (1909, p. 142), says that it is fairly common throughout the year at Buluwayo, South Rhodesia, and that it breeds there. He further states that it begins to pair at the end of October and lays from four to eight eggs in a slight hollow in the grass.

The cry is a loud and penetrating call of "Kwee-kit," and for a long time I thought it was the note of some small bird, until I saw a Shwimpi calling quite close to me, as I sat under a tree waiting for a shot at a Steinbuck.

This Francolin does well in captivity and soon becomes tame and friendly.

It is very common near Zeerust, in the Magaliesberg Mountains, and fairly common round Potchefstroom wherever there are sufficient thorn trees.

The eggs are pale greenish-white, and measure about 1.5 by 1.3 in.

Mr. Millar writes: "These birds are plentiful throughout Natal, although more partial to the coast lands; they are resident all the year round. Old mealie fields and Kaffir gardens are the favourite haunts, the coveys consisting of three or four brace; they seldom settle in trees, although

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they occasionally run into cover. The cock-bird calls frequently during the day, uttering a loud, defiant note, and is said to be very pugnacious, its spurs being long and pointed. These birds nest in the open grass. The last clutch coming under my observation consisted of five eggs, creamy-white in colour and almost round in shape, and measuring 1.25 by 1.0 in. They were slightly incubated when found on March 10th.

C. G. Davies del.

Witherby & Co. imp.

CRESTED FRANCOLIN (*FRANCOLINUS SEPHÆNA*) Male.

FRANCOLINUS SEPHAENA.
CRESTED FRANCOLIN.

(PLATE 17.)

Perdix sephaena, Smith, Rep. Exp. Centr. Afr., p. 55 (1836).

Francolinus pileatus, Sharpe's ed. Layard Birds of S. Afr., p. 593 (1875-84); Nicolls & Eglington, Sportsman in S. Afr., p. 103 (1892).

Francolinus sephaena, Ogilvie-Grant, Cat. Birds Brit. Mus., xxii, p. 146 (1893); *id.*, Game-Birds, i, p. 113 (1895); Reichenow, Vögel Afrikas, i, p. 495 (1900-01); Selater, Ann. S. Afr. Mus., iii, p. 354 (1905); Selater & Stark, Birds of S. Afr., iv, p. 199 (1906).

LOCAL NAME. "Inkwali" of the Zulus (Millar).

DESCRIPTION. The figure represents a male. The female is very similar in plumage but has the upper-parts covered with narrow wavy bars of buff and lines of black, and lacks spurs. Length about 12½ in.

DISTRIBUTION. "The Crested Francolin" is found throughout Bechuanaland, as far as the Zambesi and southern Angola in one direction, and in the other as far as Zululand and southern Mozambique. In East Africa it is replaced by other closely-allied species.

THE Crested Francolin is nowhere a common bird. Its habits appear to resemble those of *Pternistes swainsoni* (Swainson's Francolin), and it has the same liking for the vicinity of water and thick cover.

It feeds on the usual mixed diet of grain, insects, berries, seeds, etc.

I have not shot this species, but have killed a few of the closely allied *F. granti* (Grant's Francolin) in British East Africa, and thought them most unsporting little birds. So

GAME-BIRDS OF SOUTH AFRICA

reluctant were they to rise at times, that I once ran three of them into a clump of bush and picked them up by hand. Their flesh is excellent-eating and not so dry as that of most Francolins.

Mr. Sclater writes that the Crested Francolin seems everywhere to be a somewhat scarce bird, and that it is shy and retiring, generally being found in the dense undergrowth running along the banks of rivers. It usually occurs in small coveys, and is difficult to flush; it takes refuge in trees, and there with crest erect and tail uplifted it gives vent to a harsh metallic "Chiraka."

Mr. Millar met with these birds plentifully in Zululand on the White Umvolosi River, near its junction with the Black Umvolosi; he found them shy, and so much addicted to close cover that they were difficult to procure.

The nest and eggs have, apparently, not yet been described, but the latter will probably strongly resemble those laid by its near relation Kirk's Francolin (*F. kirki*).

C. G. Davies del.

Witherby & Co. imp.

KIRK'S FRANCOLIN (*FRANCOLINUS KIRKI*) Male.

FRANCOLINUS KIRKI.
KIRK'S FRANCOLIN.

(PLATE 18.)

Francolinus kirki, Hartlaub, Proc. Zool. Soc. 1867, p. 827; Ogilvie-Grant, Cat. Birds Brit. Mus., xxii, p. 149 (1893); Shelley, Birds of Afr., i, p. 180 (1896); Sharpe, Hand-List of Birds, i, p. 23 (1899); Reichenow, Vögel Afrikas, i, p. 497 (1900-01).

LOCAL NAME. "Kueri Kuechi."

DESCRIPTION. This is one of the smallest of the African Francolins, and measures about 12 in. in length. Wing $6\frac{1}{2}$ in.

The sexes are alike, the bird figured being a male.

DISTRIBUTION. The specimen from which the plate was drawn was collected by the late Mr. J. Marais in Rhodesia. Mr. F. J. Jackson records it as having been killed as far north as the Taru Desert in British East Africa. It is fairly common in some parts of Portuguese East Africa. The Transvaal Museum contains two examples from Boror, Portuguese East Africa, collected by Messrs. Kirby and Roberts.

I HAVE not met with Kirk's Francolin, but Mr. C. H. B. Grant writes that it is a woodland species. It lives mostly on the ground, and its habits resemble those of *F. sephaena*. In the early mornings it is to be found in the neighbourhood of native gardens and when disturbed it rarely attempts to fly, and almost always prefers to escape by running.

If disturbed by a dog it generally flies up into the nearest tree, but sometimes it will rise and fly well, just like the Common Partridge. This species is nearly always met with in pairs.

Mr. Roberts writes in the *Journal of the South African Ornithologists' Union* for December, 1911, that it is fairly

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common in the marshy parts of Portuguese East Africa, and was usually found there in coveys of five or six. He says that in its habits it resembles the Lemon-Dove (*Haplopelia larvata*) in its manner of running for a short distance when alarmed, and then rising with a startling "whirr"; it is remarkably quick in dodging through the trees when in flight and is then almost impossible to hit.

Small coveys were observed on several occasions running along the horizontal branches of tall trees at dusk, and no doubt they always roost in trees to be safe from their numerous enemies. Two nests found by Mr. Vaughan Kirby in June and July while collecting with Mr. Roberts in Portuguese East Africa, were placed in patches of grass at the foot of small bushes. The eggs varied in colour from cream to salmon pink, and measured 40.4 to 43.8 by 31.9 to 32.3 mm.

C. G. Davies del.

Witherby & Co. imp.

GREYWING FRANCOLIN (*FRANCOLINUS AFRICANUS*) Male.

FRANCOLINUS AFRICANUS.

GREY-WING FRANCOLIN OR CAPE
PARTRIDGE.

(PLATE 19.)

Francolinus africanus, Stephens in Shaw's Gen. Zool., xi, p. 323 (1819); Ogilvie-Grant, Cat. Birds Brit. Mus., xxii, p. 152 (1893); Woodward, Natal Birds, p. 162 (1899); Selater, Ann. S. Afr. Mus., iii, p. 354 (1905); Selater & Stark, Birds of S. Afr., iv, p. 201 (1906).

Francolinus afer, Sharpe's ed. Layard Birds of S. Afr., pp. 595, 854 (1875-84); Nicolls & Eglington, Sportsman in S. Afr., p. 101 (1892); Reichenow, Vögel Afrikas, i, p. 485 (1900-01).

LOCAL NAMES. "Patrijs" or "Berg Patrijs" of the Dutch; "Intendele" or "Isakwatsha" of the Amaxosa (Stanford), also applied to the Redwing; "Khuale" of the Basutos (Murray).

DESCRIPTION. The bird figured is an adult male. The female differs only in having no spurs, and being slightly smaller.

Dr. Bowdler Sharpe writes in the *Ibis* (1904) of a series sent from Deelfontein, that young birds can be distinguished by their white throats and paler lower mandibles. The older the bird, the more spotted it is beneath, and the throat is always more closely barred by reason of the dusty margins of the feathers, those of the lower-throat being especially scale-like. The pretty grey edging to the feathers of the fore-neck seems to become abraded during the breeding-season, and the orange and chestnut markings on the fore-neck and chest are very apparent. In young birds these colours are more subdued and the black cross-barring is continued to the lower-throat, coupled with very distinct white shaft-streaks. The plumage of the crown is blackish in young birds, with margins of sandy rufous imparting a scaled, rather than a streaked, appearance to the head. The progress from the barred-breasted young bird to the thickly pearl-spotted adult is gradually acquired, and apparently, to a great extent, by change

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of feather after the first moult, when different kinds of arrow-shaped black marks and bars are much in evidence beneath. The length is about 14 in.

DISTRIBUTION. Generally distributed through Cape Colony and the upper and more elevated parts of Natal and locally through the Orange River Colony and the southern Transvaal.

MR. MILLAR states that in Natal this bird is known as the Berg Grey-wing from the fact that it is found only in the vicinity of the Drakensberg. When flushed they are usually on the brow of the hill, and all rising together with a shrill, squeaky alarm, dive quickly round the corner, and are out of sight before a shot can be fired; if, however, they can be marked down, they will rise singly and then afford good sport.

Sergt. C. G. Davies writes that Grey-wings are common in most of the higher districts of the Cape Colony, and that they are usually found in coveys of from five to fifteen or more, and frequent the hill-sides, especially when they have a terrace-like formation.

I have shot them in various parts of the Orange River Colony and have never found them far from kopjes. Owing to their strong flight and the nature of the ground in which they are found, they are most satisfactory birds to shoot and give sometimes extremely sporting shots, especially when they are flushed on a hill well above the sportsman, and come tearing over his head at all sorts of angles, each bird screaming his loudest. They are far noisier when they rise than the Orange River Francolin, and are not nearly such powerful runners. Near Bloemfontein I have often noticed the cock-birds calling in the mornings and evenings from the tops of stone walls.

They feed early and late on small bulbs, seeds and insects,

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and occasionally come down into mealie and Kaffir-corn fields or "lands" as they are called in South Africa. In the hot part of the day they copy other Francolins and rest in sheltered places.

Mr. D. F. Gilfillan writes in the *Journal of the South African Ornithologists' Union* for April, 1908, as follows:—

"I have found these birds in the Districts of Queenstown, Cradock, Steynberg, and Middelburg in the Cape Colony.

"At one time they were very plentiful on the Stormberg, Queenstown, and also on the Zuurberg, Steynsberg District, it being not uncommon for a single gun to shoot forty brace over dogs in a day. The part of the country where I have found them most plentiful is in the grassveld in the Sneeuwberg Mountains between Cradock and Graaff Reinet. In these parts they were generally found among low shrubs and in the red grass, but never by me in certain coarse grass growing thicker and longer than the red grass and known as 'Koper Draad' [anglice, copper wire] by the Boers, which is plentiful there, and which to look at should form an ideal covert for the birds. In July last I counted over twenty birds in a covey, and I am of opinion that there were thirty at least in that covey; they flew out of sight before I could complete the counting. When found amid the rugged mountainous surroundings where I was shooting them last July they offer very sporting shots, as they are often found close to the edge of a precipice 50 to 500 feet deep, sheer down into a deep valley. The instant such coveys are flushed they would dive down over the edge, giving very difficult shooting, with perhaps a walk of half a mile or more to recover any birds killed. These birds are very fond of frequenting cultivated lands to pick up grain, and I have been informed by several farmers, living in the parts where I was shooting, that in the mountains they will scratch

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out and eat potatoes. Their favourite food, however, is a small bulb forming portion of the root of a species of rush, some varieties of which are found wherever I have been in South Africa. These birds will also eat grubs, beetles, locusts and ants. When locusts are about in the wingless stage these birds become excessively fat, but I have not known their flesh to have a rank flavour from this food, as is the case with some of the Bustards. I presume that the vegetable diet corrects the tendency of this food to make the flesh rank. They nest in the spring, from September to December as a rule, but sometimes as late as March and April. The time of nesting very much depends upon the rains.

“Grey-wing are noisy birds, having a clear ringing call, generally to be heard at sunrise and sunset, particularly when there is a change of weather coming.

“When flushed, Grey-wing generally rise with shrill squeaks from all the members of the covey, which is a very distinctive feature of this species, quite sufficient to distinguish it from the other species I know.

“The feeding time of these birds is from sunrise to about 10 a.m., and from 4 p.m. till dusk, during the winter months, and in summer they feed earlier in the morning and later in the afternoon.

“The scratchings of this bird can generally be distinguished from those of Larks and small animals by the mark of the bill at the apex of the scratchings, where it was inserted to lever out the bulb or root that was being searched for.

“The chief enemies of the Grey-wing, other than man, appear to be the numerous Hawks found in the Karroo and the Secretary Birds, but I have no doubt that wild cats, jackals, and red meercats do a fair share in the killing. I have

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seen a Falcon, the South-African Lanner, stoop at Partridges I have flushed, but without success. They are monogamous, but I have no evidence on the subject as to whether they pair for life. The coveys nearly always consist of the two old birds and the season's chickens. The nests are cup-shaped, somewhat deep, carefully lined with grass, placed under the shelter of a bush or tuft of grass, and containing from eight to fifteen eggs. The eggs are slightly larger than those of tame Pigeons and spotted with minute brown spots on a dull-coloured background. The spots vary, and sometimes the eggs are blotched with brown."

If the covey is broken up and the shooter has good dogs they afford excellent sport, as they will then lie like stones.

They thrive well and have been known to breed in captivity. I have never found the nest but have seen eggs which are dark brown minutely spotted with brown pin-points. They measure from 1.60 to 1.55 by 1.2 to 1.15 in. according to Mr. Selater.

FRANCOLINUS LEVAILLANTI.

CAPE REDWINGED FRANCOLIN.

(PLATE 20.)

Perdix levaillantii, Valenciennes, Dict. Sc. Nat., xxxviii, p. 441 (1825).

Francolinus levaillanti, Sharpe's ed. Layard Birds of S. Afr., p. 596 (1875-84); Nicolls & Eglinton, Sportsman in S. Afr., p. 100 (1892); Ogilvie-Grant, Cat. Birds Brit. Mus., xxii, p. 154 (1893); *id.*, Game-Birds, i, p. 119 (1895); Woodward, Natal Birds, p. 161 (1899); Reichenow, Vögel Afrikas, i, p. 484 (1900-01); Selater, Ann. S. Afr. Mus., iii, p. 354 (1905); Selater and Stark, Birds of S. Afr., iv, p. 203 (1906).

LOCAL NAMES. "Redwing" of the Colonists; "Hill Redwing" of Natal; "Itendele" of the Zulus (Millar).

DESCRIPTION. Adult male as in figure. Length 14 in. The adult female is like the male, but usually has no spurs.

DISTRIBUTION. The Cape Redwing is not found north of the Limpopo, and seems to be most abundant in Cape Colony. Even there it is somewhat local, being chiefly confined to the southern districts, and it does not appear to reach the more western or north-western portions of the colony.

In Natal Mr. Millar states that the Redwing is found on the higher levels about ten miles from the coast. The coveys consist of two or three brace, and the birds sit very close until flushed when they fly to a considerable distance.

Mr. Wood says that this Francolin is found in fair numbers about East London, though at times when the weather is very dry during the breeding-season, they become scarce.

Sergt. C. G. Davies tells me that it is far from common in Pondoland except in a few localities near the coast.

THE Cape Redwing is a somewhat locally distributed bird, being plentiful in some districts and entirely absent in others; it is usually met with in small coveys of from five to eight

C. G. Davies del.

Witherby & Co. imp.

CAPE RED-WINGED FRANCOLIN (*FRANCOLINUS LEVILLANTI*)

GAME-BIRDS OF SOUTH AFRICA

individuals, generally in secluded valleys where there are plenty of rushes and long grass; Layard particularly mentions its preference for the thick palmiet (reed) beds, which are so often found along the rivers of the southern part of the Colony.

Every one remarks that it lies very close and that a very good dog is required to flush it, and after this has been done once it is almost impossible to make the bird rise again, so much so that if carefully marked down it can almost be caught by hand.

The call-note, heard morning and evening, is loud and harsh, and though resembling that of *F. shelleyi*, is not so distinct and can be readily distinguished. Its food consists of insects, seeds, and small bulbous roots; it is particularly fond of Gladioli and Watsonia bulbs, and is generally to be found where these are growing in any numbers.

The nest is usually well hidden in a depression in the ground among long grass, generally not far from water; the eggs, five to eight in number, vary somewhat, but are usually a dark tawny, spotted throughout with dark brown.

Lieut. C. H. T. Whitehead (*Ibis*, 1903) states that he found fresh eggs on December 15th, and young ones only a few weeks old in June.

I have observed the breeding-season varies in many South African game-birds, and believe that many of them breed quite regardless of the time of the year, so long as the supply of food is plentiful and sufficient shelter is available.

FRANCOLINUS GARIEPENSIS.
ORANGE RIVER FRANCOLIN.

(PLATE 21.)

Francolinus gariensis, Smith, Zool. S. Afr., III, pp. 83 and 84 (1849); Sharpe's ed. Layard Birds of S. Afr., p. 599 (187-584) (part); Nicolls and Eglington, Sportsman in S. Afr., p. 101 (1892); Ogilvie-Grant, Cat. Birds Brit. Mus., XXII, p. 155 (1893); *id.*, Game-Birds, I, p. 120 (1895); Reichenow, Vögel Afrikas, I, p. xii (1900-01); Selater, Ann. S. Afr. Mus., III, p. 354 (1905); Selater and Stark, Birds of S. Afr., IV, p. 205 (1906).

LOCAL NAME. "Redwing" of the Colonists applied to this species as well as to *Francolinus shelleyi* and *F. leuallanti*.

DESCRIPTION. Adult male as in figure. Length about 13 in. The female differs from the male in being without spurs, though sometimes possessing a blunt knob in their place.

DISTRIBUTION. The Orange River Francolin was first obtained by Sir A. Smith at the head-waters of the Caledon River, in what is now Basutoland; it has not been found south of the Orange River; northwards it occurs through Griqualand West, Bechuanaland, the Orange River Colony and the Southern Transvaal, its place being taken by other closely allied species to the eastwards and westwards.

Sergt. C. G. Davies informs me that he met with a few at Aliwal North during the early part of the war.

ON the kopjes which surround the Potchefstroom Commonage and round their bases, Orange River Francolins are quite common and I have shot numbers of them. It is useless to try and shoot them without the help of dogs, as they will squat or run, or rise out of range, or in some other way defeat the sportsman who goes out alone.

The best plan is for two guns only to shoot, one going in

C. G. Davies del.

Witherby & Co. imp.

ORANGE RIVER FRANCOLIN (*FRANCOLINUS GARIEPENSIS*) Male,

GAME-BIRDS OF SOUTH AFRICA

front of the dogs on the kopje and the others keeping behind, but both guns on a level lower than the dogs. When the birds are flushed they usually fly down hill and by adopting this plan some really sporting shots can often be obtained, and one really high "curly" bird is worth ten shot out of a mealie field.

These Francolins are very common near Vryburg and right into the Kalahari Desert, and I have shot them in many places where they could hardly have had a drink for weeks, although doubtless juicy berries and roots were sufficient for their needs.

They thrive well in captivity and I have seen them come to feed with the poultry at a Boer's farm where they were protected and not shot at.

Their cry, usually uttered at dawn and evening, is clear and ringing; it is an unmistakeable call sounding like the two words "Killy-keelie," "Killy-keelie," "Killy-killeelie;" it is sometimes uttered when the covey gets scattered.

The chief enemies of these Francolins are the various meercats, especially the red meercat (*Cynictis penicillata*), wild-cats of various sorts, jackals, hawks, and snakes. The Secretary-Bird is a terrible foe to the young broods. From the stomach of one which I shot, I removed no less than nine chicks of this species which must have been at least ten days old. It is often a matter of wonder to me how game-birds in South Africa manage to rear their broods at all.

The eggs measure about 1.5 by 1.1 in., and are dark *café-au-lait* colour speckled with brown. They are of the usual peg-top shape common to most game-birds.

FRANCOLINUS JUGULARIS.

BÜTTIKOFER'S FRANCOLIN.

(PLATE 22.)

Francolinus jugularis, Büttikofer, Notes Leyden Mus., XI, p. 76, Pl. IV (1889); Ogilvie-Grant, Cat. Birds Brit. Mus., XXII, p. 156 (1893); *id.*, Game-Birds I, p. 121 (1895); Reichenow, Vögel Afrikas, I, p. 489 (1900-01); Selater, Ann. S. Afr. Mus., III, p. 354 (1905); Selater and Stark, Birds of S. Afr., IV, p. 207 (1906).

Francolinus garipeensis, Sharpe's ed. Layard Birds of S. Afr., p. 599 (part) (1875-84).

DESCRIPTION. The bird figured is an adult male. The sexes are alike in plumage, but the female is without spurs. Length about 13 in.

DISTRIBUTION. Büttikofer's Francolin is the western representative of the Orange River Francolin (*F. garipeensis*), and is found all through German South-west Africa and southern Angola.

CONCERNING its habits Anderson gives the following account: "I only met with this beautiful Francolin on the high tablelands of Damara and Great Namaqualand but there it is frequently very abundant in coveys usually of six or eight individuals, though sometimes as few as three birds, and at others as many as fourteen compose the covey.

"These Francolins invariably frequent grassy slopes sprinkled with dwarf bush; they lie very close, and after having been once or twice flushed are not easily found again, even with the assistance of dogs. They feed on bulbs, grass, berries and seeds, and their flesh is very good for the table."

C. G. Davies del.

Witherby & Co, imp.

BÜTTIKOFER'S FRANCOLIN (*FRANCOLINUS JUGULARIS*) Male.

GAME-BIRDS OF SOUTH AFRICA

I have not met with this bird, as I have never been in the localities which it inhabits; nor do I know its eggs, which probably are extremely like those of its near relative the Orange River Francolin.

FRANCOLINUS SHELLEYI.
SHELLEY'S FRANCOLIN.

(PLATE 23.)

Francolinus shelleyi, Ogilvie-Grant, Ibis, 1890, p. 348; Nicolls and Eglington, Sportsman in S. Afr., p. 105 (1892); Ogilvie-Grant, Cat. Birds Brit. Mus., xxii, p. 157, Pl. vi (1893); Reichenow, Vögel Afrikas, I, p. 490 (1900-01); Sclater, Ann. S. Afr. Mus., III, p. 354 (1905); Sclater and Stark, Birds of S. Afr., IV, p. 208 (1906).

Francolinus gariensis, Sharpe's ed. Layard Birds of S. Afr., p. 599, (part) (1875-84).

LOCAL NAMES. "Thorn Redwing" of Natal Colonists; "Isendele" of the Zulus (Millar).

DESCRIPTION. The bird figured is an adult male. The sexes are alike, but the female lacks spurs. Length about 13 in.

DISTRIBUTION. This bird is the eastern representative of the Orange River Francolin (*F. gariensis*), and in several places the two species overlap.

Its range extends from British East Africa southwards through German East Africa and the region of the Zambesi. It is also found in Nyasaland and Natal, and from Natal to Mashonaland.

I HAVE not met with this species in South Africa but have frequently killed it in British East Africa. On the Guasin Gishu Plateau, at an elevation of 6,000 to 7,000 ft., it is very common and its clear ringing call is one of the first sounds of early dawn. It is found there on grassy plateaus studded with acacia thorns, and is always a welcome addition to the larder. I once saw one being fairly flown by a Pallid Harrier, and when I interfered it was much exhausted and would doubtless have been taken very shortly. The hawk pursued it like a Goshawk or

C. G. Davies del.

Witherby & Co. imp.

SHELLEY'S FRANCOLIN (*FRANCOLINUS SHELLEYI*) Male.

GAME-BIRDS OF SOUTH AFRICA

Sparrow-Hawk, and the Francolin flew perhaps a quarter of a mile at a time, screaming all the way ; it would then pitch and dodge the Hawk in grass or rough bush, but immediately the Hawk settled the Francolin would take to flight again and the whole performance would be gone through again.

Shelley's Francolin is generally distributed throughout Natal, frequenting the coast-lands as well as the "thorns" up-country ; like most other Francolins it calls at dawn and late at night with a clear and distinct whistle.

Mr. J. folliott Darling writes that this Francolin is widely distributed in Mashonaland, and is found in every kind of country excepting near the "vleis" ; it is probably most abundant in lightly wooded country ; sometimes a covey will haunt a bare kopje without a bush on it and with scarcely a blade of grass ; there the birds hide between the stones and rocks, and lie so close, even when a dog points to them, that it is often possible to catch them in the hand ; the Mashonas frequently follow them and watching where they pitch, kill them with sticks.

They are fond of digging up roots of grass in the dry season and become very fat in consequence ; they also gorge themselves on locusts.

The nest is of the usual simple construction common to most Francolins, and eggs have been found in every month from June to November.

The covey consists as a rule of two or three brace ; they nest in the grass or in the vicinity of some old field which they frequent ; Mr. Millar found a nest in August containing five eggs which were minutely spotted, and measured 1.5 by 1.0 in.

FRANCOLINUS ADSPERSUS.
RED-BILLED FRANCOLIN.

(PLATE 24.)

Francolinus adspersus, Waterhouse in Alexander's Exped., II, p. 267, Pl. (1838); Sharpe's ed. Layard Birds of S. Afr., p. 590 (1875-84); Nicolls & Eglington, Sportsman in S. Afr., p. 104 (1892); Ogilvie-Grant, Cat. Birds Brit. Mus., XXII, p. 159, Pl. VII (1893); Reichenow, Vögel Afrikas, I, p. 474 (1900-01); Selater, Ann. S. Afr. Mus., III, p. 354 (1905); Selater and Stark, Birds of S. Afr., IV, p. 209 (1906).

LOCAL NAMES. "Pheasant" of the English, "Fazant" of the Dutch Colonists in the Transvaal. Any Francolin which habitually perches in trees is known as a pheasant, but if it roosts on the ground it is called a partridge. It is of course quite obvious that all bush-haunting species of Francolin must roost in trees, or they would be speedily wiped out of existence by vermin.

DESCRIPTION. The bird figured is a male. The sexes are alike, except that the female lacks spurs. Young birds have the mantle similar to the rest of the upper-parts as figured, and some of the scapulars are blotched with black at the extremities, the under-parts brownish-white, finely vermiculated with black; the bill is dark purple and the legs are paler than in the adult. Length about 13 in.

DISTRIBUTION. The Red-billed Francolin is found in German South-west Africa, the northern Kalahari, along the Vaal River and on the banks of the Marico and Limpopo Rivers in the north-west Transvaal.

It is quite common along the banks of the Vaal River between Fourteen Streams and Schoeman's Drift, wherever there is a thick bush, but it is not a bird worth taking much trouble about.

THE Red-billed Francolin is the Transvaal representative of the Cape Pheasant (*F. capensis*) and in habits is very like that species and *F. natalensis*. It is found in coveys numbering up to ten or twelve in the thickest bush and always

C. G. Davies del.

Witherby & Co. imp.

RED-BILLED FRANCOLIN (*FRANCOLINUS ADSPERSUS*) Male.

GAME-BIRDS OF SOUTH AFRICA

near water. When pursued the coveys break up at once, each bird either tearing away as fast almost as a rabbit, or else jumping quickly to a thick bush and there squatting. It is extremely difficult to flush, is an inveterate runner and skulks through the thickest and thorniest places at tremendous speed.

If headed by the dogs it will often perch in a tree and stay there until the sportsman appears, when it dives out and has a marvellous knack of always being on the wrong side of the bush for a successful shot.

I have found it very noisy indeed in the morning and evening and also often during the night, especially if there were a moon.

The eggs are laid in the densest cover possible; they are pale creamy-white and measure about 1.7 by 1.3 in.

Layard states that they are peculiarly shaped, being truncated at both ends; but I think those he found may have been abnormal, as all those I saw were shaped in the usual Partridge and Francolin peg-top fashion.

FRANCOLINUS NATALENSIS.
NATAL FRANCOLIN.

(PLATE 25.)

Francolinus natalensis, Smith, S. Afr. Quart. Journ., II, c. 48 (1833); Sharpe's ed. Layard Birds of S. Afr., p. 592 (1875-84); Nicolls and Eglington, Sportsman in S. Afr., p. 105 (1892); Ogilvie-Grant, Cat. Birds Brit. Mus., XXII, p. 166 (1893); Woodward, Natal Birds, p. 162 (1899); Reichenow, Vögel Afrikas, I, p. 475 (1900-01); Sclater, Ann. S. Afr. Mus., III, p. 354 (1905); Sclater and Stark, Birds of S. Afr., IV, p. 212 (1906).

LOCAL NAMES. "Coast Partridge" of Natal; "Namaqua Pheasant" of the Transvaal Boers; "Insekvehle" of Zulus; "Lesogo" i.e. "Lesoho" of the Bechuanas.

DESCRIPTION. The bird figured is a male, which measured about 13½ in. The sexes are alike but the female is slightly smaller.

DISTRIBUTION. The Natal Francolin takes the place of the Cape Pheasant in the eastern portions of South Africa and is found in Natal, Swaziland, the Eastern Transvaal and in some parts of Bechuanaland; it has also been recorded from the Zambesi by the late Captain Boyd Alexander.

I HAVE no personal experience of this bird but Sergt. Davies writes me as follows:—

"I have only met with this species in Pondoland, where it is found in most of the valleys, frequenting the thick scrub in coveys of five or six birds. They are great runners and without a dog almost impossible to put up, and owing to the bad ground they frequent, where walking is so difficult, I have seldom worried them much.

"They have a loud, harsh, cackling call uttered mostly in the evening. They are easy to shoot when once on the

C. G. Davies del.

Witherby & Co. imp.

NATAL FRANCOLIN (*FRANCOLINUS NATALENSIS*) Male.

GAME-BIRDS OF SOUTH AFRICA

wing, if you can see them through the thick bush, and they generally perch in the branches of a tree on alighting.

“The crops of those I have shot contained grain, bulbs and berries, with a few insects.”

The four species of bare-necked or red-throated Francolins (*Pternistes humboldti*, *P. nudicollis*, *P. n. castaneiventris* and *P. swainsoni*) as well as *Francolinus capensis* and *Francolinus adspersus* and this species, all seem to have similar habits, and owing to these and the impenetrable nature of the bush in which they live they are not very sporting birds; sometimes, however, they can be driven, when they give most excellent shooting.

Two eggs sent by Mr. Arnot to Mr. Layard from Mahura's country, and now in the South African Museum, are pale brown without spots and measure 1.68 by 1.4 in.

FRANCOLINUS CAPENSIS.

CAPE FRANCOLIN OR CAPE PHEASANT.

(PLATE 26.)

Tetrao capensis, Gmelin, Syst. Nat., I, p. 759 (1788).

Francolinus clamator, Sharpe's ed. Layard Birds of S. Afr., pp. 591, 854 (1875-84); Nicolls & Eglington, Sportsman in S. Afr., p. 105 (1892).

Francolinus capensis, Ogilvie-Grant, Cat. Birds Brit. Mus., xxii, p. 165 (1893); Reichenow, Vögel Afrikas, I, p. 473 (1900-01); Selater, Ann. S. Afr. Mus., III, p. 354 (1905); Selater & Stark, Birds of S. Afr., IV, p. 210 (1906).

LOCAL NAMES. "Pheasant" of the English. "Fazant" of the Dutch Colonists.

DESCRIPTION. Length about 17 in. The bird figured is a male. The female is slightly smaller and the sexes are alike.

DISTRIBUTION. This is the largest of the South African Francolins and is only found within the Cape Colony, and chiefly in the southern and south-western portions of it.

It is very abundant on Robben Island in Table Bay, where it was introduced many years ago.

The Cape Pheasant is found chiefly in the coast districts; and is especially abundant in bushy kloofs and along watercourses where there is a thick growth of rank vegetation and low underwood. It is common in the immediate vicinity of Cape Town.

A living specimen, which was presented to the Zoological Society of London in 1911, was captured by Capt. H. A. P. Little-dale as a small chick on Keimoes Island, which is situated in the Orange River. I am inclined to think that this bird was bred from parents turned down by one of the shooting syndicates that own property along the banks of that river. The custom of turning down birds is by no means uncommon among sportsmen in South Africa, and this probably accounts for the presence of this bird so far north of its normal range.

C. G. Davies del.

Witherby & Co. imp.

CAPE FRANCOLIN or CAPE PHEASANT (*FRANCOLINUS CAPENSIS*) Male

GAME-BIRDS OF SOUTH AFRICA

THE Cape Francolin, like the Red-billed Francolin, is flushed with great difficulty, preferring to squat or run when possible ; it resorts to the lower branches of thick trees, and there remains concealed just beyond the reach of the dogs ; like other Francolins it feeds early and late on tender shoots, especially of green fern, as well as on grain and on insects. Its note is a loud and drawn-out chuckle, generally heard when the bird is disturbed and flying off to shelter.

I have only shot this bird a few times—it is often found feeding on the edges of cultivation, especially if near water, and being large and not particularly quick on the wing I have always found it easy to shoot.

The nest is placed on the ground, usually under a bush ; eight to fourteen eggs are laid and are of a greenish-brown or brownish-cream colour ; they measure 1.95 to 1.8 by 1.5 to 1.4 in., according to Oates.

PTERNISTES HUMBOLDTI.
HUMBOLDT'S FRANCOLIN.

(PLATE 27.)

Francolinus humboldtii, Peters, M.B. Akad. Wissensch. Berlin, 1854, p. 134.

Pternistes humboldti, Sharpe's ed. Layard Birds of S. Afr., p. 589 (1875-84); Ogilvie-Grant, Cat. Birds Brit. Mus., xxii, p. 176 (1893); Reichenow, Vögel Afrikas, I, p. 462; Selater, Ann. S. Afr. Mus., III, p. 354 (1905); Selater & Stark, Birds of S. Afr., IV, p. 216 (1906).

DESCRIPTION. The bird figured is a male. The female differs in having the sides of the neck white with a wide black band down the middle of the feathers. The breast- and abdomen-feathers have narrower white shaft-stripes. Length about 17 in., the female being about an inch shorter.

The young bird has the cheeks and sides of the face white with black shaft-stripes, and there is more white on the breast and abdomen.

DISTRIBUTION. Mr. Selater states in the *Fauna of S. Africa*, Vol. IV, that this species is spread over Mashonaland and Portuguese East Africa northward through Nyassaland and German and British East Africa as far as the River Tana. It is also to be found near Salisbury.

In British East Africa Mr. Jackson writes that it is apparently confined to the Coast region. It is found in Witu, on the outskirts of the forest, and is plentiful in the bush-country on the banks of the lower Tana.

It is stated in the *Fauna of S. Africa*, Vol. IV., that Francis found this bird plentiful and common near Inhambane; that it frequents thick scrubby and inaccessible spots during the day, but is always to be found in the Kaffir gardens early in the morning and late in the evening. On perceiving any one, it immediately runs off into the scrub or other thick

C. G. Davies del.

Witherby & Co. imp.

HUMBOLDT'S FRANCOLIN (*PTERNISTES HUMBOLDTI*) Male.

GAME-BIRDS OF SOUTH AFRICA

stuff and generally rises behind trees or other obstructions, so that it is difficult to get a shot at it. Like other bush Francolins, on being suddenly flushed by a dog it generally takes refuge in the branches of the nearest tree. It is very fond of scratching up the ground-nuts in the Kaffir gardens, and also grubs up the roots of the manioc plant. It is a bird of strong flight and is generally found in pairs, although often in larger parties, but there are never more than five or six individuals together.

Mr. folliott Darling says that this species is plentiful along the banks of the rivers and in marshes near Mazoe in Mashonaland; the nest is well concealed and more pretentious than that of most Francolins.

The eggs according to Reichenow, are smooth, yellowish-white and covered somewhat sparsely with fine darker spots; they measure 1.65 by 1.40 in; but Mr. C. F. M. Swynnerton, writing in the *Journal of the South African Ornithologists' Union*, found it breeding near Mount Chirinda, Southern Rhodesia, in December, and describes its nest and eggs as follows:—

“The nest was a mere hollow lined with grasses, in a small comparatively bare spot in the grass-jungle. The bird sat very close, almost allowing himself to be captured on the nest, which contained five fresh eggs measuring 44.5 by 34, 44 by 34, and 43 by 35 mm.

“The eggs were sharply pointed at the small end and rounded at the other; and in colour, were palest brown, nearly white, the ‘pores’ which were pitted densely over the egg, being actually white. There were no spots whatsoever.”

PTERNISTES NUDICOLLIS.

SOUTHERN RED-NECKED FRANCOLIN.

(PLATE 28.)

Tetrao nudicollis, Boddaert, Tabl. Pl. Enl., p. ii (1783).

Pternistes nudicollis, Sharpe's ed. Layard Birds of S. Afr., p. 589 (1875-84); Nicolls & Eglington, Sportsman in S. Afr., p. 104 (1892); Ogilvie-Grant, Cat. Birds Brit. Mus., xxii, p. 174 (1893); Woodward, Natal Birds, p. 163 (1899); Reichenow, Vögel Afrikas, I, p. 461 (1900-01); Selater, Ann. S. Afr. Mus., III, p. 354 (1905); Selater and Stark, Birds of S. Afr., iv, p. 214 (1906).

LOCAL NAMES. "Pheasant" at Knysna; in other parts of the country generally known as the "Red-necked Pheasant" (Selater).

DESCRIPTION. The bird figured is an adult male. Length about 15 in. The female is smaller, measuring about 13 in. and the feathers on the nape and the sides of the neck are more strongly edged with white. She also lacks spurs.

DISTRIBUTION. The Southern Red-necked Francolin is a bird of very local distribution, and is only found in the thickly-wooded districts of Cape Colony along the south coast from Swellendam to Natal.

THIS is another of the so-called bush-pheasants and a most unsporting bird. Mr. Millar, in his book on *Natal Birds*, says that in certain districts this Francolin takes the place of the Natal Francolin (*F. natalensis*), and like the latter bird alights in trees, and is called a pheasant. It is generally found on the outskirts of the woody kloofs, where its loud cackling call may be heard in the early morning and in the evening. When put up by dogs it usually flies to the nearest tree and conceals itself in the thickest part of it, from which position it is extremely hard to dislodge. It may at times even be caught by the legs by quietly climbing up the tree.

C. G. Davies del.

Witherby & Co. imp.

SOUTHERN RED-NECKED FRANCOLIN (*PTERNISTES NUDICOLLIS*)

GAME-BIRDS OF SOUTH AFRICA

These birds apparently confine themselves to the upper Districts of Natal, where they associate in pairs or small coveys, frequenting the yellow-wood forests in the vicinity of Karkloof, Dargle, and elsewhere.

Mr. Selater writes that the nest is placed in long grass usually at the foot of a bush or tree, and that the eggs, which number from six to eight in a clutch, are reddish-buff minutely spotted with dark reddish-brown or purple, and measure 1.55 by 1.15 in.

PTERNISTES NUDICOLLIS CASTANEIVENTER.
NORTHERN RED-NECKED FRANCOLIN.

(PLATE 29.)

Pternistes castaneiventer, Gunning & Roberts, Ann. Transvaal Mus. III. (1911), No. 2, p. 110.

DESCRIPTION. The bird figured is an adult male. This subspecies is closely allied to *P. nudicollis*, from which it differs in having the breast chestnut-coloured in general effect as compared with the black breast of the latter bird, each feather having the outer part coloured chestnut.

DISTRIBUTION. It is, like its congener, a bird of a very restricted range, which is bounded on the south by the Sundays River valley, and as soon as the Sundays River is crossed its place is taken by *P. nudicollis*.

I HAVE not seen the Northern Red-necked Francolin, and what information I have about it has been obtained from Sergt. Davies.

This subspecies has in the past been regarded as representing the juvenile plumage of *P. nudicollis*, but in a recently made collection there are four adult male skins in which the spurs are fully developed, two on each leg, and it must therefore be regarded as at any rate subspecifically distinct.

Nothing has yet been recorded of the habits or eggs of the Northern Red-necked Francolin, but doubtless it does not differ in these respects from the southern bird.

C. G. Davies del.

Witherby & Co. imp.

NORTHERN RED-NECKED FRANCOLIN
(*PTERNISTES NUDICOLLIS CASTANEIVENTER*) Male.

C. G. Davies del.

Witherby & Co. imp.

SWAINSON'S FRANCOLIN (*PTERNISTES SWAINSONI*) Male.

PTERNISTES SWAINSONI.
SWAINSON'S FRANCOLIN.

(PLATE 30.)

Perdix swainsonii, Smith, Rep. Exped. Cent. Afr., p. 54 (1836).

Pternistes swainsoni, Sharpe's ed. Layard Birds of S. Afr., p. 587 (1875-84); Nicolls & Eglington, Sportsman in S. Afr., p. 102 (1892); Ogilvie-Grant, Cat. Birds Brit. Mus., xxii, p. 179 (1893); Reichenow, Vögel Afrikas, i, p. 456 (1900-01); Sclater, Ann. S. Afr. Mus., iii, p. 354 (1905); Sclater & Stark, Birds of S. Afr., iv, p. 217 (1906).

LOCAL NAMES. "Pheasant" of the English Colonists; "Fazant" of the Dutch.

DESCRIPTION. Length of a male about 13 in. The female is slightly smaller and resembles the male except that she is without the chestnut edgings to the feathers of the lower-breast and flanks, and has no spurs. The bird figured is an adult male.

DISTRIBUTION. Swainson's Francolin was first discovered by Smith along the rivers south of Kurichane; these rivers rise on the northern slopes of the Magaliesberg. It is not found much south of this point, but is common enough to the north right up to the Zambesi. I have frequently shot it along the southern slopes of the Magaliesberg, at Rustenburg, Zeerust, and on the Zeerust-Mafeking road; it is quite common near the Victoria Falls and it ranges into German South-West Africa.

SWAINSON'S Francolin is never found far from water. The sort of country it likes and in which it is most common is one which is well watered, with plenty of cultivation to provide it with food, and thick bush along the edge of the water where it can roost, breed and find shelter.

It is easy to tell if Swainson's Francolin is present in any numbers should you be looking for them, as they utter their

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curious harsh note at dawn and dusk. I have often watched them drink in the evenings and roost and then call away for some time, just as cock pheasants do in England.

When it can, it feeds on any grain obtainable from the ripened crops, but otherwise its food is the usual mixed diet of a gallinaceous bird, i.e. bulbs, seeds, berries and insects.

The natives and colonists often find this species a nuisance to young crops, and are generally glad to have it killed; nevertheless it does some good by destroying locusts.

It is a great runner, but sometimes gives good sport, especially if the guns can get near thick cover and then have the birds driven; this can often be done about 7 or 8 o'clock in the morning when the birds are well out in the young crops feeding, and under these circumstances I have seen them come quite high and fairly fast.

They are dry and indifferent-eating, unless well hung and cooked with great care.

From a description of a nest found by Ayres, on the Shanghai River, we find that the eggs are a pinkish-cream colour, finely speckled with chalky-white and measure about $1\frac{1}{2}$ in. long, and are of the usual game-bird shape.

C. G. Davies del.

Witherby & Co. imp.

HARLEQUIN QUAIL (*COTURNIX DELAGORGUEI*) Male.

COTURNIX DELAGORGUEI.
HARLEQUIN QUAIL.

(PLATE 31.)

Coturnix delagorguei, Delagorgue, Voy. Afr. Austr., II, p. 615 (1847); Sharpe's ed. Layard Birds of S. Afr., p. 605 (1875-84); Nicolls and Eglinton, Sportsman in S. Afr., p. 106 (1892); Ogilvie-Grant, Cat. Birds Brit. Mus., XXII, p. 243 (1893); Reichenow, Vogel Afrikas, I, p. 507 (1900-01); Selater, Ann. S. Afr. Mus., III, p. 355 (1905); Selater & Stark, Birds of S. Afr., IV, p. 224 (1906).

LOCAL NAME. "Lequatha" of the Matabele (Oates).

DESCRIPTION. The bird figured is an adult male. The female has the throat and chin white, the sides of the neck and cheeks buffish-white spotted with black, the rest of the lower surface dull chestnut with black spots and mottlings on the upper-breast and along the flanks. Length about 6 in. Its weight varies but average specimens weigh about $3\frac{1}{2}$ oz.

DISTRIBUTION. The Harlequin Quail is found over the greater part of Africa from the Nile to the Cape Colony. In South Africa it occurs in the eastern part of the Cape Colony and extends northwards to Rhodesia and Ovampoland. In East and Central Africa it is common.

THE Harlequin Quail is one of the most interesting of the South African migrants. In Potchefstroom, where I first met with it, it appears in large numbers about Christmas.

In good Quail years it arrives in immense flocks. Shortly after arriving they start breeding and I think are double brooded, but it is almost impossible to verify this as it is difficult to keep so small a bird under prolonged observation. My experience is that young ones can be found from Christmas to April; the eggs are practically indistinguishable from those of *Coturnix capensis*.

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These birds are perfectly easy to keep in captivity, and given a suitable aviary that is not overcrowded, they are easy to breed.

Harlequins frequent exactly the same sort of land as Cape Quail, and the bag after a shoot will usually contain a proportion of each species. I have shot a good many Cape Quail near Bloemfontein, but have never met with the Harlequin there.

The males of this species vary much in bulk and size, and this is especially noticeable in living specimens. I had a dozen or more males brought to me in one consignment, and some of them apparently were almost a third larger than the others. This I think is partly due to age and partly due to the fact that some birds carry their feathers tightly pressed to their bodies, and others carry them loosely and consequently look larger.

C. G. Davies del.

Witherby & Co. imp.

CAPE QUAIL (*COTURNIX CAPENSIS*) Male

COTURNIX CAPENSIS.

CAPE QUAIL.

(PLATE 32.)

Coturnix capensis, Lichtenstein, *vide* Gray, Hand-List of Birds, II, p. 268 (1870); Ogilvie-Grant, Cat. Birds Brit. Mus., XXII, p. 237 (1893); Woodward, Natal Birds, p. 164 (1899).

Coturnix coturnix, Sharpe's ed. Layard Birds of S. Afr., pp. 603, 854 (1875-84.)

Coturnix communis, Nicolls & Eglington, Sportsman in S. Afr., p. 106 (1892); Selater, Ann. S. Afr. Mus., III, p. 354 (1905); Selater and Stark, Birds of S. Afr., p. 35, IV, p. 221 (1906).

Coturnix coturnix africana, Reichenow, Vögel Afrikas, I, p. 506 (1900-01).

LOCAL NAMES. "Kwartel" of the Dutch; "Isagwityi" of the Amaxosa (Stanford); "Kue-Kue" of the Basutos (Murray).

DESCRIPTION. The bird figured is an adult male in breeding plumage. The females, young males, and adult males in non-breeding plumage, only differ from the bird figured in having no black throat-patch. Length about $6\frac{1}{2}$ in.

This Quail only differs from the European species (*C. communis*) in having the lores, sides of the head, chin and throat rufous instead of white, and in being slightly smaller. The true European Quail does not apparently extend its migrations as far south as the Zambesi.

DISTRIBUTION. The Cape Quail is found all over South Africa from Cape Town to the Zambesi, and it has been recorded from Nyassaland, Madagascar, the Comoros, Cape Verde and Canary Islands, Madeira and the Azores.

THE Cape Quail was extremely common near Potchefstroom. The main body of Quail arrived about the end of November and started breeding the following month in exactly the same sort of places as those chosen by the Harlequin Quail which, as far as I can see, has precisely similar habits.

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Quail are most plentiful on cultivated lands that have been allowed to become fallow and covered with weeds, but they are also common enough among mealies and other crops.

About May the greater part of the Quail have bred and they then migrate, but there are always a few stragglers to be found in suitable cover.

Quail feed chiefly on grass and weed seeds, the crops of those I examined at Potchefstroom being crammed with a small black seed about the size of No. 8 shot and a few termites and insects. Those I had in captivity were very fond of live termites and always met me at the aviary door when a bucket-full of ant-heap was brought to them.

They fly swiftly and rise with the usual game-bird rush, uttering a cry like "Pree-pree-pree." Shooting them is rather monotonous if the cover be low and if the birds are plentiful, but they often give rather sporting shots when flushed in high mealies (maize), and a good spaniel with a tender mouth is then invaluable.

Quail when shot should not be hung, as they decompose quickly. An excellent recipe for cooking them is to place a green chili inside the bird after drawing it, then to wrap a piece of fat bacon round it and a green vine leaf round the whole, and roast fairly quickly. So cooked they are appetizing to a degree.

They lay from six to twelve eggs in a little grass-lined hollow, sometimes in grass and sometimes under the shelter of a big weed or a small bush. The eggs are indistinguishable from those of the European Quail (*C. communis*), and are bright yellowish-brown, flecked and marked with dark brown spots and splashes, and are sometimes very handsome.

C. G. Davies del.

BLUE QUAIL (*EXCALFACTORIA ADANSONI*) Male and Female.

Witherby & Co. imp.

EXCALFACTORIA ADANSONI.

BLUE QUAIL.

(PLATE 33.)

Coturnix adansonii, Verreaux, Rev. et Mag. de Zool., 1851, p. 515 ; Sharpe's ed. Layard Birds of S. Afr., p. 606 (1875-84) ; Nicolls and Eglington, Sportsman in S. Afr., p. 107 (1892).

Excalfactoria adansonii, Ogilvie-Grant, Cat. Birds Brit. Mus., xxii, p. 255 (1893) ; Woodward, Natal Birds, p. 164 (1899) ; Reichenow, Vogel Afrikas, I, p. 509 (1900-01) ; Sclater, Ann. S. Afr. Mus. III, p. 355 (1905) ; Sclater & Stark, Birds of S. Afr., iv, p. 226 (1906).

DESCRIPTION. The birds figured are an adult male and female. Length about 5 in.

DISTRIBUTION. Mr. Sclater says "that this beautiful little species has hitherto been found only in West Africa from the Gold Coast to Gaboon in Nyassaland, and within our limits in Natal and the eastern part of Cape Colony."

THERE are but three species of *Excalfactoria*, one of which occurs in India and Ceylon, where I have shot it, one in Australia (*E. lineata*), and the present one.

I have killed a few of these tiny Blue Quail near Cape Coast Castle on the Gold Coast ; they were found on old land going out of cultivation, and they flew swiftly and well.

Mr. Hutchinson states that it is pretty common in Natal though not appearing every season ; it frequents long grass and reeds, breeds in the country and migrates as soon as the young are old enough to travel.

Dr. Reichenow found a nest in the Cameroons in West

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Africa in November ; it was placed in a slight hollow in the ground, lined with grass-stalks and sheltered by a tussock. The eggs, eight in number, were light yellowish, blunt and not shiny ; they measured .80 by .70 in.

C. G. Davies del.

Witherby & Co. imp.

KURRICHAINE BUTTON-QUAIL (*TURNIX LEPURANA*) Female.

KURRICHANE BUTTON-QUAIL.

TURNIX LEPURANA.

(PLATE 34.)

Ortygis lepurana, Smith, Rep. Exped., App. p. 55 (1836).

Turnix lepurana, Sharpe's ed. Layard Birds of S. Afr., p. 608 (1875-84); Nicolls & Eglington, Sportsman in S. Afr., p. 107 (1892); Ogilvie-Grant, Cat. Birds Brit. Mus., xxii, p. 539 (1893); Woodward, Natal Birds, p. 166 (1899); Reichenow, Vögel Afrikas, i, p. 301 (1900-01); Selater, Ann. S. Afr. Mus., iii, p. 355 (1905); Selater and Stark, Birds of S. Afr., iv, p. 238 (1906).

DESCRIPTION. The bird figured is a female, and is larger than the male; the rusty patch on the chest is very much darker than that of the male. Length of the male about $5\frac{1}{4}$ in., of the female $5\frac{3}{4}$.

The Kurrichane Button-Quail is regarded by Mr. Ogilvie-Grant as a subspecies of *Turnix sylvatica* of southern Europe and northern Africa, from which it differs by being slightly smaller.

LOCAL NAMES. "Reit-Quartel" of the Dutch; "Mabuaneng" of the Basutos (Murray).

DISTRIBUTION. This little Hemipode is quite a common summer resident in the Potchefstroom District, and I have found it all through the western Transvaal as far north as Mafeking. "It is widely distributed throughout the whole of South Africa, except perhaps in the western half of Cape Colony. Beyond our limits [i.e., south of the Zambesi River] it extends northwards to the Gold Coast and to North-East Africa and Aden."

THIS small bird has a great partiality for mealie fields, and there it runs like a swift rat through the weeds, but I rarely found it in the grassy "vleis" in which the two species of *Coturnix* (*delagorguei* and *capensis*) sometimes lie.

When shooting Cape or Harlequin Quail the Kurrichane Button-Quail is often met with in old mealie-lands, but as a rule it is mistaken for a Quail chick and is not fired at.

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On the wing it is easily distinguished from a true Quail ; it looks much lighter in colour, and swerves very much more. It does not fly far, and after one flight it will sometimes suffer itself to be caught by a spaniel rather than get up a second time. On rising, the true Quail gives a sharp cry of " Kree-kree-kree," but the Button-Quail is quite silent.

Like so many other South African birds, its time of migration depends on the abundance of its food and on the severity of the cold weather.

In February, 1907, my brother bought four of these little Quail from a Dutch boy in Pretoria and sent them to me in Potchefstroom ; they turned out to be three hens and one cock, and in my large aviary they lived a retired existence among some tall grass till the end of the following September, and fed on small seeds and termites which were supplied daily.

About September I noticed that the cock and one of the hens were very friendly and never far apart, so I moved them into an aviary where there was more cover, and which was only inhabited by a pair of Cut-throat Larks or Cape Long-claws (*Macronyx capensis*).

On the 3rd of October I noticed the pair of Button-Quail in a state of great excitement ; a nest had been made in a thick tuft of grass and the birds stood facing away from it, throwing bits of dried grass over their heads in its direction. The first egg was already in the nest.

On the 5th of October the second egg was laid, and in exactly twelve days the two extraordinary little ones were hatched. Never have I seen anything clothed in down quite so small and yet capable of independent movement. They looked no bigger than a good-sized humble-bee, and practically from the day of hatching were as active as their parents,

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scuttling off into cover and hiding motionless at the least noise. In colouring they reminded me of that peculiar caterpillar found on hedges in spring; I think it is the Gold-tail Moth, but am not quite sure.

The cock bird did the whole of the sitting; the hen never came near the nest, but went restlessly up and down the aviary "booming" for another mate, and for some weeks the whole garden resounded with the curious ventriloquial note which sounded like "Ooop." One chick was accidentally drowned, and the other was about half grown on October 27th.

I then went down to Cape Town and, to my great annoyance, when I returned ten days later I could find no trace of the young *Turnix*. The cock, however, had made a new nest close to the site of the old one, and was sitting on four eggs, two of which he hatched on November 19th, when he deserted the other two.

I opened the latter and found them to contain dead young just ready to come out.

The cock bird was wonderfully tame, and would allow himself to be picked up without struggling, and always brought his young up to my hand, out of which he took meal-worms and fed them. This simplified very much the rearing of these tiny things. In this species, after the young are a week or ten days old they are sometimes fed and brooded by the female; this I frequently saw her do.

The two young referred to above turned out to be both hens, and on December 17th their eyes had changed from black to the pearl colour of the adult bird, which they completely resembled in all respects.

In the following March, 1908, I missed the cock Button-Quail and suspected he was sitting, but the cover in their

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aviary was so thick that I did not risk searching for him and perhaps disturbing him. On March 24th I found him waiting at the aviary door with a newly-hatched chick under him, which he fed on some huge meal-worms. The next morning, when I went to look at him, I found three chicks under him, so that he must have gone back to the nest and hatched these off during the night. On the 26th, to my great surprise, I found a fourth chick with him. He was the only male I possessed, so that there could have been no question of the young having been hatched by different males. Three of these chicks he brought up successfully.

The nest is merely a small depression in a tuft of herbage, and is thickly lined with grass. Four eggs are the normal clutch. They measure about .89 by .69 in., and are abruptly pointed, of a dirty-green coloured ground, speckled with fine spots of dirty-purple, light and dark brown.

C. G. Davies del.

Witherby & Co. imp.

NATAL BUTTON-QUAIL (*TURNIX NANA*) Female.

TURNIX NANA.
NATAL BUTTON-QUAIL.

(PLATE 35.)

Hemipodius nanus, Sundevall, Oefvers. k. Vet. Akad. Forhandl., 1850, p. 110.

Turnix hottentota, Sharpe's ed. Layard Birds of S. Afr., p. 607 (part) (1875-84).

Turnix nana, Ogilvie-Grant, Cat. Birds Brit. Mus., xxii, p. 541 (1893); Reichenow, Vögel Afrikas, i, p. 303 (1900-01); Selater, Ann. S. Afr. Mus., iii, p. 355 (1905); Selater & Stark, Birds of Afr., iv, p. 240 (1906).

DESCRIPTION. The specimen figured is a female. Length of the male about 6 in. in the flesh, the female is a little larger and slightly more brightly coloured.

In the young bird the buff on the breast is not nearly so marked, and the transverse bars extend entirely across.

DISTRIBUTION. Mr. Selater writes of it, "that it was first discovered in Natal by Wahlberg and was apparently lost sight of until recently, when Mr. Ogilvie-Grant brought it into notice again; outside South African limits it has been met with in Nyassaland."

In Pondoland it is not common, but is found throughout that country on grassy flats.

THE habits of the Natal Button-Quail, from notes taken in Pondoland, appear to resemble those of other species. It flies straight and fast and runs hard as soon as it pitches, so that it is very difficult to find again.

According to Mr. Selater it nests in Natal in December, the nest being a small hollow about 3 in. across and about $\frac{3}{4}$ -in. deep, lined with a few fine grass-stalks. The eggs which are now in the South African Museum, are three in

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number, very pale greenish-white, very thickly covered with small spots and blotches of a yellowish and a darker shade of brown. In shape they are nearly even ovals; they measure .95 to .90 by .76 to .75 in.

C. G. Davies del.

Witherby & Co. imp.

HOTTENTOT BUTTON-QUAIL (*TURNIX HOTTENTOTTA*) Female.

TURNIX HOTTENTOTTA.
HOTTENTOT BUTTON-QUAIL.

(PLATE 36.)

Hemipodius hottentottus, Temminck, *Pig. et Gall.*, III, pp. 636, 757 (1815).

Turnix hottentotta, Sharpe's ed. *Layard Birds of S. Afr.*, p. 607 (part) (1875-84); Nicolls and Eglington, *Sportsman in S. Afr.*, p. 107 (1892); Ogilvie-Grant, *Cat. Birds Brit. Mus.*, XXII, p. 542 (1893); Woodward, *Natal Birds*, p. 167 (1899); Reichenow, *Vögel Afrikas*, I, p. 303 (1900-01); Sclater & Stark, *Birds of S. Afr.*, IV, p. 237 (1906); Sclater, *Ann. S. Afr. Mus.*, III, p. 355 (1905).

LOCAL NAMES. "Sand-Quail" of the English; "Reit-Quartel" of the Dutch.

DESCRIPTION. The specimen figured is a female. Length about 6 in. The female is slightly larger than the male.

I was unable to obtain a skin of a male in South Africa, and give the following description of one by Mr. Sclater: General colour above, dark rufous; most of the feathers barred with black and edged with white, giving a general mottled appearance; scapulars conspicuously margined with golden-buff; wing-quills blackish-brown, the outer primary strongly margined with white; lores, space round the eye, and cheeks mottled buff and white, chin and throat white; rest of the under-parts also white, covered with semi-circular black spots, most numerous on the chest; a slight wash of pale buff on the chest; tail elongated and pointed.

DISTRIBUTION. The Hottentot Button-Quail is apparently confined to the southern part of Cape Colony, where it is a resident and not a very common one. It has not been recorded from Natal nor has it been met with north of the Orange River.

It is a curious fact that in the Button-Quail family the female bird is nearly always the larger and more brilliantly coloured.

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She does all the courting and looking after the smaller male, which in his turn is entirely responsible for the incubation of the eggs and bringing up of the young. As soon as the first clutch of eggs is laid the female leaves the male and pairs with another, until she has laid her full complement of eggs.

In captivity there have never been enough males to provide sufficient mates for the hen of any one species, but I do not think it probable that a Button-Quail would lay more than a dozen eggs in one season.

Sclater writes in the *Fauna of South Africa* that it is generally solitary, although two may occasionally be seen together. It is found on grassy plains or among the reeds of dried-up "vleis"; when flushed it flies a short distance, quickly settles down again and then makes off at a run; it feeds on seeds and insects. The eggs in the South African Museum are very pointed at one end, of a yellowish-grey colour, very thickly speckled with spots and blotches of a yellowish and darker brown; they measure .90 to .96 by .75 to .80 in.

C. G. Davies del.

Witherby & Co. imp.

- A. COMMON GUINEA-FOWL (*NUMIDA CORONATA*)
B. EAST AFRICAN GUINEA-FOWL (*NUMIDA MITRATA*)
C. DAMARALAND GUINEA-FOWL (*NUMIDA PAPILLOSA*)

NUMIDA CORONATA.
COMMON GUINEA-FOWL.

(PLATE 37, FIG. A.)

Numida coronata, Gray, List of Birds, Pl. III, Gall., p. 29 (1844) Sharpe's ed. Layard Birds of S. Afr., pp. 581, 854 (part) (1875-84) ; Nicolls & Eglington, Sportsman in S. Afr., p. 108 (1892) ; Ogilvie-Grant, Cat. Birds Brit. Mus., XXII, p. 376 (1893) ; Woodward, Natal Birds, p. 165 (1899) ; Reichenow, Vögel Afrikas, I, p. 441 (1900-01) ; Selater, Ann. S. Afr. Mus., III, p. 355 (1905) ; Selater and Stark, Birds of S. Afr., IV, p. 227 (1906).

LOCAL NAMES. "Tarantal" of the Dutch ; "Impangele" of the Amaxosa and Zulus (Woodward).

DESCRIPTION. Length of the male about 24 in. The sexes are alike. Weight of a well-grown bird just over 3 lb.

DISTRIBUTION. The range of this bird extends all over the eastern half of Cape Colony and Natal and northwards to the Zambesi, where it merges into the East African *N. mitrata* ; to the west its range overlaps that of the closely allied *N. papillosa*.

I have shot or seen this species in many parts of the Transvaal ; it is common near Potchefstroom and along the banks of the Modder River, and in fact in most suitable places in the Orange River Colony. I have also seen it in the Kalahari Desert in great numbers.

GUINEA-FOWL are very gregarious, and are sometimes found in enormous flocks. I saw one near Zeerust which must have consisted of at least 500 birds. They range over a huge tract of country, and a flock may have its headquarters on one farm and work backwards and forwards some miles to another farm, where the food is suitable.

In the *Fauna of South Africa* it is stated that although often kept tame on farms, it never breeds in captivity nor

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mates with the domestic species. This is contrary to my experience. I got some young birds which were on a Boer farm and had been hatched under a hen, and these when full grown not only bred *inter se* but also crossed freely with the domesticated bird, which is doubtless derived from a West African species (*N. meleagris*). The wild cocks were much more powerful and heavy than the tame birds, and during the mating-season they killed several of the latter by literally running them to death. A Guinea-Fowl's duel is a very long-winded and tedious affair, and consists in the weaker bird running about three yards in front of the stronger for an hour or so, when the assailant will stop to draw breath, as well he may. The weaker bird then attacks: there is a wild jump in the air, but as they have no spurs no harm is done—a feather or two is lost, the weaker bird loses heart, and the whole performance is gone through again. The hen bird meanwhile looks on and does nothing. This goes on *ad nauseam* until the weaker bird is finally beaten off altogether, and the victor takes off the hen.

I think they are monogamous—the tame ones I owned certainly were; but when the young are hatched, several birds apparently “pool” their broods, and look after all indiscriminately, even if the broods are of different ages.

Guinea-Fowl are very difficult to shoot when found on river-banks, unless you can get a gun on each bank, as at the first shot they invariably cross to the further side; but curiously enough they are often singularly stupid when surprised roosting.

When found in open country they invariably start running, but if you can get ahead of them on a pony, the flock will often break up and squat, and provided you have a steady pointer, a good bag can then be made. These occasions

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however are few, and the scent of Guinea-Fowl is so strong that it drives most dogs wild with excitement. These birds do a certain amount of good, as they are largely insectivorous and feed freely on locusts and their eggs.

Guinea-Fowl breed in the South African summer, laying from ten to twenty pale brown eggs specked with pin-point spots of darker brown. The shells are remarkably hard. The eggs measure about 1.8 by 1.45 to 1.5 in.

NUMIDA MITRATA.

EAST AFRICAN GUINEA-FOWL.

(PLATE 37, FIG. B.)

Numida mitrata, Pallas, Spic. Zool., I, fasc. iv, p. 18, Pl. III (1767); Ogilvie-Grant, Cat. Birds Brit. Mus., XXII, p. 378 (1893); Shelley, Birds of Afr., I, p. 183 (1896); Sharpe, Hand-List of Birds, I, p. 44 (1899); Reichenow, Vögel Afrikas, I, p. 438 (1900-01); Selater, Ann. S. Afr. Mus., III, p. 355 (1905); Selater & Stark, Birds of S. Afr., IV, p. 232 (1906).

LOCAL NAMES. "Ikanka" of the Zambesi natives (Capt. Boyd Alexander); "Kanga" of the Swaheli; Mitred Guinea-Fowl of some authors.

DESCRIPTION. Length about 22 in. The sexes are alike. The figure in the Plate is copied from Selater & Stark, *Fauna of South Africa*, Vol. IV.

DISTRIBUTION. East Africa, from the Zambesi to Mombasa, and quite common along the Uganda Railway.

Within South African limits it has been obtained by the late Capt. Boyd Alexander along the banks of the Zambesi.

IN habits the East African Guinea-Fowl exactly resembles the Common Guinea-Fowl (*N. coronata*). In East Africa it is exceedingly abundant, especially along the banks of rivers and streams that are well fringed with bush, and its harsh and unmistakeable cry can generally be heard in the early mornings.

I obtained some of these birds from a London bird-dealer in the winter of 1910, and turned them loose about the grounds of my house in Ireland in the beginning of the following spring. They showed no inclination to breed, but stayed close to the poultry-houses and fed with the

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chickens. They were not at all quarrelsome, and invariably fled when attacked by any other bird, their extraordinary speed and activity taking them out of the way like a flash. In the summer I had some fifty or sixty young ones of the domestic Guinea-Fowl (*N. meleagris*) hatched out under hens, and as soon as they were a few weeks old the East Africans adopted them, and took them all to roost high up in a huge elm. I am quite sure they would breed if given freedom on a large farm, and they form a very handsome addition to the poultry-yard with their brilliant blue necks and very erect carriage.

I regret to say that the only hen bird I had of *N. mitrata* was weakly when bought, and finally died of decline; but I feel sure that vigorous hens would breed freely if allowed to be at liberty.

Since starting to write my experiences of *N. mitrata*, I found that the male birds paired with the domestic variety, and I have a number of hybrid chicks.

Guinea-Fowl have a curious habit of shampooing or massaging one another's heads and necks. I have often watched a bird having his wattles and loose skin gently nibbled all over by a friend, while the recipient of these favours stood with half-closed eyes and an irresistibly comical look of intense enjoyment displayed in his attitude.

NUMIDA PAPILLOSA
DAMARALAND GUINEA-FOWL.

(PLATE 37, FIG. C.)

Numida papillosa, Reichenow, Orn. Monastb., 1894, p. 145; *id.*, Vögel Afrikas, I, p. 444 (1900-01); Sclater, Ann. S. Afr. Mus., III, p. 355 (1905); Sclater & Stark, Birds of S. Afr., IV, p. 231 (1906).

Numida coronata, Sharpe's ed. Layard Birds of S. Afr., p. 581 (part) (1875-84).

Numida cornuta, Ogilvie-Grant, Cat. Birds Brit. Mus., XXII, p. 378 (1893).

DESCRIPTION. Length about 22 in. The sexes are alike. The figure in the Plate is copied from Sclater & Stark, *Fauna of South Africa*, Vol. IV.

DISTRIBUTION. This is the western representative of *N. coronata*, and is found in German South-west Africa, and extends its range in some places into the Kalahari.

I HAVE met, in various parts of Africa, with five different species of Guinea-Fowl, and all of them had exactly the same ways and habits. I have not personally met with this species, but it so nearly resembles the ordinary South African bird, that its habits are doubtless the same.

In the *Fauna of South Africa* it is stated that "a nest of this bird was found in February containing sixteen eggs, the nest was in a hollow in the sand and the eggs were thick in the shell, creamy brown, without darker spots. Some of these were hatched out under a hen and the following year a pair of these young bred and produced nine young ones." This contradicts the prevalent idea that these birds will not breed in captivity.

C. G. Davies del.

Witherby & Co. imp.

CRESTED GUINEA-FOWL (*GUTTERA EDOUARDI*) Male.

GUTTERA EDOUARDI.

CRESTED GUINEA-FOWL.

(PLATE 38.)

Numida edouardi, Hartlaub., Journ. Ornith., 1867, p. 36.

Numida verreauxi, Sharpe's ed. Layard Birds of S. Afr., p. 585 (1875-84); Nicolls & Eglington, Sportsman in Natal, p. 109 (1892); Woodward, Natal Birds, p. 165 (1899).

Numida pucherani, Sharpe's ed. Layard Birds of S. Afr., p. 586 (1875-84); Nicolls & Eglington, Sportsman in S. Afr., p. 109 (1892).

Guttera edouardi, Ogilvie-Grant, Cat. Birds Brit. Mus., xxii, p. 382 (1893); Selater, Ann. S. Afr. Mus., iii, p. 355 (1905); Selater and Stark, Birds of Afr., iv, p. 233 (1906).

Guttera cristata edouardi, Reichenow, Vögel Afrikas, i, p. 451 (1900-01).

LOCAL NAMES. "Inkankatori" of the Zambesi natives (Capt. Boyd Alexander).

DESCRIPTION. Length 20 in. The sexes are alike.

DISTRIBUTION. The Crested Guinea-Fowl is found only in one or two districts in Natal, whence its range extends to the Zambesi and Nyassaland. A very similar species is found in Uganda.

THE late Capt. Boyd Alexander gives the following account of the Crested Guinea-Fowl: "By nature this bird is far more retiring than the Helmeted Guinea-Fowl (*N. mitrata*), and possesses even a greater aptitude for running, seldom making use of flight.

"We were fortunate enough to obtain two specimens of this species near the river above Zumbo, while on another occasion, while pitching our tent for the night, we heard a flock close to the water, and not far off another one, but of

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the Helmeted species (*N. mitrata*), enabling us to observe to a nicety the difference between the cries of the two species. The call of the former, otherwise the same as the latter, was varied now and then by a tremulous whistle towards nightfall and kept up long after night had set in.

“The Zambesi natives look upon this bird with a certain amount of superstition. Nothing would induce them to eat it, and they told us that its flesh was poisonous.”

I obtained a pair of these birds, through the courtesy of Dr. Gunning, from the Pretoria Zoo, and for some weeks kept them in a large wire enclosure at Bloemfontein. I put up some leafy branches, under which they ran and hid at the least alarm. I found them shy and very silent, but they throve well until I took them to England, when I gave them to the Zoological Gardens in Regent's Park. In captivity I fed them on all or any sort of grain and on broken up bread, and they were fond of ground nuts and broken biscuits.

C. G. Davies del.

YELLOW-THROATED SANDGROUSE (*PTEROCLES GUTTURALIS*) Male and Female.

Witherby & Co. imp.

PTEROCLES GUTTURALIS.
YELLOW-THROATED SANDGROUSE.

(PLATE 39.)

Pterocles gutturalis, Smith, Rep. Exped. Cent. Afr., p. 56 (1836); Sharpe's ed. Layard Birds of S. Afr., p. 577 (1875-84); Nicolls & Eglington Sportsman in S. Afr., p. 112 (1892); Ogilvie-Grant, Cat. Birds Brit. Mus., xxii, p. 25 (1893); Reichenow, Vögel Afrikas, I, p. 305 (1900-01); Sclater, Ann. S. Afr. Mus., III, p. 353 (1905); Sclater & Stark, Birds of S. Afr., IV, p. 187 (1906).

LOCAL NAME. "Nacht Patrijs" of the Dutch.

DESCRIPTION. The birds figured are an adult male and female.

The young birds are like the female, but the transverse bands on the mantle are smaller and finer.

Length about 11 in.

DISTRIBUTION. The Yellow-throated Sandgrouse was first discovered in the present Rustenburg District of the Transvaal. From the western Transvaal it extends to Bechuanaland and the northern Kalahari, while beyond our limits it is recorded from Nyassaland, Masailand, and the mountains of Abyssinia. It does not appear to be found in Damaraland. I have shot it on the road between Fort Hall and Nairobi in British East Africa, but have no experience with this species within our limits; on the wing it much reminded me of our Red Grouse.

MR. SCLATER writes that the Yellow-throated Sandgrouse is usually found in companies of from three to twelve individuals, on bare ground not far from water, where it feeds on seeds and small bulbous roots.

When crouched on the ground it is very difficult to detect; when flushed it does not run, but rises at once with a "whirring" sound made by the wings. The note, only heard on the wing, is a short and somewhat harsh "Tweet."

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Like other Sandgrouse, it resorts to water daily, but not at such regular hours as other species.

These Sandgrouse are specially fond of the grain of Kaffir-corn, and often feed in large numbers in fields ready for reaping. In consequence perhaps of this, they are generally very good-eating, especially when split open and grilled with butter.

Mr. H. A. Bryden writes to me as follows :—

“In crossing the Kalahari Desert I found at the water-pits, where Sandgrouse abounded, that as a general rule the Double-banded species (*P. bicinctus*) came to drink chiefly in the evening, towards dusk. The Yellow-throated species (*P. gutturalis*), though sometimes seen at water about the middle of the afternoon, drank mainly between 8 and 10 a.m., as did the Namaqua Sandgrouse. Generally speaking, the Variegated Sandgrouse (*P. variegatus*) came to water quite early in the morning, just after sunrise. Sometimes however, as at Maqua, these last birds drank later, and were to be seen from eight till nearly ten in the morning. At this desert pool of Maqua, a temporary water only, and at T’Klakane, a permanent water-pit, both between Palachwe and the Botletli River, we saw Namaqua, Variegated, and Yellow-throated Sandgrouse in very large numbers at early morning. At T’Klakane and other waters large numbers of the Double-banded species drank towards dusk. I saw all these Sandgrouse also in considerable numbers at the large pan at Markereng, South Kalahari, and they were plentiful on the Botletli River, Ngamiland.

“*P. gutturalis* is much the biggest and heaviest of the four species, and in the deep chocolate or red-brown colouring of the under-parts of the body and in its cry, resembles most nearly the family of the Red Grouse of Scotland. The rare

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and beautiful sulphur-green colouring of the neck and breast of the male, and the dark brown gorget-like band upon the breast, serve still to render this a notable bird. All the Sandgrouse have very tough skins, which afford real hard work to separate from the flesh; this, at all events, was my experience in South Africa. The flesh of all Sandgrouse is tough, and compares poorly with that of many of the South African game-birds.

“ During day-time the Yellow-throated species spread over an immense extent of country—their magnificent powers of flight helping them largely to feed in pairs or families, perhaps even a couple of families, their food consisting chiefly of grass-seeds, which in the grassy wastes of the Kalahari they find plentiful enough. The cry of these birds, as they come to water is a hoarse ‘Glock, glock.’ My hunting friend W. Dove, who is a Lowland Scot, compared it, not inaptly, with the call of Grouse as they fly in among the corn-stooks in autumn. We shot 18 brace of the Variegated and Namaqua Sandgrouse at the pool of Maqua by fair shooting (not *en masse*), and could have easily killed fifty brace or more if we had been so minded. Butcherly gunners sometimes fire into a hugh flight of Sandgrouse as they get up in a cloud from the water, and kill scores. Although we saw large numbers of Yellow-throated Sandgrouse at Maqua, as a rule they seem to me to be scarcer than the other species. For close on two hours, from 8 to 10 a.m., at this pool these three species of Sandgrouse streamed in from various parts of the compass, the Namaqua and Variegated uttering incessantly their sharp shrill cries. The Yellow-throated, which were not so numerous as the others, were easily picked out by their greater size, their dark under-parts, and their hoarse cry, uttered as they came up and swept round the

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water. The Namaqua and Variegated species mingled freely, as they came up and circled incessantly round about the pool at an immense rate of speed. Suddenly a combined band would swerve towards that end of the pool farthest from our waggon, and with one swoop of incredible swiftness descend upon the margin. The rustle of their wings as they enacted this manoeuvre, was most remarkable. If not disturbed, the leading birds drank quickly and flew off, when others took their places; the watering process being gone through with perfect order and without overcrowding. If, however, my companion or I moved with our guns in that direction, the whole flight would rise with the loud whirr of hundreds of pairs of wings, and circle in the air round the pool again, until a safer opportunity presented itself for drinking. The Yellow-throated Sandgrouse held together in flocks of from a dozen to thirty or forty. They 'stooped' together at the water and drank frequently. From 8 o'clock till close on 10 this wonderful flight continued; as birds drank and departed others were constantly arriving to take their places. I should judge that the average time spent by each bird at and around the water was from twenty minutes to half an hour."

The eggs, usually three in number, are laid on the bare ground among the grass. They are dusky-tawny, marked with lines and blotches of umber, forming a zone toward the base, and measure about 1.7 by 1.09 in.

C. G. Davies del.

SPOTTED SANDGROUSE (*PTEROCLES VARIEGATUS*) Male and Female.

Witherby & Co. imp.

PTEROCLES VARIEGATUS.
SPOTTED SANDGROUSE.

(PLATE 40.)

Tetrao (Pterocles) variegatus, Burchell, Trav. S. Afr., II, p. 345 (1824).

Pterocles variegatus, Sharpe's ed. Layard Birds of S. Afr., p. 578 (1875-84); Nicolls & Eglington, Sportsman in S. Afr., p. III (1892); Ogilvie-Grant, Cat. Birds Brit. Mus., XXXII, p. 22 (1893); Reichenow, Vögel Afrikas, I, p. 307 (1900-01).

Pterocles variegatus, Selater, Ann. S. Afr. Mus., III, p. 353 (1905); Selater & Stark, Birds of S. Afr., IV, p. 186 (1906).

LOCAL NAME. "Gheel Patrijs" of Dutch (Nicolls & Eglington).

DESCRIPTION. The birds figured are an adult male and female. Length about $9\frac{1}{2}$ in.

DISTRIBUTION. The Spotted Sandgrouse is quite common in the Kalahari west of Vryburg; it does not extend south of the Orange River, but is found in the western portions of our limits as far north as the Okavango River.

THIS species has habits very similar to those of the Namaqua Sandgrouse.

During the day-time it ranges over the veldt in small parties searching for food, which consists chiefly of grass-seeds and of such berries as it can find. It is often met with at great distances from any known water, but it drinks morning and evening, and nearly always at such regular times that one can almost set a watch by it. Its long wings and powerful breast-muscles send it whizzing through the air at a speed far exceeding that of the fastest driven partridge, and at one water-hole that I know of in the Kalahari, at 7.45 a.m. precisely the air was filled with these Sandgrouse,

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and the place resounded with their clear, loud call of "Chock-lit, chock-lit, chock-lit." If scared when sitting they utter a confused "Gug-gug-gug" note, and when once fairly on the wing break into their "Chock-lit" note.

All Sandgrouse give good driven shots if the gunner is content to lie well out in the veldt at least two hundred yards from their watering-places, as they have then not begun to slacken speed to pitch at the water. Shooting them near the water I consider mere poaching and butchery.

Layard describes the eggs as pale dull greenish-brown spotted with light brown and indistinct purple, and further spotted with dark brown.

C. G. Davies del.

DOUBLE-BANDED SANDGROUSE (*PTEROCLES BICINCTUS*) Male and Female.

Witherby & Co. imp.

PTEROCLES BICINCTUS.

DOUBLE-BANDED SANDGROUSE.

(PLATE 41.)

Pterocles bicinctus, Temminck, Fig. et Gall., III, pp. 247, 713 (1815); Sharpe's ed. Layard Birds of S. Afr., pp. 575, 854 (1875-84); Nicolls & Eglington, Sportsman in S. Afr., p. iii. (1892); Ogilvie-Grant, Cat. Birds Brit. Mus., XXII, p. 30 (1893); Reichenow, Vögel Afrikas, I, p. 309 (1900-01); Selater, Ann. S. Afr. Mus., III, p. 353 (1905); Selater & Stark, Birds of S. Afr., IV, p. 189 (1906).

DESCRIPTION. The birds figured are an adult male and female. Mr. Ogilvie-Grant says that examples from Demaraland and Griqualand West are so much paler and lighter in colour, that they might very well be distinguished under a subspecific name. Length about 9 in.

DISTRIBUTION. The chief haunt of the Double-banded Sandgrouse is Bechuanaland. It does not appear to be found south of the Orange River except in the little Namaqualand, where it is common. It is found as far north as the southern part of Angola and the Zambesi Valley. I shot a few of what I am nearly sure were of this species on the Athi Plains in British East Africa.

I HAVE no personal experience of this species in South Africa, but it appears much to resemble the other Sandgrouse in its habits, being generally found in flocks which split up during the breeding-season. Its flight is swift, and its note a curious shrill whistle.

The following account of its habits in the Zambesi Valley was written by the late Capt. Boyd Alexander :—

“These birds frequent open spots in the woods, where the soil is loose and stony and the slopes of the hilly banks are coated with dry grass. They are fond of basking in the

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sun, remaining in a sleepy condition during most of the day. When on the ground it is difficult to see them, and one almost treads upon them before they rise, startling one with their flare of wings and noisy 'Chuk, chuk' notes, which are given out simultaneously and with great zest.

"Out of the breeding season they go together in large batches, sometimes thirty or forty in one flock.

"In habits they might almost be termed crepuscular. Every evening, as regular as clockwork and just as dusk is closing in, they wing their way to their watering-spots, while, should the night be moonlit, they feed in the vicinity of water."

My friend Major Sparrow, found this bird breeding in June in Portuguese East Africa, and writes that it is very partial to red soil with which its eggs completely harmonise.

Mr. Selater described the eggs as being three or four in number, and laid on the bare ground among short grass. They are brownish-pink, spotted and blotched all over, especially at the thicker end, with a darker shade of the same colour. They measure about 1.37 by .93 in.

C. G. Davies del.

NAMAQUA SANDGROUSE (*PTEROCLOLURUS NAMAQUA*) Male and Female.

Witherby & Co. imp.

PTEROCLURUS NAMAQUA.
NAMAQUA SANDGROUSE.

(PLATE 42.)

Tetrao namaqua, Gmelin, Syst. Nat., I, p. 754 (1788).

Pterocles namaqua, Sharpe's ed. Layard Birds of S. Afr., pp. 574, 854 (1875-84); Nicolls & Eglington, Sportsman in S. Afr., p. 109 (1892).

Pterochirus namaqua, Ogilvie-Grant, Cat. Birds Brit. Mus., xxii, p. 10 (1893); Selater, Ann. S. Afr. Mus., iii, p. 354 (1905); Selater & Stark, Birds of S. Afr., iv, p. 192 (1906).

LOCAL NAMES. "Namaqua Patrijs" or "Kelkje Wijn" of the Dutch; "Namaqua Partridge" of the English Colonists.

DESCRIPTION. The birds figured are an adult male and female. Length about 11 in.

DISTRIBUTION. This bird is found in country which suits it, from the Karroo and Namaqualand to the Cunene River, but is not met with in Natal, the eastern Transvaal, or Mashonaland.

THE Namaqua Sandgrouse is an inhabitant of dry and sandy countries. I have seldom seen it on rocky ground, except once when a pair bred on Naval Hill, Bloemfontein, a few hundred yards from my door. Naval Hill is a flat-topped kopje some 300 ft. above the town of Bloemfontein, and with the exception of this pair I never saw a Sandgrouse on it.

Namaquas are winter migrants to the Orange River Colony, and it is but rarely that they breed there.

Some years they come in the winter in huge flocks, and in other years are very scarce indeed or entirely absent.

The stronghold of the Namaqua is the Kalahari region,

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and there it moves about in small and large parties, and acts precisely as does the Spotted Sandgrouse, with which it mingles at the morning and evening drinking-time.

It can be distinguished on the wing from *P. variegatus* quite easily by its loud note of "Kelkie Vane," whence its Dutch name.

Namaquas are very fast on the wing, but are easily shot owing to their punctual habits of drinking morning and evening at the same hours.

They are rather tough and tasteless to eat, in my opinion, and are best boiled and served with white sauce.

They lay two oblong eggs of a light cream-colour, which measure about 1.50 by 1.0 in. The nest is a mere depression in the ground, with a few bits of dry grass in it.

C. G. Davies del.

Witherby & Co. imp.

SPECKLED PIGEON OR BUSH-DOVE (*COLUMBA PHAEONOTA*) Male

COLUMBA PHAEONOTA.
SPECKLED PIGEON.

(PLATE 43.)

Columba phaeonotus, G. R. Gray, List Birds Brit. Mus., Columbæ, p. 32 (1856).

Columba phaeonota, Sharpe's ed. Layard Birds of S. Afr., pp. 559, 854 (1875-84); Salvadori, Cat. Birds Brit. Mus., XXI, p. 268 (1893); Woodward, Natal Birds, p. 129 (1899); Reichenow, Vögel Afrikas, I, p. 403 (1900-01); Selater, Ann. S. Afr. Mus., III, p. 353 (1905); Selater & Stark, Birds of S. Afr., IV, p. 160 (1906).

LOCAL NAMES. "Bosch Duif" of the Boers; "Ivukutu" of the Amaxosa (Stanford); "Leeba" of the Basutos (Murray).

DESCRIPTION. The bird figured is an adult male. Length $13\frac{1}{2}$ in. The sexes are alike, but in the living or newly-shot bird the adult cocks can be distinguished from the hens by their more brightly burnished necks and slightly more powerful appearance.

DISTRIBUTION. This is a purely South African species, but a very near relation (*C. guinea*), which is much paler on the rump, is found in its stead in East, West, and Central Africa.

THIS sporting bird is common all over the country in suitable localities. It has very much the same habits as our wild English Blue Rock (*C. livia*), and nests in caves or cliffs for choice. However, it is not very particular, and I have found the nests in dry, steep banks along the Vaal and Modder Rivers, and frequently in the cavities formed by a dislodged brick in the side of a well, a very favourite breeding-place of the Barn-Owl.

It hybridises quite freely with the domestic pigeon, and the progeny are fertile both with tame pigeons and *inter se*.

GAME-BIRDS OF SOUTH AFRICA

During the late Boer war I saw a large colony of these pigeons breeding in the corner of a verandah belonging to some missionaries in the western Transvaal. They were at complete liberty, and I was curious to know how they were first established. I was informed that some domestic pigeons had been in the verandah-corner first, and their eggs replaced by Bush-Dove eggs, and that the young had not only bred freely in due course, but had brought wild birds back with them.

I have found this bird breeding practically all the year round. This is also Sergt. Davies's experience, and he tells me he has shot young birds at all times of the year.

They feed on all or any grain, and often do great damage when the crops are ripening. Very pretty shooting may be had by lying up at the edge of the crops when the birds are fighting in to feed, especially if a few live decoys be placed within gun-shot. For this purpose any ordinary pigeon will do.

The "coo" is quite distinct—a hoarse, rough note utterly different from that of the domestic pigeon, but the courting attitudes are very similar.

The eggs are always two, and pure white. They measure 1.4 by 1.0 in.

C. G. Davies del.

Witherby & Co. imp.

OLIVE PIGEON (*COLUMBA ARQUATRIX*) Male.

COLUMBA ARQUATRIX.

OLIVE-PIGEON.

(PLATE 44.)

Columba arquatrix, Temminck & Knip, *Pig. et Gal.* i, p. ii, Pl. v. (1808-13); Salvadori, *Cat. Birds Brit. Mus.* xxi, p. 276 (1893); Woodward, *Natal Birds*, p. 130 (1899); Reichenow, *Vögel Afrikas*, i, p. 403 (1900-01); Selater, *Ann. S. Afr. Mus.*, iii, p. 353 (1905); Selater & Stark, *Birds of S. Afr.*, iv, p. 163 (1906).

Palumbus arquatrix, Sharpe's ed. *Layard Birds of S. Afr.*, p. 561 (1875-84).

LOCAL NAMES. "Rameron Pigeon" or "Black Pigeon" of the Natal Colonists; "Oliven Duif" or "Bosch Duif" of the Dutch; "Izuba" of the Amaxosa (Stanford).

DESCRIPTION. Length about $15\frac{1}{2}$ in. The sexes are alike except that the female is slightly smaller and duller. The bird figured is a male.

DISTRIBUTION. The Olive-Pigeon is found along the southern coast of Cape Colony from Knysna to Natal and Zululand. Beyond South African limits it extends through Nyassaland and East Africa to Shoa and Abyssinia.

It is not uncommon in the Magaliesberg Mountains near Rustenburg.

In British East Africa it is very plentiful on the wooded slopes of the Guasin Gishu Plateau, and in the heavy forests of the Nandi country and the Mau Escarpment, and gives excellent shooting.

It is found all over Pondoland in wooded country, but is very irregular in its appearance, being common one year and rare another.

THIS is the largest of the South African Pigeons, and has habits very much resembling those of the European Wood-Pigeon

GAME-BIRDS OF SOUTH AFRICA

(*C. palumbus*). It is a partial migrant, and as its food-supplies ripen, it moves from district to district. It feeds on wild-olives and wild-figs.

Olive-Pigeons are very strong on the wing, and carry a lot of shot. They are excellent-eating.

They are often found in large flocks, and when shooting for the pot a good bag can at times be made by waiting under the trees in which they feed.

They frequently make a great noise when feeding, and the heavy flapping of their wings as they balance themselves on some slender twig to reach the berries on the end, can be heard a considerable way off.

I have never heard this Pigeon make any note except in the breeding-season, when the males utter a deep "Coo."

When in good plumage and freshly shot, these birds have a beautiful plum-like bloom over all the feathers; but this comes off at once with handling, so that preserved skins appear much more red than freshly-killed birds.

They are tree-breeders and not rock-breeders, making the usual type of Pigeon's nest of a few loose sticks, and laying two white eggs measuring about 1.5 by 1.15 in.

C. G. Davies del.

Witherby & Co. imp.

DELALANDE'S GREEN PIGEON (*VINAGO DELALANDII*) Male.

VINAGO DELALANDII.
DELALANDE'S GREEN PIGEON.

(PLATE 45.)

Phalacrotreron delalandii, Bonaparte, Consp. Av., II, p. 6 (1854).

Treron delalandii, Sharpe's ed. Layard Birds of S. Afr., p. 558 (1875-84).

Vinago delalandei, Salvadori, Cat. Birds Brit. Mus., XXI, p. 24 (1893);
Reichenow, Vögel Afrikas, I, p. 397 (1900-01).

Vinago delalandii, Woodward, Natal Birds, p. 128 (1899); Sclater,
Ann. S. Afr. Mus., III, p. 352 (1905); Sclater & Stark, Birds of
S. Afr., IV, p. 157 (1906).

LOCAL NAME. "Ijubantoto" of Natal Zulus (Sclater).

DESCRIPTION. Length about 12 in. The sexes are alike.

Shallow's Green Pigeon (*V. shalowi*), another South African species, has been recorded from Matabeleland from the north of German South-west Africa, and also from the Zambesi River. It differs from *V. delalandii* only in the olive-green of the head, the neck and under-parts being replaced by yellowish-green, and the bird is slightly smaller.

DISTRIBUTION. This species ranges all over East Africa, from British East Africa to the extreme east of Cape Colony.

I have shot it in the Magaliesbergen (Transvaal) and often in British East Africa, where it occurs in huge flocks. Sergt. Davies writes that it is fairly common in Pondoland, and is often found in large flocks.

GREEN PIGEON, like Woodcock, are very irregular in their appearance in any particular district, their movements being governed entirely by their food-supply. I have usually found them feeding in thickly foliaged wild-figs, and have generally known they were in them by hearing small twigs or figs fall to the ground, the birds themselves harmonising so well

GAME-BIRDS OF SOUTH AFRICA

with the leaves that it is a matter of great difficulty to see them. When the tree in which they are feeding is approached they generally sit quite still, trusting to their green colour to hide them effectually ; but if they do fly they whizz out like lightning, and give an exceedingly twisty and difficult shot.

The note is a curious whistle ending in a sharp “Turr-turr-turr.”

According to Mr. Sclater (*The Fauna of South Africa*) Ayres found a nest of this species in the Magaliesbergen towards the end of November, 1882 ; it was composed of the usual layer of sticks, and was not more than 10 ft. from the ground ; it contained a young bird, and an addled white egg.

This Pigeon is nearly invariably fat, and is tender and well flavoured.

C. G. Davies del.

Witherby & Co. imp.

SPUR-WINGED GOOSE (*PLECTROPTERUS GAMBENSIS*) Male.

C. G. Davies del.

Witherby & Co. imp.

SPUR-WINGED GOOSE (*PLECTROPTERUS GAMBENSIS*) Male.

C. G. Davies del.

Witherby & Co. imp.

SPUR-WINGED GOOSE (*PLECTROPTERUS GAMBENSIS*) Male,

PLECTROPTERUS GAMBENSIS.
SPUR-WINGED GOOSE.

(PLATES 46A, 46B, AND 46C.)

Anas Gambensis, Linnaeus, Syst. Nat., I, p. 195 (1766).

Plectropterus gambensis, Sharpe's ed. Layard Birds of S. Afr., p. 746 (1875-84); Nicolls & Eglington, Sportsman in S. Afr., p. 121 (1892); Salvadori, Cat. Birds Brit. Mus., xxvii, p. 48 (1895); Shelley, Birds of Afr., I, p. 170 (1896); Sharpe, Hand-List of Birds, I, p. 208 (1899); Reichenow, Vögel Afrikas, I, p. 134 (1900-01); Selater, Ann. S. Afr. Mus., III, p. 351 (1905); Selater and Stark, Birds of S. Afr., IV, p. 115 (1906).

LOCAL NAMES. "Wilde Macaauw" or "Makow" of the Dutch; "Peele, Peele" of the Bechuanas (Nicolls & Eglington); "Esikwi" of the Kaffirs (Lawrence); "Letsikhir" of the Basutos (Murray).

DESCRIPTION. Length about 40 in.; wing $21\frac{1}{2}$ in. Weight about 12 lb.; has been obtained up to 15 lb.

I have figured the three varieties of this species which I do not consider entitled to specific rank. Plate 46A represents the Northern form known as *P. gambensis rueppelli*. Plate 46B shows the intermediate form, which merges into the Northern form on the one hand and into the bird shown on Plate 46C on the other. This latter is the most Southern form. I have found nearly every intermediate grade of coloration between them.

The female is like the male, but is slightly smaller. Young birds have the face entirely feathered and no frontal knob. The young in down are pale yellowish, with the upper-parts pale brown, two yellowish spots on the back at the base of

GAME-BIRDS OF SOUTH AFRICA

the wings, and two others on the sides of the rump ; sides of the head yellowish ; throat white. This species varies much individually in size, some birds being so small that they look almost like a different species.

DISTRIBUTION. Extends from Gambia on the west and Kordofan on the White Nile throughout the whole of Africa southwards.

It is common enough in the Orange River Colony and Transvaal, Bechuanaland, and along the Zambesi, and is not often found to the south of the Orange River.

SPUR-WING are residents of most of the large marshes and lakes, and are often to be found living on the rivers also. By day they stay on the pans, washing, sleeping and resting, but towards nightfall they flight out into the grassy fields and grain crops, and do an immense amount of damage, treading down the standing corn with their huge feet and wasting and spoiling much more than they eat. Sergt. Davies writes me that when the corn is in stooks they perch on them and greedily strip the grain from the top sheaves, and he tells me he has seen many of the stooks completely ruined by these birds.

These geese are easy to keep in captivity, but if the young birds are obtained whilst still in the downy stage, care should be taken not to let them swim in water or they are sure to get cramp ; they will feed readily on any grain which has been previously soaked in water, as well as on soft bread, and they should, if possible, have access to young grass, as like all true geese they get much of their food by grazing. When they are adult it is not safe to keep them with smaller and weaker birds, as they are very powerful and have rather an uncertain temper.

GAME-BIRDS OF SOUTH AFRICA

They nest in long grass or in thick reed-beds, laying from six to ten eggs. Eggs now in the South African Museum are smooth, shining, and ivory-white, and measure about 2.8 by 2.1 in.

PLECTROPTERUS NIGER.
BLACK SPUR-WINGED GOOSE.

(PLATE 47.)

Plectropterus niger, Selater, Proc. Zool. Soc., 1877, p. 47, Pl. VII; Salvadori, Cat. Birds Brit. Mus., XXVII, p. 50 (1895); Shelley, Birds of Afr., I, p. 170 (1896); Sharpe, Hand-List of Birds, I, p. 208 (1899); Selater, Ann. S. Afr. Mus., III, p. 351 (1905); Selater & Stark, Birds of S. Afr., IV, p. 118 (1906).

Plectropterus gambensis niger, Reichenow, Vögel Afrikas, I, p. 136 (1900-01).

LOCAL NAMES. As for *P. gambensis*.

DESCRIPTION. The bird figured is an adult male. This drawing was made from a bird which I bought as a gosling in Potchefstroom five years ago, and which is still (1912) living in Norfolk, England.

Length about 40 in. This species is just as variable in size as *P. gambensis*, no two being exactly similar.

Mr. W. L. Selater suspects that *P. niger* and *P. gambensis* are different forms of the same species, and that the differences are due to age, but the present bird is the common one of the Orange River Colony and the Transvaal, where I have seen them in flocks up to as many as a couple of hundred in number. Among these flocks there would perhaps be three or four birds apparently answering to the description of *P. gambensis*, but if the age theory were correct there would surely be many more.

Further, the bird figured is at least five years old, and has not yet begun to change.

I consider that *P. niger* is a good species, but that it grades into *P. gambensis* the further north it is found, and probably interbreeds with it.

THESE geese are among the most common water-fowl in South Africa.

C. G. Davies del.

Witherby & Co. imp.

BLACK SPUR-WINGED GOOSE (*PLECTROPTERUS NIGER*) Male.

GAME-BIRDS OF SOUTH AFRICA

Their habits are exactly the same as those of *P. gambensis*, a few of which may sometimes be found mingled in their flocks.

Their flight is powerful but not very fast, and their note, which is usually uttered when they are on the wing, is a curiously weak sort of whistle which sounds like "Cow-whit, cow-whit," sometimes clear and sometimes rather harsh. They have none of the trumpet-like, loud clanging notes of our northern birds, but like them they can carry away an immense amount of shot.

When fighting out to their feeding-grounds, Spur-wing nearly invariably reconnoitre the ground carefully, and on alighting stand on the alert and look round in every direction. When satisfied that no danger threatens, they post sentries in the same way that wild-geese do at home, and then start feeding.

Young birds are not bad-eating, but the old birds are quite impossible, as they seem to remain hard and tough until they decompose.

Eggs sent me from Vredefort Road, Orange River Colony, were not to be distinguished from eggs of *P. gambensis*. These eggs were found in nests built of loose heaps of dry grass among the big stones at the foot of the kopje. The site was thickly studded with prickly-pear bushes, and was not far from water.

SARCIDIORNIS MELANONOTA.
KNOB-BILLED DUCK.

(PLATE 48.)

Anser melanotus, Pennant, Ind. Zool., p. 12, Pl. XI (1769).

Sarcidiornis africana, Sharpe's ed. Layard Birds of S. Afr., p. 752 (1875-84); Nicolls & Eglington, Sportsman in S. Afr., p. 123 (1892).

Sarcidiornis melanonota, Salvadori, Cat. Birds Brit. Mus., XXVII, p. 54 (1895); Selater, Ann. S. Afr. Mus., III, p. 351 (1905); Selater and Stark, Birds of S. Afr., IV, p. 119 (1906).

Sarkidiornis melanotus, Reichenow, Vögel Afrikas, I, p. 129 (1900-01).

LOCAL NAME. "Comb-duck" of some authors.

DESCRIPTION. The plate represents a female and a male in full breeding-plumage, with the bunch of orange-yellow feathers on the side of the lower-abdomen that the male carries at that season, and the excrescence that he carries on the bill at its full development. The male bird figured was one shot by Sergt. Davies, and the excrescence was drawn to scale by him. At other times of the year the excrescence is inconspicuous. The young birds resemble the female, but have no metallic gloss.

Length about 31 in.

DISTRIBUTION. There are two species of Knob-billed Duck, both very similar, one of which is found all over South America, while the other, the subject of our drawing, is distributed throughout Africa and southern Asia.

Besides being found in India, Burma, and Ceylon, the Knob-billed Duck is also found throughout Africa from Gambia and Khartoum southwards, as well as in Madagascar.

I have shot it in British East Africa on the Uasin Gishu Plateau, but have not met with it in South Africa. A small flock was met with in Pondoland, out of which was shot the male bird now illustrated.

C. G. Davies del.

Knob-billed Duck (*Sarcidiornis melanonota*) Male and Female.

Witherby & Co. imp.

GAME-BIRDS OF SOUTH AFRICA

I HAVE not met with this bird in South Africa, and there is not much of interest on record about it. It is usually met with in flocks where plentiful, flying in V-shaped formation, and it not infrequently perches on dead trees, at which times it is not difficult to approach; it is said by sportsmen to be exceedingly good-eating, but those which I ate in British East Africa were not particularly so.

Mr. C. H. Taylor writes in the *Journal of the South African Ornithologists' Union* for 1907, that in the Amersfoort District (South-east Transvaal) they are resident, and breed regularly during the months of November and December, making a nest in the long grass, usually at the side of a "vlei" or near a pan. In one instance on the farm Rolfontein, they used to nest amongst the stones on a low-lying kopje, but of recent years have been too much disturbed in this locality, and apparently no longer breed there.

They are very destructive to lands freshly sown with mealies or oats, rooting up the grain and doing much damage. A short while ago, in the Ermelo District, four of these ducks were caught in traps put into a patch of forage for this purpose.

Mr. Taylor further writes that he has seen them in great numbers on the Que Que River in Matabeleland, where they are migratory, arriving in September and staying all through the rainy season.

Like other duck and geese, they shed all their flight-feathers in the spring, and when in this state, being unable to fly, are easily caught.

Mr. Sclater states that it apparently breeds in Bechuana-land, though no one has hitherto given any account of the matter. Eggs laid in captivity in Mr. Blaauw's aviaries in

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Holland were yellowish-white, and rather more pointed at one end than at the other.

There are six eggs of this species in the British Museum obtained by Anderson at Ondonga, in Ovampoland, in February; they are described as being smooth, rather glossy, and pale yellowish-white, and measure from 2.58 to 2.22 by 1.78 to 1.65 in.

C. G. Davies del.

DWARF GOOSE (*NETTION AURITUS*) Male and Female.

Witherby & Co. imp.

NETTOPUS AURITUS.
DWARF GOOSE.

(PLATE 49.)

Anas auritus, Boddaert, Tabl. Pl. Enl., p. 48, n. 770, 1783.

Nettapus auritus, Sharpe's ed. Layard Birds of S. Afr., p. 750 (1875-84);
Reichenow, Vögel Afrikas, I, p. 127 (1900-01).

Nettapus aurilius, Nicolls & Eglington, Sportsman in S. Afr., p. 122
(1892).

Nettopus auritus Salvadori, Cat. Birds Brit. Mus., xxvii, p. 65 (1895);
Sclater, Ann. S. Afr. Mus., III, p. 351 (1905); Sclater & Stark,
Birds of S. Afr., IV, p. 122 (1906).

Nettopus auritus, Woodward, Natal Birds, p. 208 (1899).

DESCRIPTION. The birds figured are an adult male and female.
Length about $12\frac{1}{2}$ in.

DISTRIBUTION. This near relation of the Indian Cotton-Teal (*N. coromandelianus*) is found all over Africa, south of Gambia on the west, and Somaliland on the east. It is also a resident in Madagascar. Mr. Sclater states that it is a casual visitor to the Colony, and only met with along the coast and larger rivers, but it is more frequently to be seen in Natal and the Transvaal up to the Zambesi. He also says that it is not recorded from German South-west Africa, though fairly plentiful about Lake Ngami.

Three specimens were shot on the Umtumvumu River, Pondoland, during October and November, 1908.

I do not quite understand why this little bird is called a Goose at all. All geese are naturally grazing birds, and do not dive unless wounded or pressed by a bird of prey, while the Dwarf Goose dives as easily as a Pochard, and gets most of its food from underneath the surface. On Lake Victoria Nyanza this bird may often be seen in flocks

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numbering up to thirty or forty, diving and playing about, and behaving very much like Pochards. They fly well and fast, and are very good-eating. They are not difficult to shoot, as they generally allow a canoe to be paddled within range before they begin to get uneasy.

Apparently no observations have yet been made on the breeding-habits of this bird.

Of the Indian species *N. coromandelianus*, Dr. Jerdon says : "It breeds generally in holes in old trees, often at some distance from the water, occasionally in ruined houses, temples, old chimneys, and the like, laying eight to ten (sometimes, it is stated, as many as fifteen) small white eggs."

C. G. Davies del.

Witherby & Co. imp.

WHITE-FACED TREE-DUCK (*DENDROCYGNA VIDUATA*) Male.

DENDROCYGNA VIDUATA.
WHITE-FACED TREE-DUCK.

(PLATE 50.)

Anas viduata, Linnaeus, Syst. Nat., I, p. 205 (1766).

Dendrocygna viduata, Sharpe's ed. Layard Birds of S. Afr., p. 751 (1875-84); Nicolls & Eglington, Sportsman in S. Afr., p. 126 (1892); Reichenow, Vögel Afrikas, I, p. 124 (1900-01); Woodward, Natal Birds, p. 209 (1899); Selater, Ann. S. Afr. Mus., III, p. 351 (1905); Selater & Stark, Birds of S. Afr., IV, p. 124 (1906).

LOCAL NAMES. "Idada" of the Matabele (Chubb); "Masked Duck" of some authors.

DESCRIPTION. The bird figured is a female. The sexes are alike, and measure about 19 in.

DISTRIBUTION. Like the South African Pochard (*N. erythrophthalma*), this bird has a most remarkable range, and is found through the greater part of South America, from the West Indies to the Argentines, and in Africa from the Gambia and Khartoum southwards, as well as in Madagascar.

Mr. Selater states that this is a rare Duck in South Africa except in the lake regions and on the Zambesi, and that up to the date of his book (1906) it had not been met with within the limits of Cape Colony or in Great Namaqualand or Damaraland.

The specimen illustrated was obtained in Griqualand by Sergt. C. G. Davies.

THIS bird is a rare visitor to southern Africa, though common enough in the Zambesi and Lake Ngami regions. These are its strongholds, and it is to be found there in considerable flocks, and sometimes when the rains have been very heavy, in multitudes.

It is said by the Woodwards not to perch on trees, but some

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birds I saw in captivity that had full use of their wings certainly did so, and Reichenow also states that they have this habit in the wild state.

It has a clear whistling cry and is often kept in collections of ornamental water-fowl both in England and on the Continent. It is a peaceful little bird in captivity, but often succumbs to hard frost, and requires protection in severe weather.

Mr. C. F. M. Swynnerton writes: "I have found these ducks exceedingly plentiful on the pools between Chibabava and Mangunde (Gazaland) in pairs or in parties of from a dozen upwards. They have two whistling notes, or more rarely three, frequently uttered by the whole flock together as it flies along, sometimes in more or less wedge-formation, sometimes not. They were easy to shoot, for when flushed they would circle backwards and forwards two or three times over the swamp, and seldom went more than a few hundred yards before again descending. One of the stomachs examined contained a small larva and grit, and in both crop and stomach were large quantities of a small black seed."

There is no record of eggs having been taken in Africa, but eggs from Madagascar in the British Museum are glossy and cream-coloured, and measure about 2.0 by 1.5 in.

C. G. Davies del.

Witherby & Co. imp.

WHISTLING TREE-DUCK (*DENDROCYGNA FULVA*) Male.

DENDROCYGNA FULVA.
WHISTLING TREE-DUCK.

(PLATE 51.)

Anas fulva, Gmelin, Syst. Nat., I, p. 530 (1788).

Dendrocygna fulva, Salvadori, Cat. Birds Brit. Mus., xxvii, p. 149 (1895); Selater, Ann. S. Afr. Mus., iii, p. 351 (1905); Selater and Stark, Birds of S. Afr., iv, p. 125 (1906).

Dendrocygna fulva, Reichenow, Vögel Afrikas, I, p. 126 (1900-01).

DESCRIPTION. The plate represents an adult male. The sexes are alike. Length about 20 in.

DISTRIBUTION. The bird figured was killed in Griqualand.

Mr. Selater writes that this Duck has a very remarkable disconnected range, extending over four continents; it is to be found in the southern part of the United States and Mexico in North America, from Venezuela and Peru to the Argentine in South America, from Kordofan southwards along the Nile Valley through Nyassaland to Lake Ngami in Africa, in Madagascar, and finally in India, Burmah, and Ceylon.

I HAVE not personally met with this bird in South Africa, but have often shot it in Ceylon. There they inhabit all the larger lakes, and have a curious whistling cry which is uttered often when in flight, producing a wild effect when a big flock is passing overhead.

They perch freely on trees, and I believe make use of old nests of crows and other birds during their breeding-season. They fly fairly slowly and with much beatings of wings, and are therefore easy to shoot. They are of little use when shot, being rank and fishy in flavour.

ALPOCHEN AEGYPTIACUS.
EGYPTIAN GOOSE.

(PLATE 52.)

Anas aegyptiaca, Linnaeus, Syst. Nat., I, p. 197 (1766).

Chenalopex aegyptiaca, Sharpe's ed. Layard Birds of S. Afr., p. 747 (1875-84); Nicolls & Eglington, Sportsman in S. Afr., p. 122 (1892).

Chenalopex aegyptiacus, Salvadori, Cat. Birds Brit. Mus., xxvii, p. 167 (1895); Woodward, Natal Birds, p. 209 (1899); Reichenow, Vogel Afrikas, I, p. 131 (1900-01); Selater, Ann. S. Afr. Mus., III, p. 352 (1905); Selater & Stark, Birds of S. Afr., IV, p. 128 (1906).

LOCAL NAMES. "Berg Gans" of the Dutch; "Nile Goose" of some authors; "Esikwi" of Kaffirs (Lawrence), a name also applied to the Spur-winged Goose; "Lefalva" of Basutos (Murray).

DESCRIPTION. The Plate represents an adult male. The sexes are alike. Young birds have the legs and beak clay-coloured. Length about 27 in.

DISTRIBUTION. The Egyptian Goose is found all over Africa south of the Sahara, and its range extends as far to the north-east as Palestine.

In South Africa it is quite common, and is equally at home on the coasts and along the rivers, as on the lakes and marshes.

THIS bird is well known to most people. It breeds very freely in captivity, and nearly every piece of ornamental water in public parks in the British Isles has a pair or so of them as inhabitants. In the tame state it hybridises freely with many and very different species. Mr. Selater writes that it has frequently hybridised with the Spur-winged Goose and even with the Mallard (*Anas boscas*), while I have

C. G. Davies del.

Witherby & Co. imp.

EGYPTIAN GOOSE (*ALOPOCHEN ÆGYPTIACUS*) Male.

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seen hybrids between it and the Ruddy Sheld-drake (*Casarca casarca*) to which it is nearly akin, the Canada Goose (*Bernicla canadensis*), and some beautiful hybrids between it and the European Sheld-drake (*Tadorna tadorna*).

When breeding in confinement these birds are very noisy, quarrelsome, and dangerous to other water-fowl, but are courageous to a degree and firm believers in the "bold offensive," for they will promptly attack anything which they even think might attack their goslings. Their strength and fury is so great, too, that they generally get the best of it.

In the wild state in South Africa they are familiar residents on most large pans and marshes, but are shy and wild, and take a tremendous lot of shot. They generally go about in pairs, and when flying utter a loud cackling call which Anderson describes as a "barking quack."

As a sporting bird they are not worth shooting, their flesh being tough and rank; even young ones are not very palatable. I once saw a bird picked up after a drive, and at some previous date it had been hit by a bullet at the base of the lower mandible, which, as well as most of the tongue, had been carried almost entirely away. Nevertheless the wound had completely healed, and the bird was fat and in good condition.

Egyptian Geese live nearly entirely on grass and herbage, and are most persistent grazers.

At certain times of the year large numbers assemble at the big marshes and lakes, to breed and cast their flight-feathers.

I have found the nests among thick rushes and water-weeds, but sometimes quite different nesting-places are chosen. They will nest in a hole or in a hollow tree. This, however,

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is not unnatural, as the Egyptian Goose is obviously a near relative of the Sheld-drakes, which are all hole-breeders. This relationship is clearly shown in voice and attitude, and in the first plumage of the downy chicks and the freedom with which they interbreed.

Mr. Atmore relates that he found nests of the Egyptian Goose built on broad ledges of rock 200 feet above the banks of the Gouritz River in the Mossel Bay District, and that this site was amicably shared with numerous Vultures (*Gyps kolbii*). A Boer showed him an old Vulture's nest in an acacia tree some 30 ft. high on the banks of the Vaal River, which he assured him was occupied every year by a "Berg Gans."

This Goose is somewhat scarce in Pondoland, and has only been found on the Umzimvubu River, where it breeds. The natives often catch the young ones and bring them in for sale. They get very tame, but are inclined to "bully" other poultry.

The eggs are creamy-white and small for the size of the bird. They measure about 2.7 by 1.9 in.

C. G. Davies del.

Witherby & Co. imp.

SOUTH AFRICAN SHELD-DRAKE (*CASARCA CANA*) Male.

CASARCA CANA.

SOUTH AFRICAN SHELD-DRAKE.

(PLATES 53 [MALE] AND 54 [FEMALE].)

Anas cana, Gmelin, Syst. Nat., I, p. 510 (1788).

Casarca cana, Sharpe's ed. Layard Birds of S. Afr., p. 753 (1875-84); Nicolls & Eglington, Sportsman in S. Afr., p. 129 (1892); Salvadori, Cat. Birds Brit. Mus., xxvii, p. 182 (1895); Reichenow, Vögel Afrikas, I, p. 137 (1900-01); Sclater, Ann. S. Afr. Mus., III, p. 352 (1905); Sclater & Stark, Birds of S. Afr., IV, p. 131 (1906).

LOCAL NAME. "Berg-eend" of the Dutch.

DESCRIPTION. Adult male, female, and chick as in figures. Length of male about 26 in. The female is slightly smaller.

DISTRIBUTION. The South African Sheld-drake has a very restricted range, and so far has only been met with in Cape Colony, the Orange River Colony and the Transvaal, and has not been recorded from Natal, Rhodesia or German South-west Africa.

MR. SCLATER states in the fourth volume of the *Fauna of South Africa*, that this species is considered to be a scarce bird, but Messrs. Grant and Seimund found it very common all the year round at Deelfontein in the centre of the Karroo. Near Bloemfontein it is by no means rare, and I have seen it the whole year round on dams of suitable size. Sheld-drake, except when actually breeding, are usually in small parties of five or six, presumably the last season's brood. I have invariably found them wild and suspicious, and they are always the first to leave when the shooting begins.

Before I went to South Africa I had often heard that this species was frequently caught young and kept in captivity by the Boers. This rumour caused me many weary journeys,

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which nearly always ended in the disappointing view of some young Egyptian Geese. Once, however, a young Boer came in and told me that he had a pair on his farm. I took him out and showed him a tame Egyptian Goose I had, asking him if it was the same as the birds he was talking about. After firm assurances that his were quite different I rode some twenty miles to his farm, and after the customary coffee and handshaking all round and the usual volley of questions about my family, age, where I came from, etc., I went to see the Berg-eende. They were a lovely pair, but alas were full-winged, and by repeated efforts to catch them they had been made too shy for their timidity to be overcome. Try as we could I had to go home without them, and shortly afterwards they were accidentally shot. Their owner told me that he had surprised an old female Sheld-drake leading her youngsters across the veldt; that they were just hatched, and that he had caught two of them, the birds in question.

The usual cry is a loud nasal "How," but they have many varied notes. When they flight from one dam to another, or when one bird is separated from its mate, the note generally used is the loud sonorous "How." The cry is very much like that of the Indian Ruddy Sheld-drake (*C. rutila*), and those who know this bird will be struck at once by the resemblance between the two species.

Like all other Sheld-drake, the South African species breeds in holes. The nests have been found among rocks, but near Bloemfontein they usually breed in ant-bear holes.

The eggs are creamy-white, and measure 2.5 to 2.0 by 1.8 in.

Sheld-drake are most indifferent-eating, being both rank and tough; but they are so wild and take such care of themselves, that they seldom get in position to appear on the table.

C. G. Davies del.

SOUTH AFRICAN SHIELD-DRAKE (*CASARCA CANA*) Female with Young.

Witherby & Co. imp.

C. G. Davies del.

Witherby & Co. imp.

YELLOW-BILLED DUCK (*ANAS UNDULATA*) Male.

ANAS UNDULATA.

YELLOW-BILLED DUCK OR GEELBEC.

(PLATE 55.)

Anas undulata, Dubois, Orn. Gall., p. 119, pl. LXXVII (1839); Salvadori, Cat. Birds Brit. Mus., XXVII, p. 212 (1895); Woodward, Natal Birds, 209 (1899); Reichenow, Vögel Afrikas, I, p. 113 (1900-01); Selater, Ann. S. Afr. Mus., III, p. 352 (1905); Selater & Stark, Birds of S. Afr., IV, p. 134 (1906).

Anas xanthorhyncha, Sharpe's ed. Layard's Birds of S. Afr., p. 755 (1875-84); Nicolls & Eglington, Sportsman in S. Afr., p. 127 (1892).

DESCRIPTION. The bird figured is an adult male. Length about $22\frac{1}{2}$ in. The sexes in the Yellow-billed Duck resemble each other, but there is a marked difference: the males, besides being distinctly larger and more brightly coloured in the yellow of the beak, have all the pale edgings of the feathers whiter and the centres darker than the corresponding feathers of the female bird, so that their breasts and flanks have a scaled appearance, whereas in the females and young birds the whole colouring is dingier, the dark brown is lighter, and the centres to the feathers of the under-parts more longitudinal, giving them a more striped appearance.

These differences are hard to describe, but easy to see if the birds are compared.

DISTRIBUTION. This is the common Wild Duck of South Africa, and is found everywhere except, perhaps, in German South-west Africa and the Natal sea-board. It only extends as far west as Angola, but in the east has been recorded from all over Africa as far north as Abyssinia. It is very common in British East Africa.

YELLOW-BILL, like most South African duck, are partially migratory, their movements depending on the amount of water there is in their haunts and on the rainfall.

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They are double-brooded, raising one brood in the spring and one in the autumn. Broods have been found in East Griqualand in April. It is easy to tell the birds that have young or eggs, as they have a way of drawing you away from the vicinity by pretending they are wounded and cannot fly, flapping along the surface of the water in a helpless manner until you are some distance from their treasures, when they rise and make swiftly off.

They have very much the habits of the European Mallard, haunting marshes and lakes and avoiding running water. The voice of the female resembles that of the Mallard female; the note of the male is also similar to that of the male Mallard, but rather deeper and louder in tone.

They are often found in fairly large flocks except when breeding, when of course they are in pairs. When breeding three or four amorous males will often chase a female round and round high up in the air.

They soon get tame when not much molested, but if frequently shot at they circle round once or twice, and then clear right out, and will probably not return for a day or so.

When the grain crops are ripe. they flight out in the evening like Mallard, feed, and return in the morning to sleep, wash and rest. A little careful observation will soon show the lines of the flight, but it is very necessary that the gunner should be well hidden, and not move until the birds are well over and in shot.

They require fairly heavy shot (No. 4 is best), and fly strongly and fast. They dive and hide so well, that a winged bird that has fallen in water is generally a lost one.

I sent a pair of these birds home to the Zoological Society of London three years ago, and one of them is still alive

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and has hybridised this year with *Anas melleri* from Madagascar, a closely related species, as there was no female of his own kind with which he could be mated. In confinement they quickly become tame, and are very easy to manage, feeding on any kind of grain, soaked in water for preference, bread and any green-stuff, such as lettuce or chopped cabbage.

I found one or two nests near Potchefstroom. They were situated on the banks of a small stream which ran into a big irrigation dam, and in each case were well concealed in a clump of thick grass.

The eggs are oval, of a greenish-cream colour. Seven of them averaged 2.29 by 1.78 in.

ANAS SPARSA.
BLACK DUCK.

(PLATE 56.)

Anas sparsa, Smith, Cat. S. Afr. Mus., p. 36 (1837); Sharpe's ed. Layard Birds of S. Afr., p. 756 (1875-84); Nicolls & Eglington, Sportsman in S. Afr., p. 124 (1894); Salvadori, Cat. Birds Brit. Mus., xxvii, p. 213 (1895); Woodward, Natal Birds, p. 210 (1899); Reichenow, Vögel Afrikas, I, p. 115 (1900-01); Sclater, Ann. S. Afr. Mus., III, p. 352 (1905); Sclater & Stark, Birds of S. Afr., IV, p. 136 (1906).

LOCAL NAMES. "Edada" of the Amaxosa and Zulus, a name which is also applied to other species.

DESCRIPTION. The bird figured is a male. The sexes are alike in plumage, but the female is a little smaller. Old birds have a prominent knob on the bend of the wing. Length of a male 23 in. Weight $2\frac{1}{2}$ lb. The young may always be told by their whitish under-parts.

The white patch on the neck varies from a nearly complete collar to a few white feathers, and is sometimes completely absent.

DISTRIBUTION. The Black Duck extends from Abyssinia to Cape Colony through all the eastern parts of the country. In South Africa it is never abundant, but is widely distributed through Cape Colony, Natal, the Transvaal and Rhodesia.

THE Black Duck is hardly ever to be found on "vleis" or dams, and is essentially a haunter of rivers and streams.

I have seen them as a rule in pairs and sometimes in small flocks numbering a dozen, which I suppose were the adult birds with their grown-up broods. They feed, like European Mallard, chiefly at night, but in rainy weather often during the day as well. During the heat of the day they usually rest and sleep in some shady place under overhanging branches

C. G. Davies del.

Witherby & Co. imp.

BLACK DUCK (*ANAS SPARSA*) Male.

GAME-BIRDS OF SOUTH AFRICA

or amongst the reeds, and will then often allow themselves to be passed without taking to flight, trusting to escape observation by keeping still.

Sergt. Davies writes me that they are easy to shoot as they rise, but have a most annoying habit of flying low over the surface of the water if the reeds are high, until well out of shot.

They feed on seeds of water-plants and on insects, but when the native crops are ripe they are often shot with their crops full of grain, and at this season they get very fat.

Near Potchefstroom they breed in August and September, but the broods are never big, owing no doubt to the number of monitor lizards, water-mongoose, and other vermin that frequent their breeding-haunts.

The Black Duck is easily tamed and bears captivity well, but it was not until 1911 that the first bird reached Europe alive, this example forming part of the King's South African collection.

Mr. L. E. Taylor in the *Journal of the S. African Ornithological Union* for December, 1906, gives a photograph of a nest of this bird taken in July which contained eleven eggs, and was concealed in rushes and built on the ground about two feet above the water. They resembled those of *Anas undulata*, and measured about 2.5 by 1.75 in.

NETTION CAPENSE.

CAPE TEAL.

(PLATE 57.)

Anas capensis, Gmelin, Syst. Nat., I, p. 527 (1788); Reichenow, Vögel Afrikas, I, p. 120 (1900-01).

Querquedula capensis, Sharpe's ed. Layard Birds of S. Afr., p. 758 (1875-84); Nicolls & Eglington, Sportsman in S. Afr., p. 127 (1892).

Nettion capense, Salvadori, Cat. Birds Brit. Mus., xxvii, p. 259 (1895) Sclater, Ann. S. Afr. Mus., III, p. 352 (1905); Sclater & Stark, Birds of S. Afr., IV, p. 138 (1906).

LOCAL NAMES. "Teal-eendje" of the Dutch (Sclater); "Cape Wigeon" of Sclater.

DESCRIPTION. The bird figured is a male, and was shot by Sergt. Davies, and careful notes taken of the colours of the soft parts at once. The sexes are alike. Length about 19 in. The irides of these birds vary from light hazel and yellow to deep orange (Littledale).

DISTRIBUTION. The Cape Teal seems to be a rare bird everywhere. Its range extends from Cape Colony northwards through Nyassaland and Uganda to Shoa, but in South Africa it has not been hitherto met with in the eastern portion of the Cape Colony, Natal, or Rhodesia.

A few flocks have been observed in the Dordrecht District of Cape Colony, and a single bird was seen on the Utumvumu River in December, 1909.

I should not be surprised if the Cape Teal were not so rare after all; it is probably often confused with the Red-bill, and is put into the bag as such.

I HAVE never met with the Cape Teal, and very little was known of its nesting and other habits until Lieut. H. A. P. Littledale, 1st King's Own Yorkshire Light Infantry,

C. G. Davies del.

Witherby & Co. imp.

CAPE TEAL (*NETTION CAPENSE*) Female.

GAME-BIRDS OF SOUTH AFRICA

published in the *Journal of the S. African Ornithological Union* for April, 1908, the following notes:—

“I have found the Cape Widgeon (Teal) to be comparatively common at Van Wijk's Vlei, near Carnarvon, Cape Colony, and also I have seen a good number on most of the dams in the neighbourhood.

“Van Wijk's Vlei is probably the largest permanent sheet of water in Cape Colony, and certainly the largest in Great Bushmanland. This year [1908] the dam is fairly full, but not so full as to cover the islands, of which there are several. The dam was built about 22 years ago, and in a couple of years 1,700 acres were submerged, which is rather less than its present extent. In circuit it is about 10 miles round. The islands are about 50 to 150 yards in diameter.

“I have found three nests of the identity of which I am certain. There are others which contain similar eggs, but on which I have not seen the birds actually sitting.

“The nests do not vary much. In two cases they were placed under very thin and scanty bushes which did not conceal them from view. The third was very well hidden under a very thick bush. The first two nests were merely round holes in the ground, obviously scraped by this or some other bird. The holes were 9 inches in diameter and 3 inches deep. The bottom was almost bare earth, the few feathers and scraps of down that there were below looking as if they had got there accidentally. When the bird is sitting the eggs are encircled with a ring of down about $1\frac{1}{2}$ inches broad, which the bird overlaps, and thus keeps the eggs warm.

“Before leaving the nest the bird pulls the ring of down over the eggs and makes a thick pad of it, thus leaving the eggs protected from cold and rather difficult to find. If the bird is put up off the nest she will leave the eggs uncovered ;

GAME-BIRDS OF SOUTH AFRICA

but in one instance I saw the bird fly round in a circle, and returning hover over the nest as if she wanted to secure them before leaving, although I was within 20 yards in a punt at the time. This idea seemed at first sight a little too 'intelligent,' but the following will show that the above is quite probable: I had noticed a Widgeon [Teal] several times flying round a certain island, and both myself and my companion were sure that there was a nest there. We hunted everywhere, but found only one likely egg, and that broken open and quite fresh. Days later I stumbled on the nest containing nine Widgeon's eggs and one old Berg Gans' egg (*Alapochen aegyptiacus*) under a very thick bush. I was watching a nest at the time belonging to some Gull, and used to come and have a look at it every now and then. Each time I landed on the island the Widgeon left her nest a few minutes after my arrival, and on each occasion the eggs were covered over carefully. Eventually I was watching her on her nest, and was within 10 feet of her. She was asleep or dozing, and did not mind me at all. I opened my camera to take a photograph of her. This startled her and she left the nest. The eggs were uncovered, the ring of down being all round them. This nest was on the site of an old Goose nest. The eggs were resting on the down and feathers, which had evidently been the old Goose nest, hence the old Goose egg which was included in her sitting.

"The cock bird does not, I think, take any part in incubation. The hens' breasts are picked quite bare of down, but the contour-feathers are not picked out. The cock bird's breasts show no signs of this. One meets single cock birds scattered about on the dam, and sometimes can get near enough to shoot one. I have never found a hen alone. Before I realized that they were breeding I shot several birds, and

GAME-BIRDS OF SOUTH AFRICA

I noticed that they were in breeding condition, and also that the hens' breasts were bare of down.

"These birds are sometimes very shy, at other times, particularly at dusk, they are quite tame. In the evening they sometimes 'flight,' but this habit is, at this season at least, of irregular occurrence, not taking place every night; they also change their feeding-grounds during the day. There are some salt pans below the dam, and a pair of Widgeon often spent the middle of the day on them. When swimming about their call is a rather high-pitched quack. I have never heard them quack when flying, but they sometimes make a sort of short, whistling note. This (July) is evidently the breeding season for these birds, but they are often to be found in threes and fours.

"Clutch of seven eggs, July 6th, 1907. Slightly incubated. Average measurements of six eggs (one having been broken), length 1.91 inches; breadth 1.34 inches.

"Colour pale cream, smooth (not glossy). Shape, slightly irregular; the more pointed end is generally attenuated and then rounded abruptly at the end.

"Clutch of eight eggs, July 6th, 1907. One was examined and found to be fresh. Average length 1.97 inches; breadth 1.5 inches.

"Colour smooth cream, smooth (not glossy). Shape fairly regular; slightly more pointed at one end than at the other.

"Clutch of nine eggs, 8th July, 1907; two eggs examined and found fresh. Average length of nine eggs, 1.92 inches; average breadth 1.46 inches.

"Colour deep cream, smooth but not glossy. Shape rather variable, but all pointed more at one end than at the other; in some this is rather more marked.

GAME-BIRDS OF SOUTH AFRICA

“It will be seen that clutches vary in colour, size, and shape, but eggs of the clutch match each other fairly well.

“The Cape Teal is good eating, but not to be compared with the Red-Bill.”

C. G. Davies del.

Witherby & Co. imp.

HOTTENTOT TEAL (*NETTION PUNCTATUM*) Male.

NETTION PUNCTATUM.
HOTTENTOT TEAL.

(PLATE 58.)

Anas punctata, Burchell, Travels, I, p. 283 (1822); Reichenow, Vögel Afrikas, I, p. 120 (1900-01).

Querquedula hottentotta, Sharpe's ed. Layard Birds of S. Afr., p. 757 (1875-84); Nicolls & Eglington, Sportsman in S. Afr., p. 128 (1892).

Nettion punctatum, Salvadori, Cat. Birds Brit. Mus., xxvii, p. 265 (1895).

Nettion punctatus, Sclater, Ann. S. Afr. Mus., iii, p. 352 (1905); Sclater & Stark, Birds of S. Afr., iv, p. 139 (1906).

DESCRIPTION. The bird figured is an adult male. The sexes are alike, but the female is not quite so brightly coloured. Young birds have fawn-coloured breasts without spots or bars. Length about 14 in.

DISTRIBUTION. This pretty little Teal is found all through Uganda and British East Africa, and extends southward through Nyassaland to Cape Colony. It is nowhere very common, but it probably is not so rare as is thought, for owing to its small size and retiring habits it is frequently overlooked.

I HAVE killed a good many Hottentot Teal both in the Transvaal and in the Orange River Colony, and consider it is one of the tamest and most sluggish little birds I have ever met with.

The first pair I saw were on a tiny pond some twenty yards across, and they were so friendly that I took them for hand-reared birds, and naturally did not shoot them. Some days later, four or five of us surrounded a big pan that held a lot of ducks, and after firing some twenty or thirty

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shots at Yellow-bill, Red-bill, etc., we waded in to collect the slain. Among the many Coots and Dabchicks that were swimming about in a startled fashion, I suddenly noticed some Hottentots, but it was not until I examined them with a pair of powerful field-glasses that I could make them out. There were over a dozen of them, and not one had risen in spite of the shooting and general uproar. However, they rose quickly and easily enough when we began to pay special attention to them. Like all Teal they fly at great speed, with many of the curious twists and curls in their flight that make the European bird so difficult a target. You may kill with the first barrel, but at the report of the gun the remainder of the flock shoots off at all sorts of angles, and at a fine speed, and you soon realise that "the quickness of the bird deceives the eye."

They would make most delightful pets, and would look very well in a collection of ornamental water-fowl, but up to the present I do not think they have been brought to Europe alive.

Eggs in the British Museum, obtained by Anderson in Ovampoland are described as oval in shape, moderately glossy, and of a pale cream-colour. They measure 1.7 by 1.3 in.

C. G. Davies del.

Witherby & Co. imp.

RED-BILLED PINTAIL (*PAECILONETTA ERYTHORHYNCHA*) Female.

PAECILONETTA ERYTHORHYNCHA.
RED-BILLED PINTAIL OR RED-BILL.

(PLATE 59.)

Anas erythrorhyncha, Gmelin, Syst. Nat., I, p. 517 (1788); Reichenow, Vögel Afrikas, I, p. 118 (1900-01).

Paecilonetta erythrorhyncha, Sharpe's ed. Layard Birds of S. Afr., I, p. 754 (1875-84); Nicolls & Eglington, Sportsman in S. Afr., p. 126 (1892); Salvadori, Cat. Birds Brit. Mus., xxvii, p. 285 (1895); Woodward, Natal Birds, p. 211 (1899); Selater, Ann. S. Afr. Mus., III, p. 352 (1905); Selater & Stark, Birds of S. Afr., IV, p. 141 (1906).

LOCAL NAMES. "Smee Eendje" of the Dutch (the word "Smee" is sometimes used in East Anglia for the Wigeon); "Semto Letata" of Basutos (Murray).

DESCRIPTION. The bird figured is a female. The sexes are alike, except that the male has a slightly brighter coloured beak. Length about 19 in.

DISTRIBUTION. The Red-bill is to be found all over South and East Africa from Abyssinia to Cape Colony, and up to southern Angola on the west; it is also common in Madagascar.

It is common at Matatiele and in most of the higher districts in Griqualand, on the various dams and lakes, but I have not heard of it in Pondoland.

THIS beautiful little bird is generally found in small flocks on reedy pans and lakes; it is not often seen on rivers, although when the water was low I have occasionally killed a few on quiet pools on the rivers Modder and Vaal. Still, it is the exception to find it in such places.

This is by no means a difficult bird to kill; it falls to a fairly light blow, and is often very tame. It is excellent-eating. When shooting, I once wing-tipped a pair of these

GAME-BIRDS OF SOUTH AFRICA.

birds; they happened to fall on dry land, and I caught them and had them tame for some time. They quickly lost their wildness, and fed with the ordinary domestic ducks around the house.

The Red-bill has been imported into Europe, and has bred in the Zoological Gardens in London, but in the living state it is very expensive to buy, being to-day worth some five or six pounds per pair.

It is a near relation of the Bahama Duck (*P. bahamensis*), which is found in the West Indian Islands, and which is a common bird in collections of ornamental water-fowl in Europe.

The note of the Red-bill is a rather low, harsh quack, but it is seldom uttered.

From what Sergt. Davies writes me, March appears to be the principal breeding-month in Griqualand, as during it he came across nests and broods of young of this species, as well as Yellow-bills, Pochards, and White-backed Ducks.

Red-bill usually nest among thick herbage and grass growing on the borders of lakes and ponds. The nest is built of grass, reeds or sedges, and lined with down from the breast of the female. The eggs are from eight to ten in number, and are described by FitzSimmons as being of a light greenish-white colour; examples in the South African Museum are creamy-brown and glossy; fairly oval in shape, and measure 2.0 by 1.55 in.

C. G. Davies del.

EUROPEAN SHOVELER (*SPATULA CLYPEATA*) Male, Female and Young.

Witherby & Co. imp

SPATULA CLYPEATA.
EUROPEAN SHOVELER.

(PLATE 60.)

Anas clypeata, Linnaeus, Syst. Nat., I, p. 200 (1766).

Spatula clypeata, Salvadori, Cat. Birds Brit. Mus., xxvii, p. 306 (1895); Shelley, Birds of Afr., I, p. 173 (1896); Sharpe, Hand-List of Birds, I, p. 221 (1899); Reichenow, Vögel Afrikas, I, p. 110 (1900-01); Selater, Ann. S. Afr. Mus., III, p. 352 (1905); Selater and Stark, Birds of S. Afr., IV, p. 144 (1906).

DESCRIPTION. The birds figured are an adult drake in full breeding-plumage and a duck with young ones. The female of this species is very like the female of *S. capensis*, but can be distinguished by the tail-feathers, which are dark-brown with white edges and a pale-brown V-shaped mark on the centre of them, the tail of the V pointing away from the bird's body, while the tail-feathers of the female *S. capensis* are dark brown with slightly paler edges, and irregular rufescent bars.

DISTRIBUTION. The Shoveler is a well-known winter visitor to the British Isles, and many also breed in suitable localities. Probably most of those that breed migrate in autumn southwards, while those that appear in winter come from further north. It is a circumpolar bird, breeding in the Arctic regions of both hemispheres about as far north as 68° north lat. throughout Europe, Asia, and North America. In the northern winter it migrates south to India, Africa, southern Asia and Central and northern South America, including the West Indies.

It has only once been shot within South African limits, viz. a male in nearly full breeding-plumage in September, 1893, at Riet Vlei near Cape Town. This specimen is now preserved in the South African Museum. It is a regular visitor as far south as Abyssinia, so it is stated in the *Fauna of South Africa*, and I met with it in some numbers in British East Africa.

THIS Shoveler is never likely to be found nesting within South African limits. In Europe it is a somewhat late

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breeder. Eggs are seldom found in the British Isles before the middle of May, and in high latitudes not until the middle of June.

Seebohm writes that the nest is generally found in the open, well concealed in long grass or heath, and is very skilfully made. The depression in which it is placed, if deep, is only slenderly lined with dead grass or sedge ; but if shallow, a considerable amount of material is collected to give the required depth.

The eggs are pale buffish-white, with the faintest possible trace of olive. They vary in length from 2.2 to 1.8 in. and in breadth from 1.6 to 1.4. The nest-down like that of nearly all ducks, has pale centres, but it may be recognised by its very conspicuous white tips.

C. G. Davies del.

CAPE SHOVELER (*SPATULA CAPENSIS*) Male.

Witherby & Co. imp.

SPATULA CAPENSIS.
CAPE SHOVELER.

(PLATE 61.)

Rhynchaspis capensis, Smith, Cat. S. Afr. Mus., p. 36 (1837).

Spatula capensis, Sharpe's ed. Layard Birds of S. Afr., p. 759 (1875-84); Nicolls & Eglington, Sportsman in S. Afr., p. 128 (1892); Salvadori, Cat. Birds Brit. Mus., xxvii, p. 318 (1895); Reichenow, Vögel Afrikas, i, p. 111 (1900-01); Sclater, Ann. S. Afr. Mus., iii, p. 352 (1905); Sclater & Stark, Birds of S. Afr., iv, p. 145 (1906).

LOCAL NAME. "Slop" of the Colonists.

DESCRIPTION. The bird figured is an adult male. The female resembles that of the European Shoveler (*S. clypeata*), but has a very dark brown tail with irregular rufescent bars. Length about 20 in.

DISTRIBUTION. This is rather a rare duck in South Africa, but I think it is probably commoner than is generally supposed, as it is a bird of shy and wary habits. I have shot it near Bloemfontein, and in other parts of the Orange River Colony. It is supposed to be confined to South Africa, but I shot a fine male in British East Africa in company with some European Shovelers. I have never met with it in the Transvaal, although there were plenty of places suitable for it.

THE few Cape Shoveler that I have seen in South Africa were in pairs, and in their manner of feeding they exactly resemble the European bird, and have a curious trick of swimming swiftly round each other in small circles in shallow water, while they sift through their curious beaks the mud and small insects stirred up by this action.

They are very fast on the wing, and come through a flock

GAME-BIRDS OF SOUTH AFRICA

of Yellow-bill or Pochard like race-horses, and neither Pochard nor Yellow-bill are by any means slow.

Eggs, described in the British Museum *Catalogue*, measure 2.16 by 1.5 in., and are delicate cream-colour tinged with green.

C. G. Davies del.

Witherby & Co, imp.

SOUTH AFRICAN POCHARD (*NYROCA ERYTHROPHTHALMA*) Male and Female.

NYROCA ERYTHROPTHALMA.
SOUTH AFRICAN POCHARD.

(PLATE 62.)

Anas erythrophthalma, Wied-Neuwied, Beitr, iv, p. 929 (1823).

Aythya capensis, Sharpe's ed. Layard Birds of S. Afr., p. 760 (1875-84) ;
Nicolis & Eglington, Sportsman in S. Afr., p. 129 (1892).

Nyroca brunnea, Salvadori, Cat. Birds Brit. Mus., xxvii, p. 351 (1895)
(see also *Nyroca erythrophthalma*, p. 353).

Nyroca erythrophthalma, Woodward, Natal Birds, p. 211 (1899) ;
Selater, Ann. S. Afr. Mus., iii, p. 352 (1905) ; Selater & Stark,
Birds of S. Afr., iv, p. 147 (1906).

Nyroca capensis, Reichenow, Vögel Afrikas, i, p. 108 (1900-01).

LOCAL NAME. " Bruine-eend " of the Boers.

DESCRIPTION. The birds figured are an adult male and a female in
the first adult plumage. Very old females have whiter faces.
Length about 20 in.

DISTRIBUTION. This is the only true Pochard found in South African
limits. Its range is from Abyssinia to the Cape Colony, extending
west to Angola ; it is also found in South America, in southern
Brazil and Peru.

Mr. Selater states that it is not very abundant in South Africa,
but in 1906-7-8-9 I found flocks varying in numbers from a few
individuals to many hundreds on various pans in the Orange
River Colony and Transvaal, and as a rule the bigger the pan the
larger I found the flock to be.

THESE Pochards, like the rest of their family, are excellent
divers, and get their food, which consists chiefly of water-
weeds, plants and insects, under the surface of the water.
Sergt. Davies tells me that he met with a few of this species
in Griqualand in 1898, and that they were remarkably swift
on the wing, and while flying looked almost black, the white

GAME-BIRDS OF SOUTH AFRICA

on the speculum showing up strongly. From my notes, however, I do not find that they are especially fast, and they take a considerable time getting under way, "squatting" along the surface of the water in true diving-duck fashion.

Most dams in South Africa have a large retaining wall at one end, and if the guns take stand under this cover and the duck are driven over, some very sporting shots may be had. Still the Pochard is a poor fowl to eat, tasting strongly of mud ; but as my office staff apparently thought them good, I usually shot these birds when possible.

I saw many hundreds on some of the lakes in British East Africa, and one afternoon while watching some of them I had a most extraordinary number of different species of birds in view at the same time. I had binoculars, and was hidden ; and within one hundred yards of me swam a huge Pelican, and spread over the surface of the lake were parties of Yellow-billed Duck, Red-billed Pintail, Red-knobbed Coots and Egyptian Geese, while some Spur-winged Geese and a pair of Saddle-billed Storks and a party of Stilts moved about on the banks near at hand.

Sergt. Davies writes to me of the South African Pochard as follows :—

"I formerly thought that these birds frequented only the deeper pans, but I have lately found them in all sorts of places, even in shallow little rain pools on the flats. They usually go in flocks, but when breeding they are in pairs.

"Wounded birds dive well, and are a fearful trouble to retrieve.

"I found a nest on the 24th April containing nine eggs of a creamy-white colour, the nest was in a clump of grass about twenty yards from the water, and was neatly made of grass and a little down.

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"I did not take the eggs, so cannot give measurements. The Duck nearly let me catch her before she left the nest."

The Pochard was found nesting on the Berg river in September by Mr. Layard, who states that the eggs were from five to eight in number. Three of these are still in the South African Museum; they are broad, almost regular ovals, smooth and moderately glossy, of a pale creamy-colour, and measure 2.3 by 1.65 in.

Sergt. Davies further remarks that he noticed the eyes of a male bird he killed were red when he picked it up, but that they changed some time after death to yellow, which was the colour of the eyes in all the others he killed. My own experience, however, is that the eyes of some twenty males I killed were red, resembling exactly the colour of a ripe red currant.

THALASSIORNIS LEUCONOTA.
WHITE-BACKED DUCK.

(PLATE 63.)

Clangula leuconotus, Smith, Cat. S. Afr. Mus., p. 37 (1837).

Thalassiornis leuconota, Sharpe's ed. Layard Birds of S. Afr., p. 761 (1875-84); Nicolls & Eglington, Sportsman in S. Afr., p. 124 (1892); Salvadori, Cat. Birds Brit. Mus., xxvii, p. 436 (1895); Woodward, Natal Birds, p. 212 (1899); Sclater, Ann. S. Afr. Mus., iii, p. 352 (1905); Sclater & Stark, Birds of S. Afr., iv p. 150 (1906).

Thalassiornis leuconotus, Reichenow, Vögel Afrikas, i, p. 106 (1900-01).

DESCRIPTION. The bird figured is a male. The sexes are alike. The young birds are less ochraceous, and more brown on the abdomen. Length about 17 in.

DISTRIBUTION. The White-backed Duck is confined to Africa and Madagascar. It is found in Abyssinia, East Africa, Nyassaland, to Cape Colony and as far west as Loango.

Within South African limits it is fairly widely distributed where suitable conditions exist. Mr. Sclater states that it has not been found in Rhodesia or on the Zambesi, but that it has probably been overlooked.

SERGT. DAVIES writes to me as follows: "These curious little birds are not uncommon on some of the pans here in Griqualand, and are usually to be found in small flocks of four or five individuals. They are wonderful divers, going under water without a ripple. They rise readily off the water, although they paddle along with their feet for a little way, and when once fairly on the wing fly at a great pace, their feet sticking out far beyond their tail, and all the time while flying they utter their curious whistling note.

C. G. Davies del.

Witherby & Co. imp.

WHITE-BACKED DUCK (*THALASSORNIS LEUCONOTA*) Male.

GAME-BIRDS OF SOUTH AFRICA

“They swim rather deep, the tail flush with the water.

“I found a nest on April 3rd, 1910. It was in a clump of rushes in about 3 feet of water, and was made chiefly of rushes; it had a rather deep cup, without any down, and contained seven eggs of a warm, rufous colour. In measurements they agreed with those in the South African Museum, i.e. 2.7 by 1.6 in. The female dived like a Grebe on leaving the nest.”

ERISMATURA MACCOA.
MACCOA DUCK.

(PLATE 64.)

Oxyura maccoa, Smith, Cat. S. Afr. Mus., p. 37 (1837).

Erismatura maccoa, Sharpe's ed. Layard Birds of S. Afr., p. 762 (1875-84); Nicolls & Eglington, Sportsman in S. Afr., p. 125 (1892); Salvadori, Cat. Birds Brit. Mus., xxvii, p. 448 (1895); Reichenow, Vögel Afrikas, I, p. 105 (1900-01); Selater, Ann. S. Afr. Mus., III, p. 352 (1905); Selater & Stark, Birds of S. Afr., IV, p. 153 (1906).

DESCRIPTION. The birds figured are an adult male and female. There are several species of *Erismatura*, but this is the only South African representative.

Maccoa differ from most duck in that they have very thick necks, and when skinning them the head and neck can be turned inside out quite easily. Length $18\frac{1}{2}$ in.

DISTRIBUTION. This is one of the rarest, if not quite the rarest, of the South African ducks, but from its habits and the nature of its haunts it is quite possible that it is commoner than is supposed.

Sergt. C. G. Davies writes me that he has seen and shot it on various "vleis" and waters in East Griqualand. It has been shot at Mafeteng in Basutoland, and it appears to be sparingly distributed in suitable places throughout Cape Colony. I have seen skins obtained from Lake Naivasha in British East Africa.

Col. Sloggett's collectors, Messrs. Grant & Seimund, obtained it near Deelfontein.

THE Maccoa Duck is a splendid diver and most reluctant to fly; but it by no means follows that it is unable to do so, as it whizzes along at a great pace once it is on the wing.

It feeds chiefly on water-snails, water-beetles, etc.

Sergt. C. G. Davies, writing from East Griqualand in March,

C. G. Davies del.

Witherby & Co, imp.

MACCOA DUCK (*ERISMATURA MACCOA*) Male and Female.

GAME-BIRDS OF SOUTH AFRICA

1910, says: "I have lately come across a pan in which there were quite a dozen Maccoa Duck. They refused to fly and only dived but were on the whole very tame and I shot a good pair.

"The female contained an egg ready for laying and quite enormous for the size of the bird. It was of the usual duck shape, but the shell somewhat rough in texture, and of a bluish-white colour, the bluish colour most noticeable when wet.

"Unfortunately I had no time to hunt for nests, and the egg got smashed on the way home.

"Apparently this is the first time the egg of this bird has been properly identified."

He writes further :—

"I did not hear these duck utter any note, and when swimming about casually, they swim much as other duck, perhaps rather deeper, but when alarmed they look very curious, as they then sink the body very deep so that scarcely more than the head and lower back and tail are to be seen, the tail sticking straight up in the air at right angles to the water."

HAGEDASHIA HAGEDASH.

HADADA IBIS.

(PLATE 65.)

Tantalus hagedash, Latham, Ind. Orn., II, p. 709 (1790).

Hagedashia hagedash, Sharpe's ed. Layard Birds of S. Afr., p. 739 (1875-84); Sharpe, Cat. Birds Brit. Mus., XXVI, p. 19 (1898); Woodward, Natal Birds, p. 191 (1899); Sclater, Ann. S. Afr. Mus., III, p. 351 (1905); Sclater & Stark, Birds of S. Afr., IV, p. 100 (1906).

Theristicus hagedash, Reichenow, Vögel Afrikas, I, p. 325 (1900-01).

LOCAL NAME. "Ingagane" (i.e. Black Ibis) of the Amaxosa (Stamford).

DESCRIPTION. The bird figured is an adult female. The sexes are alike, and measure about 30 in.

DISTRIBUTION. The Hadada is found throughout the whole of the Ethiopian region, from Senegal, Kordofan, and Somaliland southwards to Cape Colony. In South Africa the bird is apparently confined to the well-wooded and watered districts of the south and east coasts, and does not occur on the high plateau of the centre of the country, nor did Anderson come across it in German South-west Africa, although he met it in the Lake Ngami region.

THE Hadada is not really a Game-bird in the strict sense of the word, but it is most excellent-eating, and is always a welcome addition to the bag.

Nearly all my time in South Africa was spent on the "High Veldt," so that I was not within the range of the Hadada,

C. G. Davies del.

Witherby & Co. imp.

HADADA IBIS (*HAGEDASHIA HAGEDASH*) Male.

GAME-BIRDS OF SOUTH AFRICA

but I saw it quite often in British East Africa, where it is quite common.

Sergt. Davies has made a careful study of this bird, and writes to me of its habits as follows :—

“Hadada are usually found in fair sized flocks, but sometimes in pairs or singly. They feed principally on beetles, locusts and worms which they dig up with their long beaks. They are partial to grassy flats that have been lately burnt, they also haunt cultivated lands and marshy places, and may frequently be found feeding in the bush. They go out to their feeding places at the first streak of dawn, but during the heat of the day generally resort to the bush or the shade of trees along the banks of rivers. They roost in trees, generally preferring those which overhang water, and are very conservative, returning every night to the same tree. When feeding in the open they are usually very wild, and the best way to shoot them is to wait at sunset under the trees in which they roost, and take them as they come in. Their flight is strong, and often at a great height, but they are not fast. Their sonorous call, from which they get their name, is uttered both when alarmed and while on the wing. They breed in August and September, but I once found a nest containing nearly fledged young at Christmas.”

Messrs. Anderson, Reid, and Ayres have described the nesting-habits of the Hadada. The nest is generally placed in a tree overhanging water, and is a slight structure built of sticks, lined with a little dry grass, and rather flat on the top, so that it is surprising the eggs do not fall out. The usual clutch consists of three eggs; these are very different from those of the other Ibises, being greenish or greyish-buff, densely covered with brownish splotches and streaks. The

GAME-BIRDS OF SOUTH AFRICA

example in the British Museum, obtained by Ayres and figured in the *Catalogue of Birds' Eggs*, is stated to be rather rough, and much pitted with pores, and to measure 2.43 by 1.57 in.

FINIS.

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