

THE BIRDS OF KENYA AND UGANDA.

PART I. VOL. 2.

OTIDIDAE and *BURHINIDAE* (Bustards and Thick-knees).

By

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OTIDIDAE (Bustards).

INTRODUCTION.

With the issue of Part IX of this series Volume I was completed. Part I of Vol. II is now issued. This volume deals with the Bustards, Plovers, Sand Pipers, Rails, Crakes, and Snipe of the territories embraced in the review, i.e. Uganda, Kenya, Tanaland, and Jubaland (Juba River).

The Bustards as a group possess certain characters which are common to the family. They are entirely terrestrial and their feet are adapted to their mode of life; the legs are long and strongly scaled; toes short, and the hind-toe entirely missing. They vary in size from the Greater Bustard which stands some five feet high to the Little Crested species which is no taller than 18 inches. All possess powerful straight bills, rather wide at base, bluntly pointed, and slightly notched at the tip of the cutting edge; nostrils bare and open. The crown of the head is wide and flattened.

Seven species and two sub-species occur in our territories, arranged in five genera.

CHORIOTIS STRUTHIUNCULUS (Neum.) GREATER BUSTARD.

Ref.: Neumann, *J. f. Ornith.*, 1907, p. 306.

Type locality: Lake Zwai, Abyssinia.

DISTRIBUTION:

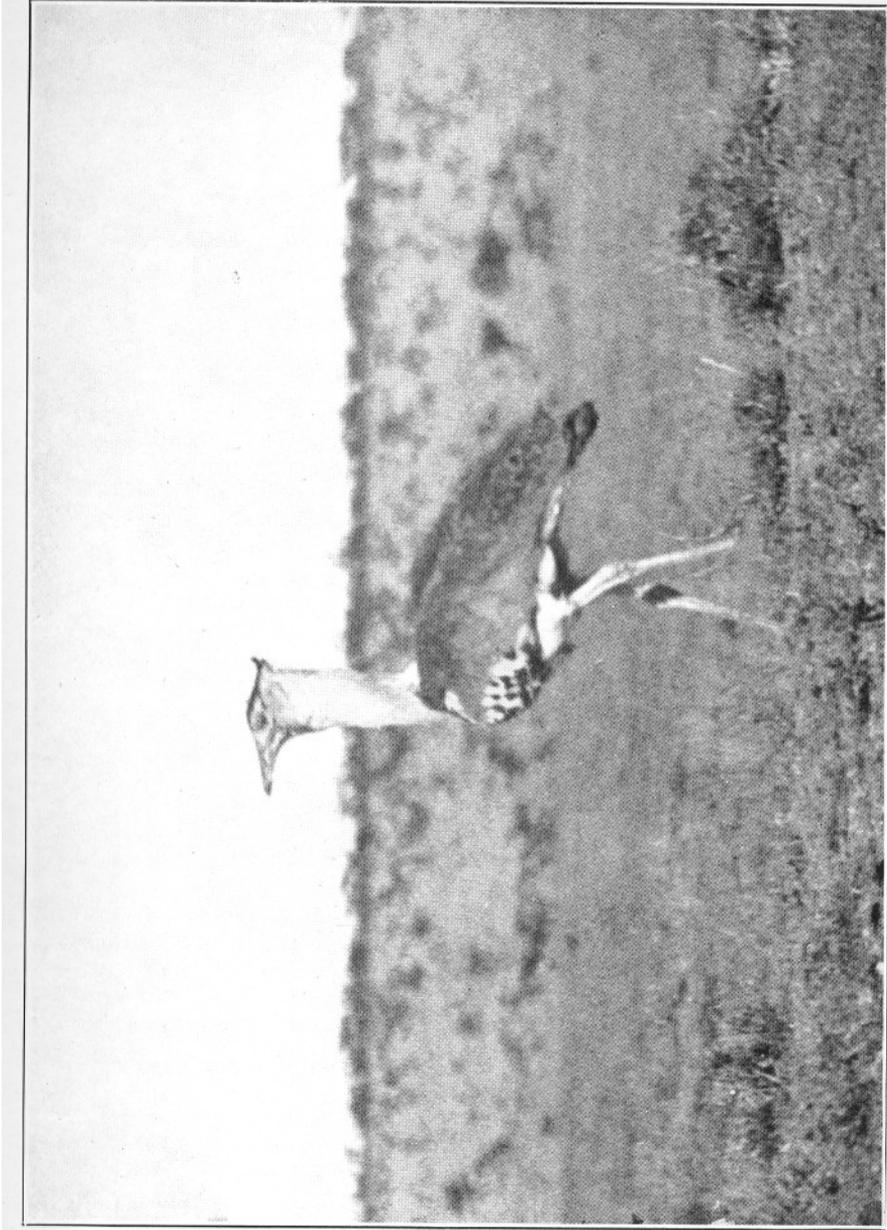
North-eastern portion of Uganda and the greater part of Kenya, though not the highlands above 6,500 feet.

DESCRIPTION, MALE, ADULT:

Streak in centre of crown grey finely vermiculated, bordered on either side by a wide black streak from the base of the bill, all these feathers greatly elongated, especially those posteriorly, and with the white black-barred feathers of the occiput, form a crest; from the nostrils and passing over the eye, a white stripe bounded below from



Greater Bustard, female.



Greater Bustard, male (*Choriotis struthiunculus*, Neum.).

the posterior angle of the eye by a black streak. Lores and earcoverts white, the latter streaked with blackish; cheeks white more strongly streaked with black; chin white; throat and neck feathers elongated and black and white barred, those on the base of the neck on either side black, forming a decided patch. The hind part of the neck, especially towards the base devoid of feathering, but this bare area is completely covered by the backward inclination of the elongate neck feathers. Base of hind neck where it meets the mantle, with a conspicuous black patch often continuous with the patches on the side. Mantle, scapulars, innermost secondaries, lesser wing-coverts buffy to ashy-grey very finely vermiculated with black; those of the mantle with rufescent tinge to margins; median wing-coverts white with wide black bar towards end and irregular black speckling basally, forming a distinct check pattern; secondary coverts, white mottled with black with a wide grey penultimate bar and white tipped; secondaries grey with macular white bars; outer primaries black, others dark grey with white bars and wavy lines on the inner webs. Back, rump and upper tail-coverts like the mantle; rectrices dark grey basally, with two or more white cross bars, distally vermiculated and freckled as the mantle, and with a blackish end white tipped. The whole of the underside from upper breast to under tail-coverts white. Wings, 720-760 mm. Bill, grey-brown upper, olive-greyish lower. Eyes, reddish-yellow to hazel-yellow. Legs, greyish-yellow with greenish tinge. Weight 25-30 lbs.

FEMALE, ADULT :

Very much like the male but smaller, the wings varying from 525-640 mm., weight 11-14 lbs. The colour difference is mainly in the tone of the black, it being paler; the head crest and neck plumes not so developed; the wings are greyer and the check-pattern of the coverts not so developed.

JUVENILE :

There appears to be no description, nor have I any personal notes on this stage.

HABITS :

The Greater Bustard is an inhabitant of the open grassland plains and open thornbush, and occurs from the Taru desert through suitable localities up the Rift Valley to Baringo and Rudolf, is found on the plains to the east and west of Mt. Kenia to east Rudolf and westward to north-east Uganda. It does not occur at over 6,500 feet. The type of country loved by these birds is one where the grass is not too long such as we find on the Athi Plains and where stony outcrops occur. They are also very partial to this type of grass country after a fire has passed over it; not only when the young grass is sprouting

but also soon after the fire. At these latter times they pick up vast quantities of land snails, grasshoppers and small rodents which have been partly scorched by the heat though not charred. One usually sees these birds in pairs, or in small companies occasionally; even if there are several in one locality, one will notice that the pairs do not associate. The numbers in any one district vary from time to time, partly seasonal—that is breeding or not—but mostly varying with the food available. In April-June, 1932, I have counted as many as twenty birds within a radius of two miles or so; this year in the same locality not more than two pairs were observed. On the other hand, the Nairobi commonage has been full of these birds.

They may be seen at a considerable distance, for they walk and stand with proud upright carriage. Even afar off one will note the difference in size of the sexes, a difference which is accentuated at close range. The male are altogether taller and bigger and though there is quite a considerable range in size in this sex, they are never as small as the females. One may term these birds tame, that is, they allow one to pass or approach in a car at no great distance, but attempt to draw nearer and with aggravating, slow, stately walk they move away keeping just so far off. One will note the characteristic backward and forward swing of the neck. If on foot, one may tramp miles to get within reasonable distance but one never gets nearer. If one comes upon these birds suddenly, they may take flight, but trust rather to a short run, then leisurely walk to put distance between one. The times of the day to see these birds are early morning and in the afternoon; during the heat of the day they remain quiet, perhaps standing under the shade of a stunted thorn-tree or squatting in longish grass. They seem to be partial to ridges and tops of hillocks, but take shelter in the valleys and dips when they rest. One may hear them call in the morning or late evening, or occasionally when flushed. The call may be likened to the syllables "bar-kah-ka," frequently repeated when undisturbed, but uttered once or twice only when frightened.

Although fairly evenly distributed throughout their range, the area between Nairobi and the Kapiti Plains, seems to be considered with favour. They are always to be seen here. They nest on the bare ground, very often without any attempt at a shallow scoop. One or two eggs are laid, greenish or olive-brown in ground colour streaked and mottled all over with darker brown, thus resembling their immediate surroundings to a great degree. They measure 75-78 x 60-63 mm. Both birds incubate. The nesting season varies according to the rains; breeding birds or eggs have been noted from May to August over a number of years. The males display before the female at the approach of the nesting season. I have not noticed more than one male so engaged at a time. The display is somewhat like that of a turkey cock; the head crest is raised and fanned, the neck feathers raised and

ruffled out, especially those of the lower neck, and the head and neck thrown back; the tail is raised and spread fan-wise; the wings drooped; the throat expanded. A short space in this position and he advances to the female by side-stepping, then suddenly ruffling all his feathers he resumes the usual poise. The female appears to take little notice.

The diet of this bird covers a wide range: stones, flints, bits of iron and brass; insects, snails, small rodents; bulbs, grass and other herbage are grazed. Truly a diet almost as varied as that of the ostrich.

As a sporting bird, the Greater Bustard offers a large target, but many are the misses on account of the large wing span and length of tail; bulk goes for nothing. A rifle of small bore is usually employed to secure these birds as they can be very wary, and it is only by careful stalking that one can get within gun-shot range. When secured, the flesh is not really palatable, unless it be a young bird, and even then it has to be hung.

CHORIOTIS ARABS BUTLERI, Bannm. SPECKLED - WING
BUSTARD.

Ref.: Bannerman, *Ibis*, Vol. VI, No. 3, p. 433, 1930.

Type locality: Renk on the White Nile.

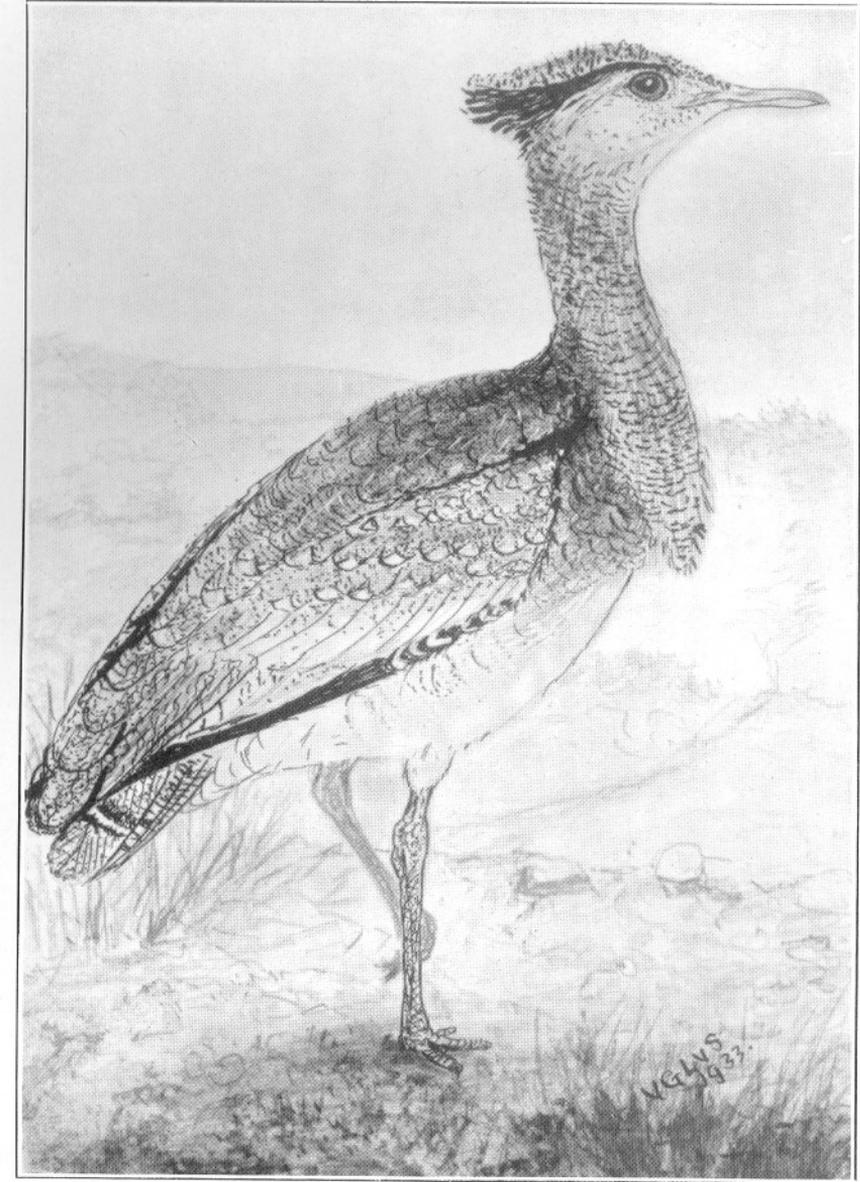
DISTRIBUTION:

Restricted to Lake Rudolf area.

DESCRIPTION, MALE, ADULT:

Feathers of crown sandy ochreous to sandy-grey, finely vermiculated with black; those toward the occiput elongated, bordered by a black streak, narrow in front and widening out posterior to the eye where the feathers elongate and meeting those of the other side, form a crest with the long feathers of the crown. Loes and a wide streak running through the eye, white; chin, white; cheeks, ear-coverts, neck, except the base of hind-neck, white barred with black, the neck feathers elongate and disintegrate, forming a ruffle. Feathers at basal area of hind-neck, mantle, scapulars, back, rump and upper tail-coverts sandy-buff vermiculated with black; some of the outer short scapulars, lesser and median wing coverts sandy and vermiculated, each with a white tip; distal half of major coverts white with some black freckling; primaries black, inner ones with slight white barring; secondaries ashy-grey with irregular white bars on outer web and white freckling on inner webs; tail feathers, base ashy-grey followed by three white bands separated by two black bands the distal one narrow, followed by a broad sandy band strongly black vermiculated merging into a black subterminal bar tipped with white.

The whole of the under-surface of the body is white, including the axillaries, a few of the upper breast feathers slightly black-barred.



Speckled-winged Bustard (*Choriotis arabs butleri*, Bannm.).

Length of wing 565-570 mm. Bill ochreous-olive with blackish at base of culmen; legs and feet dirty yellowish-white; eyes creamy round pupil, white distally.

FEMALE, ADULT :

Similar to the male but smaller and rather paler above.

N.B.—The chief characters which distinguish this species from *C. struthiunculus*, with which it might be confused, are: The colour of the crown; the absence of any black collar at the base of the neck; the presence of white tips to the wing coverts, and absence of any black and white "check-pattern"; the general more sandy tone of the upper side and the amount of white on the wings.

HABITS :

So far as I am aware, this is the first record of this species for Kenya or Uganda. No mention is made of its occurrence in these territories by Sclater in his *Systema Avium Aethiopicarum*, by the late Sir F. Jackson, in his "Game Birds," nor Bannermann in his review of the species in *Ibis*, Vol. VI, No. 3, p. 429-434, 1930. There is, of course, no reason why it should not occur further south than its previous known distribution, that is S. Anglo-Sudan, and it has probably been overlooked in the area from which it is now recorded, viz. Turkana, East Lake Rudolf area. I know little of its habits. The type of locality frequented by these birds is the semi-arid open plains with sparse grass, grass-lands with stunted thorn trees, and dried-up watercourses. In general habits they resemble others of the group, but are reported by my collectors as much more wary than the others of this genus.

The records for this country are a male and female shot in the locality cited, in January, 1932.

NEOTIS CAFRA JACKSONI, Bannm. JACKSON'S RUFIOUS-NECKED BUSTARD.

Ref. : Bannerman, B.B.O.C., Vol. 1, 1930, pp. 59-61.

Type locality : Amala River, Kenya.

DESCRIPTION, MALE, ADULT :

Crown of head from forehead to nape, black with a white central streak, widest at the nape; a white superciliary line widest at and beyond the eye; a whitish patch at base of bill; lores and ear-coverts white with grey streaks; chin and throat white, followed by a grey area from the gape down the fore-part of the neck where it pales off and becomes streaky over the white ground of the fore-neck; hind-neck cinnamon-rufous separated from the black of the nape by a white

collar. Upper breast to abdomen white streaked with grey, these feathers elongate and distintegrate at the ends forming a ruffe. Abdomen and under tail-coverts white; lateral upper tail coverts white, remainder as the back. Mantle, scapulars, back, rump, and long upper tail-coverts closely vermiculated with tawny and black, the mantle washed with greyish in fresh plumage; lesser wing-coverts similarly coloured; median coverts white at base, black beyond; greater coverts black and white, the latter colour being more apparent at the tips and most in evidence at the inner ones; primary coverts black, white tipped; primaries mostly black with an increasing amount of white on the inner webs; secondaries black with white on inner webs, freckled with blackish, long secondaries as mantle. Tail, central feathers freckled and vermiculated as back, remainder black and white barred, the penultimate white bar freckled with black distally. Wings, 580-620 mm. Weight, 15-18 lbs. Eyes, brown; bill, grey-blue with darker base and horny white edges, lower mandible whitish tinged with olive; legs and feet whitish with ochreous to greenish tinge round "knee."

FEMALE, ADULT:

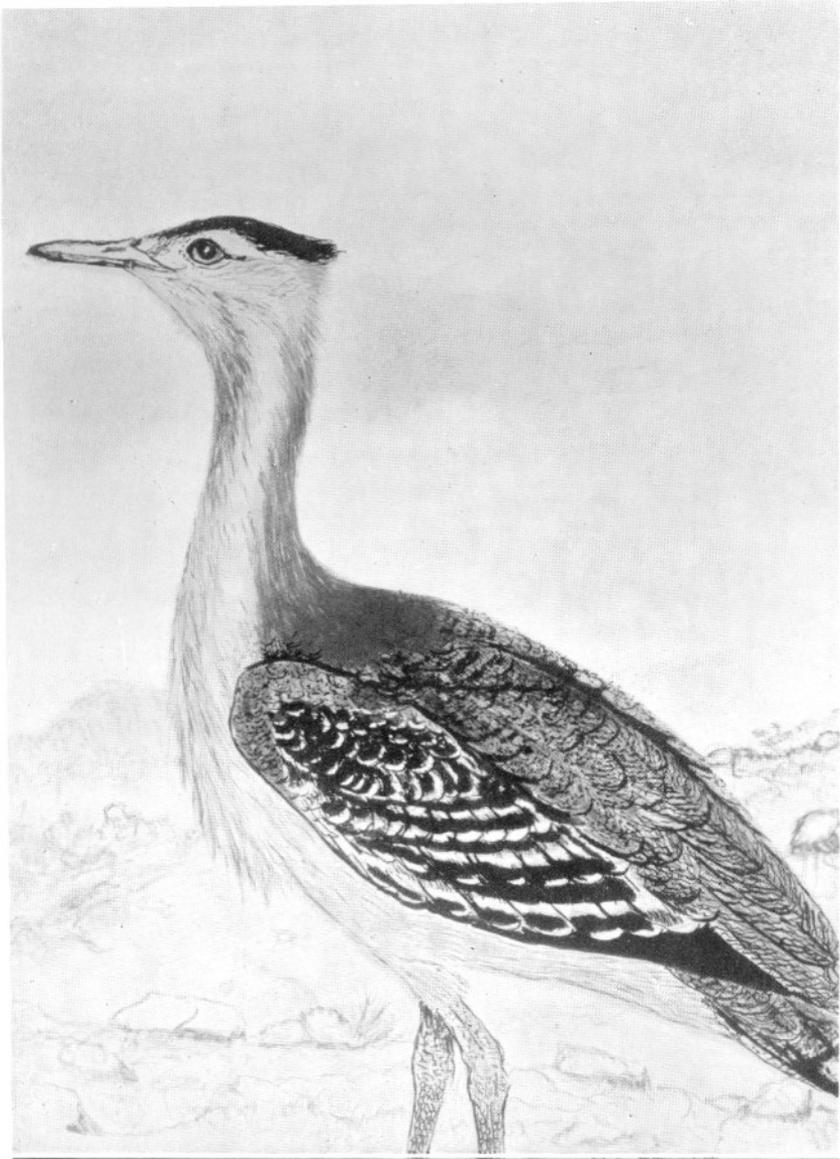
Somewhat like the male but smaller. Crown black with central white streak expanding towards nape but not extending over the black; lores freckled black on sandy ground, this colour extending over the fore part of eye, followed by a wide white supercillium which goes back over the ear-coverts; cheeks and ear-coverts whitish freckled on the former and streaked on the latter, with blackish; chin and throat white; the whole of the fore-part of the neck ashy-grey finely and closely vermiculated, the grey shading to lavender at the sides, encircling the nape, and extending to the upper breast where it is sharply defined from the white of the breast; hind-neck rufescent; abdomen flanks, thighs, under tail-coverts white; flanks buffy; mantle, back, scapulars, rump, long inner secondaries, lesser coverts, freckled and vermiculated sandy-buff and black; median, greater-coverts black and white. Tail and flight feathers as in the male. Wings 490-590 mm. Weight 10-12 lbs. Eyes, hazel; bill, lead-grey with darker culmen, lower whitish; legs and feet whitish.

IMMATURE:

Very like the female, but with freckled streak to crown, coarser freckling on the throat, less rufescent on the back of the neck, scapulars and long inner secondaries more coarsely vermiculated longitudinally, and with a considerable rusty wash on the lesser coverts. Bill, blackish above, dirty white below; eyes brown; legs and feet dirty whitish.

JUVENILE:

Not examined.



Rufous-necked Bustard (*Neotis cafra jacksoni*, Bannm.).

HABITS :

Jackson's Rufous-necked Bustard inhabits similar country to that of the Greater Bustard. One frequently sees both species hunting the same ground and the difference in size is at once obvious.

It can be definitely stated that Jackson's Bustard ranges to higher altitudes than does *C. struthiunculus*; thus we have records of it from Nandi, Ravine and Mau. Its stronghold, however, appears to be the Rift Valley south of Rongai, and the plains of South Kavirondo and West Kenia. It also occurs in suitable localities in Uganda, especially N.E. Lake Albert. It is very partial to localities which have recently been burnt off and here it takes its fill of insects, small mammals, and lizards which have been left by the flames. Under ordinary circumstances, in addition to the above diet, it feeds on grass, both blades and seeds, and herbage; it also digs up with its bill, bulbs of certain lilies and allied plants. I have always found the stomach to contain a large quantity of grit also.

The display of the cock bird is even more elaborate than that of the Greater Bustard, partly due to the fact that the neck ruffle is very much longer and is fanned out into an immense ball in front and the feathers are kept quivering all the time; further the actual neck skin is capable of great distension. The call is unlike that of other Bustards and is very similar to the "booming" of the Bittern. Calling usually takes place in the morning or evening, except during the pairing season when it can be heard between times. The nesting season is from February (Uganda), March to June and November. The nest is a mere shallow scoop or nothing at all, usually quite exposed or occasionally at the base of a dwarf thorn-tree. Two eggs are laid, oval in shape, of a pale brown ground smeared and blotched with darker brown.

In general behaviour, this Bustard is rather wary, and seldom allows of a close approach even in a car. The only time I have really come quite close and within easy gun-shot range was when a cock was busy displaying. The flight is a heavy seemingly slow motion, but it covers distance with remarkable speed as one has learnt to realise when trying to walk the birds up. At the end of a flight they drop suddenly, unless the flight has been prolonged and at a considerable height, in which case they "plane" down gradually. They are usually loath to take wing, but their steady walk suffices to out-distance one completely. Though one may see these birds feeding on the more open grass lands, they resort to the taller denser grass areas to rest towards noon, and in such situations they are difficult to detect as their plumage harmonises with the vegetation to a marked degree, but they are always on the alert; and their height accentuated by their erect carriage enables them to detect danger long before one can "spot" them.

As a sporting bird they offer excellent targets for a rifle; a shotgun is seldom of use. Their flesh is quite excellent, but they have to be hung for a day at least.

There is an undoubted local migration of these birds, but insufficient data exists to enable one to attempt a calendar of movements. Information of this nature should be noted and submitted to the Museum in Nairobi.

NEOTIS HEUGLINII (Hartl.). HEUGLIN'S RED-BREASTED
BUSTARD.

Ref.: Hartlaub, *Ibis*, 1859, p. 344.

Type locality: Harar, Abyssinia (E.).

DISTRIBUTION:

Extralimital, Somaliland, and Eastern Abyssinia; within our limits, Northern Frontier and Jubaland.

DESCRIPTION, MALE, ADULT:

Crown black, tapering to a point at the nape, with a central irregular white streak slightly expanded towards the nape, followed by a white superciliary line narrow at the base of the mandible, expanding in the region of the eye and extending back over the ear-coverts; lores white speckled with black; a black streak runs from the gape to below the eye and ends above the ear-coverts; chin and cheeks white, the latter black speckled; throat white with a large black patch; fore-neck and upper part of hind-neck lavender grey shading into vinous-grey, then chestnut on the base of the fore-neck and upper breast, these areas indistinctly barred with wavy dark-grey lines; feathers on back of neck sandy-buff with large buffy central area freckled and vermiculated with black at margins and tip. Mantle, back, lesser wing-coverts sandy-buff with arrow-shaped buff marks vermiculated and freckled at margins with blackish; the upper part of mantle slightly washed with rusty; scapulars and long inner secondaries coloured as the mantle, but the buffy arrow marks more broken up by wavy black lines; median coverts black and white with terminal white spot; greater coverts black with white tips. Secondaries brown-black with white tips and varying amount of white on inner webs; primaries mostly black with slight freckling on inner webs, remainder black-brown with white on inner webs. Rump and upper tail-coverts buff-sandy distally with gradually increasing distinct blackish vermiculations towards end where there is a distinct broad black bar followed by clear blackish vermiculations then a pure white tip. Lower surface: Breast, flanks, abdomen, and undertail-coverts white. Wings, 445 mm. Eyes, hazel; bill, olive at base, horn at tip, lower whitish; legs and feet, ivory with greenish tinge posteriorly. Weight 6 lbs.



Heuglin's Red-breasted Bustard (*Neotis heuglini*, Hartl.).



Blue-necked Bustard (*Eupoditis canicollis*, Reich.).

FEMALE :

Very similar to the male above, but top of head less black and the pale central line buffy; very much less black on throat; chestnut of breast merely a wash; size smaller. Wings 360 mm.

HABITS :

The Chestnut-breasted or Red-breasted Bustard has only just recently been known to exist within the limits of our territories and is represented by specimens in my collection from the Northern Frontier and Jubaland. It is reported on good authority to be present on the north-east of the Tana River, though no actual specimens are preserved from this district. Little is on record regarding its habits. The country inhabited is open rocky or tufty grass land, with sparse vegetation.

EUPODOTIS CANICOLLIS CANICOLLIS (Reichw.). BLUE-NECKED BUSTARD.

Ref. : Reichenow, *Orn. Centrbl.*, 1881, p. 79.

Type locality : Bardera, Juba River.

DISTRIBUTION :

Kenya, from the Juba River southward to east Kenya and thence Tanganyika Territory.

DESCRIPTION, MALE, ADULT :

Forehead black, shading to blue-grey which colour extends to the nape, but is surrounded marginally by black which runs into a point of elongate feathers at the nape, forming a crest. Lores, supercillium, ear-coverts, chin and cheeks pure white, the central ear-coverts black streaked, while a line of similar colour extends from above the gape to below the posterior angle of the eye. A large V-shaped black patch, apex towards chin occupies the throat, the angle of the V being white. The whole of the neck blue-grey, this colour extending to the upper breast where it becomes slightly vermiculated with fine alternate lines of black and sandy. Mantle, scapulars, back, rump, and upper tail-coverts sandy buff, minutely freckled and vermiculated with blackish, the centre of the mantle feathers darker; the long scapulars and long inner secondaries with more marked sandy-buff areas and wider black speckling and wavy black lines. Lesser coverts, bend of "elbow," primary coverts, slaty-grey with slight sandy vermiculations; median coverts rather more tawny and less vermiculated at tip and outer web giving this area a more uniform tawny appearance; greater coverts greyish distally shading to tawny-buff proximally most black tipped. Secondaries black at tip and along outer web, with increasing whitish on inner web; primaries brown-black with increasing degree of whitish on inner webs.

Rectrices, ashy-grey at base shading to buffy vermiculated with blackish and with two blackish cross bars. The fluffy bases of nearly all the feathers tawny-vinous coloured. Axillaries black. Sides of breast washed with tawny-buff slightly vermiculated; rest of underside to vent white; under tail-covert greyish at base becoming white then buffy at tip, crossed by greyish bars and freckling. Wings, 295-320 mm. Weight 2½-3 lbs. Eyes, grey-brown; bill, horn brown at tip, pinkish to yellow at base, lower mandible whitish; legs and feet ivory with golden ring at knee.

FEMALE, ADULT :

General scheme of colouration as the male, but with less black on the forehead and round the crown, also very much less black on the throat, these feathers being largely white-tipped. The fore part of the neck and the upper breast tipped with sandy-ochreous finely vermiculated; the mantle and back more crossed with sandy-buff markings, the wings with less grey and the blackish freckling and vermiculations more distinct though wider spaced.

Immature, 1-3 months: Forehead rufescent shading to black towards nape, all feathers buff or white tipped; streak below eye rufescent, black streaked; throat patch as in the female; hind part of neck greyish, fore part of neck and upper breast tawny washed, all white or buffy tipped and a black line proximal to pale tip; mantle, scapulars, lesser and median coverts, back and rump with sandy and black vermiculations and freckles all with white ends rusty tipped; lesser coverts rusty with white tips; the whole of the lower surface white; secondaries blackish on outer webs, whitish internally and with buffy and black vermiculations; primaries blackish with paler inner webs and buffy freckling at ends. Rectrices buffy at proximal half sparsely black freckled, more heavily freckled distally and with two black bars. Bill, horn brown; eye, greyish; legs and feet, dirty greyish-pink.

The change of plumage from this stage to almost adult female-like takes four months (captive birds).

HABITS :

The Blue-necked Bustard is found in the open grass and thorn bush from the coast up to Ukambani and the Southern Masai country; in the latter two areas it is common. It is quite common in the thorn-bush south of Nairobi. North of these areas it is represented by a northern race which is distinguished by its paler plumage. They are usually met with in pairs or small bunches after the breeding season is over, though on occasions, one may see them in greater numbers in areas where the grass has been burnt off.

This is perhaps the most-noticed of the smaller Bustards on account of the fact that it makes its presence known by its loud far-

reaching call which is like the syllables "rue-a-akh" sounded gutterally, and oft repeated. It is particularly noisy in the early morning, any time during dull weather, at evening, and after a sudden rain storm. It also has a soft low whistle like "peu-peu" which it utters as it feeds. A tame bird which had the freedom of the grounds could always be made to call lustily if a loud hammering noise was made. In captivity they are fearless and will put up quite a good fight against an animal considerably larger than themselves. The attitude of defence is very similar to that of the courting display but defence is achieved by the use of the bill, and to a lesser degree the feet, in much the same way as an ostrich defends itself, by a forward kick. Captive birds become extremely tame, confiding, and playful. They are practically omnivorous.

In the wild state these birds feed principally in the morning and evening, and during noonday they rest, preferably amongst longish grass under the shade of a small acacia.

Their food consists very largely of green herbage, grass seeds, bulbous roots, insects, and land shells.

The nesting season is from February to June and later in the year in November, though the early part is the principal time. The courting takes place when the grass-rains start. The males call lustily and display, though the performance is not so elaborate as that of Jackson's Bustard. The wings are half expanded and drooped; the tail is fanned; the neck is depressed, but the throat is expanded showing off the full black patch to great advantage, and the head feathers are raised, the nape crest being expanded. In this attitude he walks around in small circles, and drawing in his feathers he stands upright, expands his throat and calls vociferously. The nest is a mere scratch amongst stones on the bare ground; two eggs are laid, almost round, olive-grey in ground colour with dark-brown blotches and indistinct purply-grey marks. The downy stage has not been recorded.

These birds offer quite good sport but they are not difficult to obtain. Their flight is slow and not sustained. When flushed they soon alight again and do not run, so that one can count on flushing them more than once. If one of a pair is shot, the other remains in the vicinity and can be bagged with little difficulty.

EUPODOTIS CANICOLLIS SOMALIENSIS, Erl. SOMALI BLUE-NECKED BUSTARD.

Ref.: Erlanger, *Jur. f. Ornith.*, 1905, p. 84.

Type locality: Metaker, Gallaland.

DISTRIBUTION:

The whole of the Northern Frontier area to just south of the Northern Guasso Nyiro, Laikipia, Suk, and Turkana.

DESCRIPTION :

In both sexes, this race can be recognised from the more southern and typical race by their generally paler, more sandy upper surface which in addition to the sandy and black vermiculations, has sandy subterminal irregular bars. Further the wings are more rufescent from the " elbow " to the long secondaries.

The female is rather more buffy on the front of the chest, and the top of the crown is greyish-buffy.

HABITS :

These are similar to the southern race.

**LOPHOTIS GINDIANA GINDIANA (Oust.). BUFF - CRESTED
LITTLE BUSTARD.**

Ref. : Oustalet, *Bull. Soc. Philom.*, 7, 1881.

Type locality : South Somaliland, Bardera ?

DISTRIBUTION :

The dry country round Rudolf, Suk, Northern Frontier, south through Ukambani, to the Taru desert.

DESCRIPTION, MALE, ADULT :

Forehead, lores, cheeks, supercillium, upper ear-coverts dove-grey, with a white line above gape and round the fore-part of the eye; sides of throat to lower ear-coverts creamy-white shading to isabelline at the nape; crown of head grey with sandy-buff vermiculations alternating with fine black freckling and dark centres to each feather; at the nape a long isabelline-vinous tuft of disintegrate plumes. Fore and hind-neck grey, the latter with an isabelline wash at upper part, the former with a black central stripe which runs from the chin to the middle of the upper breast where it separates the two conspicuous white breast patches; the whole of the undersurface to the under tail-coverts jet black. Mantle, scapulars, lesser wing-coverts, long secondaries, rump and upper tail-coverts sandy-buff with irregular, coarse, wavy blackish vermiculations, the feathers of the mantle and scapulars with blackish spear-shaped central markings.

Median wing-coverts grey vermiculated with blackish basally and with broad white tips; greater coverts, similarly vermiculated at base but with a broad white subterminal band followed by black; secondaries black, isabelline-white barred; primaries black on outer web, but mostly white on inner web with black bars. Central tail feathers sandy-buff vermiculated with blackish, remainder similarly coloured but with a terminal black band. Bill, horn-brown at tip, olive-grey at base, lower paler greenish-grey; legs and feet pale olive-grey with whitish fore scales; eyes creamy-white. Wings, 250-260 mm. Weight 1½-2 lbs.

FEMALE :

General scheme of body plumage similar to the male. The wings are less conspicuously coloured having more black freckling and less white on the median coverts; the upper breast feathers instead of being pure white are heavily and irregularly marked with black; the whole of the neck feathers are sandy, barred with blackish and have terminal buff tips; the throat is isabelline to whitish with an extension of the white colour down the middle of the front to about half way; the lores, cheeks, and ear-coverts are deep isabelline; the forehead is rufescent shading to black-brown with buff tips and bars. The white areas on the primaries and secondaries are strongly isabelline. Wings 250 mm. Bill horny brown to greyish at base, lower horn-grey; legs and feet olive-grey. Eyes ochre.

HABITS :

This, the smallest of the Bustards of the territories, is a very handsome species and its distribution is more limited than most. It is an inhabitant of the drier thorn-bush and veldt country of low levels and does not occur over 5,000 feet. It is frequently met with singly, sometimes in pairs and seldom in parties. One often sees it in those open bare patches where ants have cleared all vegetation leaving a wide circle of bare ground with just a heap of grass-seed husks in the centre; I shrewdly suspect that these birds eat the ants in these places, as ants of the species have been found in the stomach contents. Their principal diet is seeds, green herbage, and insects.

Little is known of their movements, but there is a local migration. When flushed, they fly up over the stunted bush but soon drop, selecting some patch where cover is thick, and here they actually squat, and may be flushed again. Breeding birds were obtained in March to June. I have not seen the nuptial display. The clutch consists of two eggs laid on the bare ground. They are stone grey with brown markings and underlying blotches of darker purply-grey. There is not the great difference in size between the sexes in this species as in others but its general small size makes it readily recognisable.

LISSOTIS MELANOGASTER MELANOGASTER (Rupp.). BLACK-BELLIED BUSTARD.

Ref. : Ruppell, *N. Wirbelth. Vog.*, p. 16, 1835.

Type locality : Lake Tsana, Abyssinia.

DISTRIBUTION :

Through the open bush and grass-lands from practically the coastal belt to the highlands up to 6,000 feet and thence to Uganda in suitable localities.

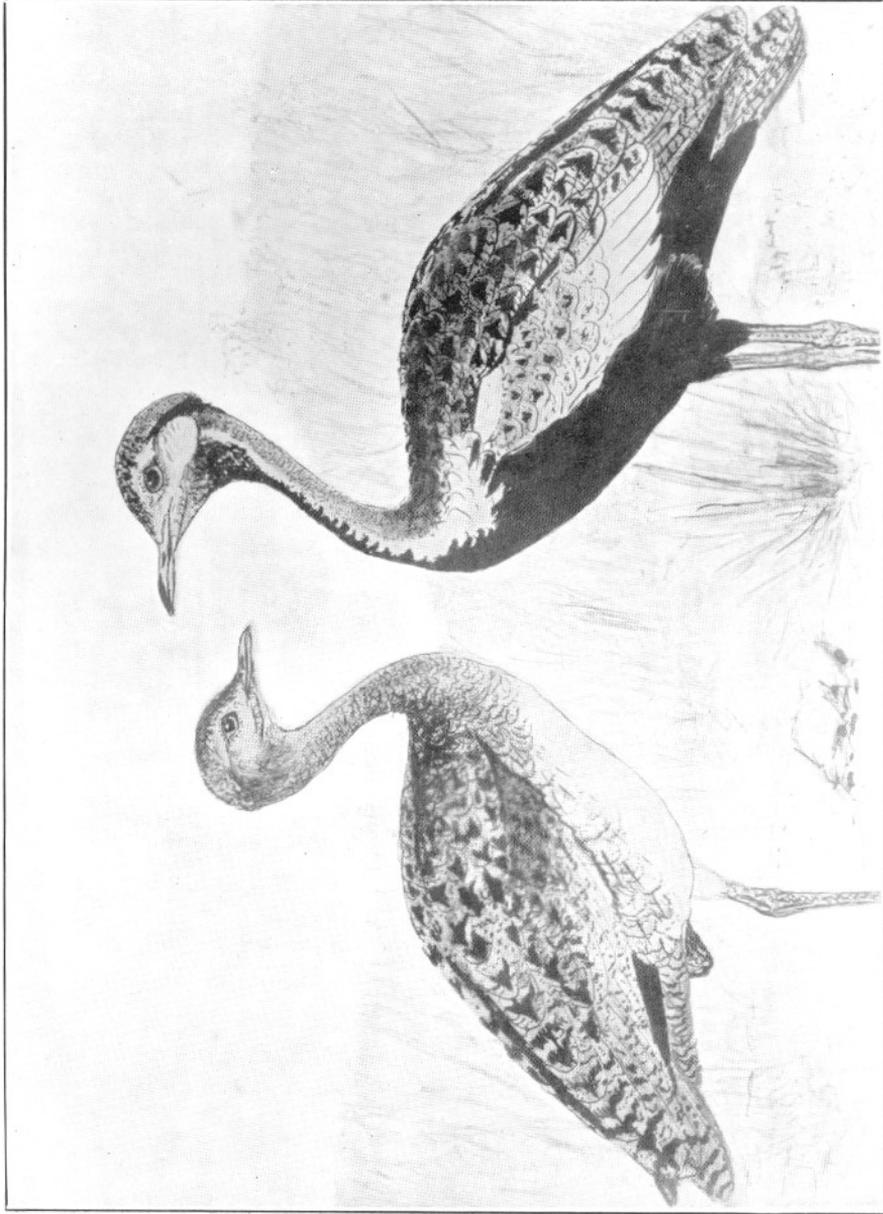
DESCRIPTION, MALE, ADULT :

Forehead to about the centre of the crown blackish, each feather with a wide sandy-buff tip; posterior part of crown sandy-buff extremely

finely vermiculated with blackish, the nape feathers elongate; lores, supercillium and upper part of ear-coverts pearl-grey with buffy flecks, continued beyond the eye as a black streak bordered above and below with white and continuing to the nape, forming with the buffy-nape feathers a short crest; feathers round gape isabelline shading off into white on the cheeks and ear-coverts, this white extending downward and forward on either side of the black neck line; chin and upper throat silvery-grey shading to black which colour passes down the mid-line of the fore-neck to widen out on the upper breast and joins the black of the lower surface. The hind-part of the neck sandy-buff with fine wavy black lines; this ground colour extends over the mantle, scapulars, long inner secondaries, each feather vermiculated with black and having an arrow-head central mark of the same colour in increasing size from the fore-part of the mantle to the long secondaries. Wings and marginal coverts and median coverts pure white; lesser coverts sandy-buff sparsely vermiculated with blackish, the upper ones with black arrow-marks towards end; greater coverts almost entirely white and with a sub-terminal V-shaped black mark; outer primary black, remainder white with black on the outer web of the next two and black only on the tips of the rest; secondaries white with black tips and black on the inner webs. Back, rump and upper tail-coverts buffy with blackish freckling and vermiculations; central tail feathers similarly coloured and with blackish cross-bars, remainder more ochreous-sandy more sparsely, but less finely freckled and vermiculated with black-brown and with four blackish cross-bars. Upper breast with a large white patch on either side formed by the expansion of the white stripes of the fore-neck; whole of the remainder of the underside, including the thighs, black, this last with a white ring distally, and the tips of the under tail-coverts slightly freckled with buff. Bill horn-brown at culmen, rest yellowish, lower whitish; eyes yellow or ochreous; legs and feet yellowish white or creamy. Wings 325-350 mm. Weight (average) 2½ lbs.

FEMALE, ADULT :

Middle of forehead to just beyond the eye line, sepia, each feather with an ochreous tip; remainder of the crown to nape rufescent-sandy vermiculated with blackish; sides of forehead, lores and superciliary stripe ochreous fading to whitish distally; region below the eye, forward ear-coverts, chin and throat whitish with buffy tinge more pronounced on the distal ear-coverts; neck sandy coloured finely vermiculated with blackish; upper breast paler and more sparsely vermiculated and speckled with black, with median dart shaped blackish marks; mantle, scapulars, back, long secondaries, marginal and lesser coverts of the wing buffy with spear-head blackish central marks and black irregular vermiculations. The buffy ground-colour of the wings paling towards the median coverts and less marked with black; secondaries black with small white tips and sandy freckling in the form of bars; primaries,



Black-bellied Bustard (*Lissotis melanogaster melanogaster*, Rupp.).

outer one black, remainder black with dentate marks on the inner web and with slight buff tips. Upper breast buffy fading to white on the abdomen and vent; sides of body washed with ochreous buff and with blackish vermiculations and black streak on mid-rib; some of the long feathers blackish; under tail-coverts buffy with blackish wavy cross-bars and freckling. Rectrices sandy-buff with blackish vermiculation and four black bars. Bill, eyes, and feet as in the male. Wings 310-330 mm.

IMMATURE MALE :

Very like the female but with some indication of a black throat patch and central black line down the front of the neck; breast and abdomen sepia to black blotched with white; thighs black spotted with white and with a white circlet distally; mantle and back generally like the female, but arrow marks more distinct and the wing-coverts paler and inclining to white on the median area.

JUVENILE :

Crown dark brown heavily spotted with ochreous; neck ochreous with black bases; mantle, back and wing coverts sepia with black central area to each feather vermiculated with sandy-buff and with a terminal buffy spot; upper breast spotted like the neck; remainder of underside dirty whitish freckled and vermiculated with blackish on the sides and on the under tail-coverts.

HABITS :

This is by far the commonest of the smaller bustards within our territories and is distributed over a wide area from the bush zone of the coast to the highlands up to 7,000 feet and over the greater part of Uganda. It is a conspicuous bird when on the wing, more especially the males, as the large white area of the wings is most apparent. One character of interest and importance is the very slender long neck, which gives the impression that the bird has an extra big head; most figures of the species do not depict this character. The black-bellied Bustard can only be confused with one other species and that is Hartlaub's Bustard, which should be recognisable by its much darker appearance and more squat, thicker neck.

One most often sees the birds in pairs or small family parties, though occasionally in groups of half a dozen on some favourite feeding ground which has recently been burnt off. In the grass and thorn-bush country these birds are difficult to detect as their colour harmonises with the brown vegetation, and even the black under-surface conceals rather than makes the bird obvious. Often, if one suddenly surprises these birds, they will squat or lower themselves on to their "knees" and remain motionless; they are then very hard to see. When flushed they

go off with rather a heavy flight and carry on until well out of range and then drop down and crouch.

It is easily killed with shot, as its plumage is soft, and the pellets penetrate with little difficulty. As a table bird, its flesh is excellent. These birds have a ground display when courting very similar to that of the Blue-necked species, but in addition they indulge in aerial displays both before and after copulating.

The male bird will fly up and "tower" and when a considerable height up will put the wings up over the back, depend the legs and with lowered head will drop vertically, and just before reaching the ground will bring the wings sharply to the horizontal and with outspread tail will break the impetus. On other occasions the downward flight is more of a sailing motion, the wings being held not so vertically.

The call of the cock is characteristic and is like the syllables "Ror-burk" oft repeated and is usually uttered in the morning or evening, but in this species also, a shower of rain will cause them to call. They feed largely on insects, seeds, green vegetation, and berries. They are easy to keep in captivity and become very tame. The nesting season varies according to district; thus in Uganda breeding birds were obtained in February to April; in the Nairobi area they breed in May and June; at the coast in March and October. The egg, for only one is laid, is laid on the bare ground, either amongst stones or in short tufty grass. It is olive-brown in ground colour, with deep purply-grey marks and brown blotches on the surface. Old native cultivations are very frequently resorted to by these birds, for the purpose of obtaining certain green herbs, especially a wild spinach which grows there.

LISSOTIS HARTLAUBII (Heugl.). HARTLAUB'S BLACK-
BELLIED BUSTARD.

Ref. : Heuglin, *Jr. f. Ornith.*, 1863, p. 10.

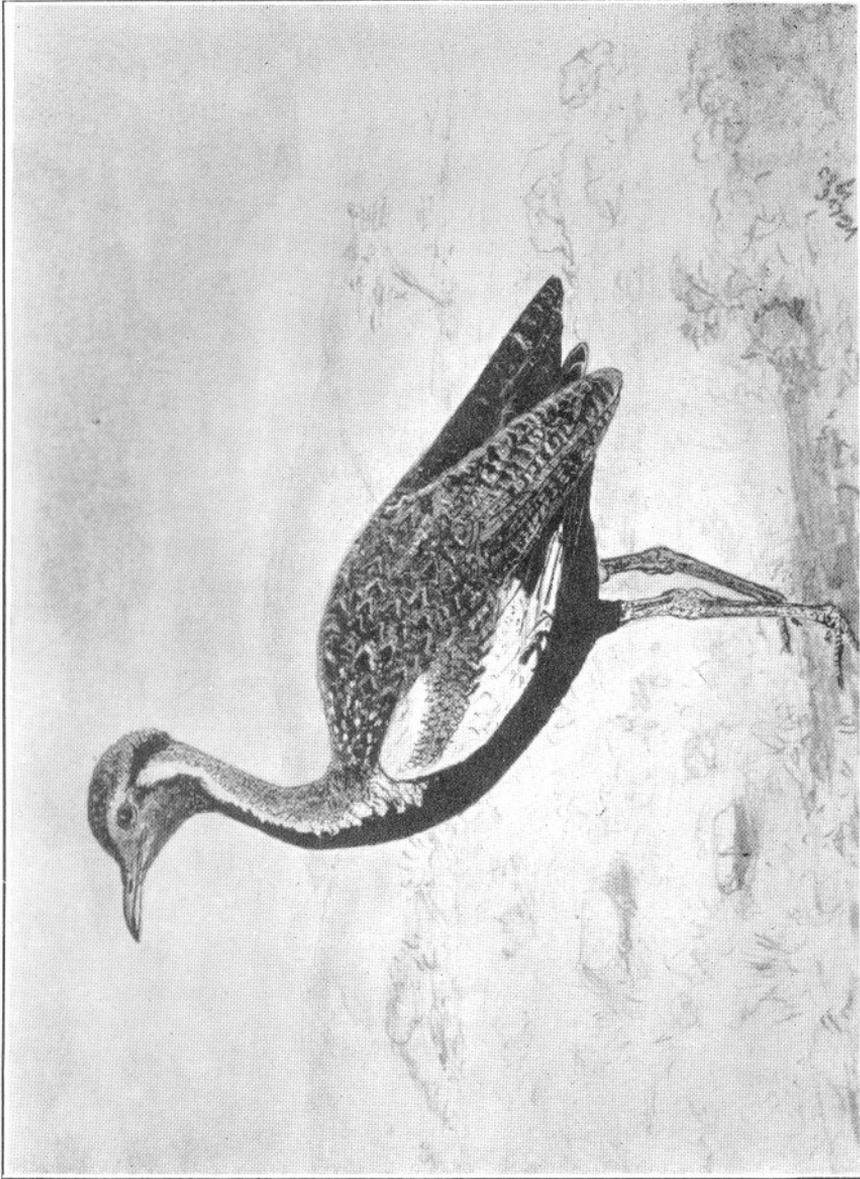
Type locality : Eastern Sennar.

DISTRIBUTION :

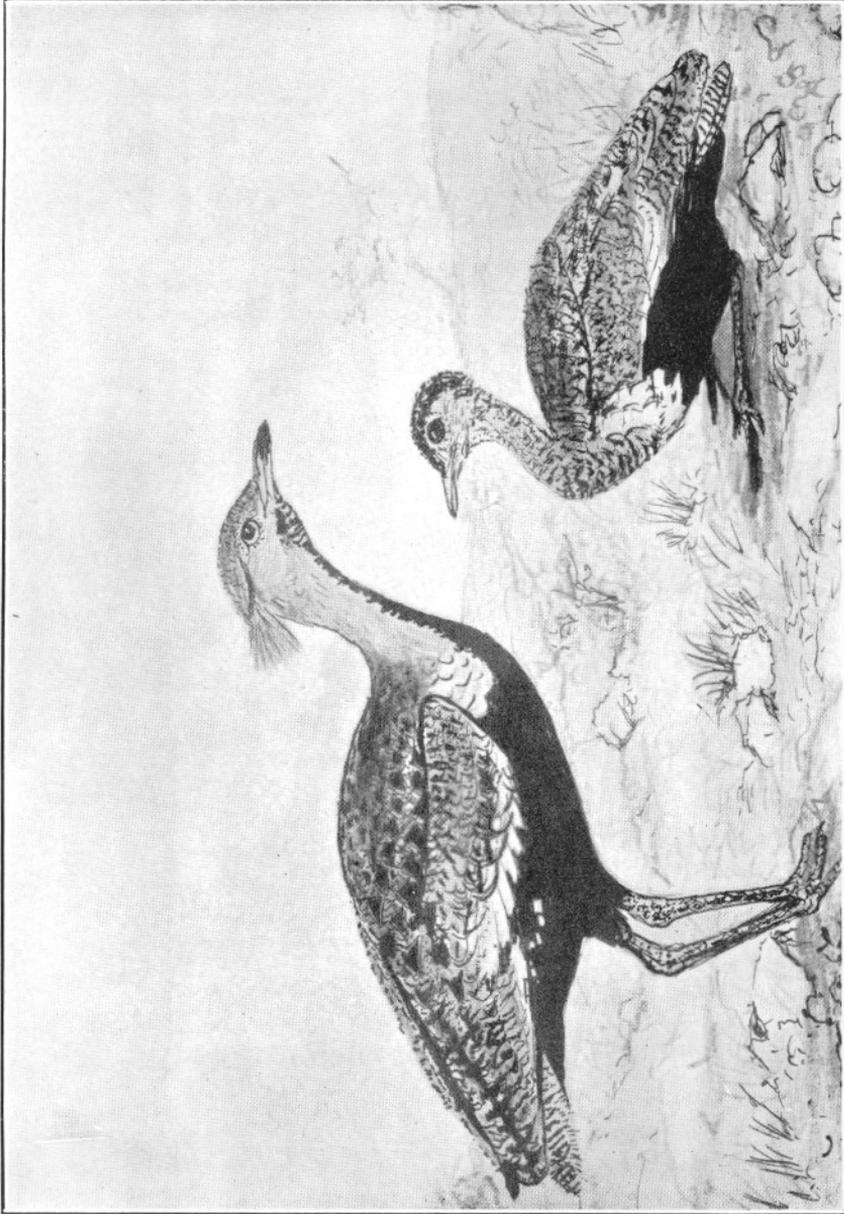
Drier parts of Kenya from the Coast up the Rift Valley, east and north Mt. Kenia, to Eastern Uganda.

DESCRIPTION, MALE, ADULT :

Centre of forehead to mid-line of crown blackish with creamy tips, behind this paler, with whitish fine vermiculations; this area to the nape surrounded by a white band; lores, supercillium, cheeks, chin, and throat shading to black, this black zone extending from the posterior angle of the eye, passing to the posterior part of the supercillium thence back to the nape where it meets the line of the opposite side; it is continued down to the lower throat where it meets its fellow of the other side and then extends down the mid line of the fore-neck to meet the



Hartlaub's Black-bellied Bustard (*Lissotis hartlaubii*, Heugl.).



Buff-crested Little Bustard (*Lophotis gindiana*, Oust.).

black of the upper breast which colour extends over the whole of the underside to the under tail-coverts. Beyond the black on the head is a narrow white zone which expands over the ear-coverts then passes down on either side of the mid black line of the throat and expands out into two white patches on either side of the upper breast. The remainder of the neck is very finely vermiculated black and greyish-white, the vermiculations broader and widening out at the base of the neck. Mantle, scapulars, back and long inner secondaries sepia, with bold creamy speckling and vermiculations, each feather with an irregular arrow-mark in the centre accentuated by a creamy outline. Lesser wing coverts similarly coloured but paler; while the marginal coverts median and greater coverts are white; primary coverts black and white; primaries: outer one black, remainder mostly pure white with increasing black tips from within outward, the second and third with black outer webs; secondaries white with black inner webs and an increasing amount of black extending to the outer web from without inward, innermost secondaries as described above. Rump and upper tail-coverts black with fine sparse white speckling; tail black with narrow bars of white speckling. Bill horn-brown on culmen, remainder pale whitish-horn with yellowish tinge; legs and feet ivory; eyes creamy-yellow. Wings 320-330 mm.; weight 2½ lbs.

FEMALE, ADULT :

Fore-part of crown sepia with large creamy tips shading to sandy buff on the hind-part which is finely vermiculated with blackish and ochreous tipped; lores, area round the eye and ear-coverts sandy-buff the latter slightly streaked; chin and throat whitish with a creamy wash; upper part of hind neck sandy-buff very finely vermiculated with blackish while the lower part, though similarly coloured, has in addition large creamy spots at the end of each feather, these spots outlined in blackish; fore-part of neck with ground colour as back, but with elongate creamy central marks which become more rounded towards the base of the neck and widening out on the upper breast and outlined distally with blackish thus forming narrow angular marks; the breast, abdomen, flanks and under tail-coverts are creamy, the long feathers on the side of the body with black shaft-marks and slight blackish vermiculations; mantle, scapulars, long inner secondaries with small arrow-head blackish marks accentuated distally with creamy, the remainder of each feather being creamy with blackish vermiculations (the back is thus more pale and blackish and the central marks less conspicuous than in *L. melanogaster*). The wing-coverts are creamy with sparse sepia vermiculations and blackish shaft streak; the outer primary is black, the remainder black with dentate white marks on the inner webs; the secondaries black with white tips and whitish freckling as indistinct bars on the inner webs. The tail is buffy with blackish vermiculations and irregular blackish bars, more ill-defined than in *L. melanogaster*.

The under tail-coverts are buffy with distinct black bars and widely-spaced black vermiculations.

The whole general tone of the upper-side in both male and female is darker, more finely marked and less sandy ochreous than in *L. melanogaster*, with which they might be confused.

The immature and juvenile plumages are unknown to me.

HABITS :

Hartlaub's Bustard is of extreme interest in that so far as Eastern Africa is concerned, little or nothing is known of it or its accurate distribution, largely owing to its great resemblance to the preceding species and resultant confusion therewith.

Relatively few examples have been obtained, not so much due to its scarcity, but to the fact that most Lesser Bustards, when shot, are not preserved but find their way to the "pot." From records, as indicated in the distribution, we know that the bird is to be found in the lower altitudes from the coast to Uganda, that is, in open bush-country and the more arid areas of the territories. They occur singly or in pairs and in general behaviour resemble *L. melanogaster*, except that I have never witnessed these birds doing aerial stunts. It is reported to be plentiful north of Suk and in Turkana. There is nothing on record as to its nesting time in Kenya or Uganda. I have endeavoured to indicate the distinguishing characters of these two very similar species in the hope that readers will make observations on Hartlaub's Bustard, and send material to the Museum.

FAMILY BURHINIDAE.

STONE PLOVERS, or THICK-KNEES.

Genus *Burhinus*.

The members of this family form a compact group which until recently were classified along with the *Charadriidae*, or true Plovers. There are however certain skeletal characters which remove them from the plovers and indicate their affinity to the Bustards, a group we have just completed. The presence of only three toes, the type of scaling on the legs, and the thickened knee are points which separate them from plovers.

Four species and two geographical races are found within our boundaries. All are characterised by a type of plumage which is suited to their environment, mostly greys, buff and sandy, streaked or spotted with blackish or sepia, and white underside. All possess long legs which enable them to run with ease in the type of country they inhabit,



Spotted Stone Plovers.

Photo: Mrs. J. T. Hansen.



Spotted Stone Plover (*Barhinus capensis capensis*, Licht.). Photo: Mrs. J. T. Hansen

and all have large heads with very large eyes and strong blunt-pointed bills. Of the species which occur here, one is a migrant from Europe, visiting these territories during the northern winter.

BURHINUS CAPENSIS CAPENSIS (Licht.). SPOTTED THICK-KNEE or STONE PLOVER.

Ref. : Lichtenstein, *Vers. Doubl.*, p. 69, 1823.

Type locality : Cape of Good Hope.

DISTRIBUTION :

Through the southern and central portion of Kenya to the Rift Valley and Kikuyu country and south of the Northern Guasso Nyiro and parts of South-western Uganda.

DESCRIPTION. MALE AND FEMALE, ADULT :

Lores and forehead at base of bill, white, the latter slightly streaked with black; the white of the lores extending below the eye to the front of the ear-coverts, the feathers below the eyelid streaked with black; a buffy line streaked with black extends from the sides of the lower mandible and passes back to the lower ear-coverts which are greyish-buff streaked with sepia; chin and throat white, this colour extending up towards the ear-coverts; crown to nape and fore-part of supercillium dark sepia with sandy-buff margins, posterior part of supercillium white; neck and chest buffy to sandy colour streaked with dark sepia, these dark streaks extending on to the lower breast and sides of body which are buffy white; abdomen white; vent pale buff shading to deep buff on the under tail-coverts; mantle, scapulars back, and marginal coverts of wing sandy to to greyish-buff with central dark sepia arrow marks; long secondaries similarly coloured but with a series of contiguous arrow marks; lesser and median wing-coverts pale buffy-grey to buffy, with sepia arrow marks; greater coverts grey to buffy-grey with paler margins; secondaries : outer ones sepia-black with white tips and white on inner webs, inner ones becoming more greyish with buffy margins and vermiculations; primaries black, paling on the inner web and with a broad white bar on the three outer ones. Rump and upper tail-coverts buffy to grey-buff with central sepia marks which form irregular cross bars on the latter; tail feathers, central ones grey-buff with sepia cross bars, others with a paler ground colour to almost white, with fewer bars but subterminal white bar and broad black tip, sometimes slightly edged with whitish. Wings 210-225 mm. Eyes lemon-yellow, with mottling; bill, black at tip, greeny-yellow at base; legs and feet yellowish with darker more brownish scutes.

IMMATURE :

Somewhat like adults in general colour but dark markings more elongate, especially on the dorsum.

JUVENILE IN DOWN :

The whole of the upperside greyish-buffy with slight diffuse darker marks in spots, bars, and streaks down the centre of the back and the sides of the dorsum; underside whitish to buffy on the breast where it is slightly mottled. Feathering takes place rapidly, but the downy feathers are retained on the tips of the succeeding feathers for quite a long period. The back and rump feathers are the last to appear. Eyes yellow; bill pale olive at base, tip black; legs pale olive-yellow.

HABITS :

These will be dealt with under the two races. *Vide post.*

BURHINUS CAPENSIS AFFINIS (Rupp.). NORTHERN SPOTTED THICK-KNEE.

Ref. : Ruppell, *Mus. Senck.* 11, p. 210, 1837.

Type locality : Kordofan.

DISTRIBUTION :

The northern portions of Kenya, north of the Guaso Nyiro, Lake Rudolf area, and Turkana.

DESCRIPTION. MALE AND FEMALE, ADULT :

Differs from the southern race by the general brighter colour, the ground tone being a tawny-rufous instead of sandy-buff. The crown of the head is not so dark, and the ear-coverts are strongly rufescent; the dark sepia markings are smaller, not so diffuse marginally and thus show up much more on the rufescent ground colour. On the other hand the wing coverts are paler with more cordate or racquet-shaped spots; the tail feathers are more strongly marked.

JUVENILE :

Ground colour sandy grey finely mottled; two dark dorsal lines and broken lines on the head and spots on the wing. Underside buffy to white.

HABITS OF BOTH RACES :

The Spotted Thick-knees are found in the more open scrub and bush country where there are areas of open rocky or sandy ground or rocky broken ground with sparse tufty grass. They are very partial to the wide shallow rock-strewn dongas or valleys, but they are not averse to frequenting partially dried-up river-beds. In the Nairobi district one not infrequently sees them in the vicinity of the large exposed and decomposing lava flows such as one finds on the plains and in the Ngong district. They do not occur in long thick grass, but it

is no uncommon thing to find them on the veldt where the grass is short and small stunted whistling-thorn abound. They are full of confidence in their wonderful protective colouration, and for this reason are bold and do not take alarm easily, but they remain motionless either standing or squatting, and it is extremely hard to detect them. Their large light yellow eyes are the most conspicuous part about them. Even when disturbed, they run and take up their position near some object that blends with their colours; this action is deliberate. If they have settled, after flight, they stand and then move with very slow motion to some spot of concealment. Furthermore, a brooding bird will not leave its nest, *sic*, unless made to; rather does it make itself less visible by flattening and laying its head and neck on the ground straight in front. The species is comparatively common on the plains south of Nairobi, and here they breed. The nesting season in the Nairobi district is March to June and October to November, and during these months we have seen both eggs and young. Two eggs are laid in a shallow depression with either no lining or possibly a few small stones or bits of grass. In ground colour these eggs are grey-buff or pale brown with underlying marks of stone-grey or purple-grey blotched on the surface with dark brown. In size they vary from 50-55 x 36-40 mm. The young in down are as already described. They remain in the vicinity of the nest-scraps for a few days but later wander further afield. At the slightest alarm, these youngsters squat and lying flat with head and neck outstretched, in some slight depression, become invisible. One has frequently watched a pair feeding with their young on some stony ground, and going forward one has failed to find the youngsters which were a moment before walking about the spot. At such a time, the parents remain close by and keep up a continuous low whistling, running a few steps, then standing still, or standing very upright for a while, then bobbing, at the same time raising and depressing the tail—very plover-like in behaviour. Their food consists almost entirely of insects, and small crustacea and molluscs, but certain grass-seeds are also taken. Young birds make a curious noise like that uttered by a brooding fowl when disturbed, a rather long-drawn note; while the usual call is rather plaintive like that of the Curlew, "tche-u," the end of the note drawn out and gradually tailing off. These birds are subject to local movement, but the data is incomplete to suggest fixed movements. When on migration one may see more than a dozen birds more or less together, but usually one finds them in pairs.

Their flight, when disturbed, is weak and trailing, that is, it lacks vigour; the wings are not fully expanded, and the legs are held hanging down as though the bird was very loath to fly at all, and it soon settles. They have a good turn of speed when running and this mode of progression is preferred. The head and neck are extended and held low as they run.

**BURHINUS SENEGALENSIS (Swains.). EASTERN, SENEGAL
OR WHITE-WINGED THICK-KNEE.**

BURHINUS SENEGALENSIS ASSIMILIS (Bädeker).

Ref. : Swainson, *Bds. W. Afr.* 11, p. 228, 1837.

Type locality : Senegal (typical); East Sudan (for race).

DISTRIBUTION :

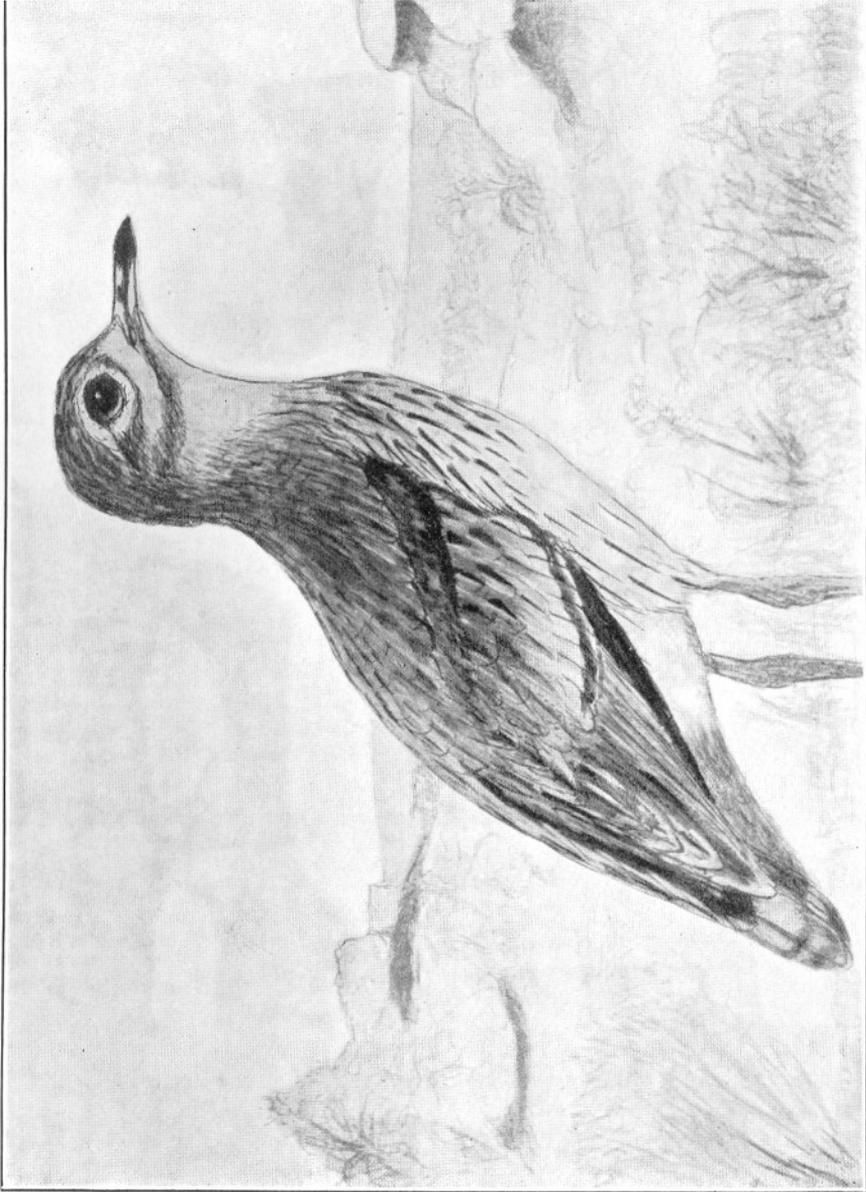
Through Uganda, to the N.W. portion of Kenya, Lakes Baringo, Hannington; Northern Guasso Nyiro; Rudolf area.

DESCRIPTION. MALE AND FEMALE, ADULT :

Top of head, cheeks, ear-coverts and back of neck, cinnamon-buffy with dark central streaks of sepia to black; lores and the greater portion of the supercillium white; throat white, this colour being carried up the side of the upper neck below the ear-coverts; lower neck and upper chest white, washed with sandy-buff and streaked with black-brown; rest of the underside to vent white; the sides of the body lightly streaked with blackish; under tail-coverts white to cinnamon-buff. Mantle, back, scapulars, marginal coverts of wing, long inner secondaries ashy-grey brown, with blackish central shaft streak and faint sub-marginal grey line, the edges washed with ochreous and sandy. The lesser wing-coverts ashy-grey-brown with blackish shaft streaks and tawny edges, darker where they meet the median-coverts which are pale ashy-grey with decided sepia shaft streaks; greater-coverts pale greyish basally shading to whitish followed by a sub-terminal black bar, tips white. Primaries white at base and on most of the inner web, remainder black-brown with a white bar crossing the three outer feather, and with white tips to the inner primaries; secondaries: outer ones whitish basally, distally grey-brown with white tips, inner ones elongated and mostly grey-brown to ashy-brown with narrow blackish shaft streak, edges paler and washed with sandy-buff. Rectrices: central pair ashy-grey with black shaft and grey sub-marginal band and pale edges; next two pairs mostly ashy-grey with indistinct grey wavy bars, then shading to black distally, with a white subterminal bar; remainder mostly white with a black tip and indistinct wavy grey bar across inner web, and dark shaft. Eyes pale yellow; legs and feet olive-grey with yellowish tinge; bill, black at tip and margins; greyish-yellow basally. Wings 212-230 mm. (These birds are slightly larger than West African ones. The racial name *assimilis*, Bädeker, is available for them.)

HABITS :

I am not yet satisfied that the eastern birds constitute a fixed geographical race and have therefore merely indicated the possibility of distinction. (*Vide* Friedmann, *Bull. U.S.N. Museum*, 153, pp. 182-



Senegal Thick-knee or Stone Plover (*Burhinus senegalensis*, Swains.).

184.) This species has a rather limited distribution as already indicated *ante*, but it is common in the Turkana and Rudolf areas. In these districts it is to be found along the banks of the rivers, in old water-courses, and also occurs on the shores of Lake Rudolf. One may safely state that it is partial to water, but on the other hand one does observe it in places miles from rivers or lakes. In general habits it resembles the Spotted Thick-knee, but is on the whole rather more shy. As soon as they observe one approaching, they stand motionless, or squat; with care one can then come quite close to them. If too close, they suddenly run, but not far, seeking cover at no distance, usually a bush, rock, or depression. Their mode of running is typical; they hold the wings just clear of the body, and with out-stretched necks they make off, often taking a zig-zag course. Their general carriage is an upright one and if they have come to a stand after a run, they "bob" in much the same way as has been described under the preceding species. When the river beds are dried up one may frequently find the birds there, for they love the shelter of the trees in the vicinity. Their diet consists almost entirely of insects, small mollusca and crustacea, but they are also known to eat small frogs and tadpoles. They devour large quantities of locusts when these pests are about.

Though fond of the vicinity of water, the ground they frequent is usually sandy or rocky and it is in these localities that they nest. The nesting season occurs twice a year: March to June and September to November, so far as my records show. The clutch consists of two eggs, buffy with brown marks of various shades, some superficial, others underlying, and are deposited in a shallow depression which may or may not be lined with a few bits of gravel or grass. They are of no interest as a sporting bird. The call is very like that of the spotted species, but higher in pitch.

BURHINUS VERMICULATUS VERMICULATUS (Cab.). WATER
THICK-KNEE or STONE-PLOVER.

Ref.: Cabanis, *J. f. Ornith.*, 1868, p. 413.

Type locality: Lake Jipe, Teita.

DISTRIBUTION:

In suitable localities from Western Uganda through to the Juba River and Kenya.

DESCRIPTION. MALE AND FEMALE, ADULT:

Throat white to buffy-white; a white streak on the posterior supercillium; lores white, this colour passing below the eye and shading off into the ear-coverts; streak from the base of the lower mandible, top of the head and hind-neck to upper mantle, ashy-brown streaked with blackish; front of neck, breast and sides of body white with a strong wash of sandy to buff, strongly streaked with sepia, the feathers

on the sides of the upper-breast tinged with greyish; rest of the under-surface white to as far as the vent; under tail-coverts cinnamon-buff. Mantle, scapulars, long inner secondaries ashy-grey-brown with central blackish streak, widest and most pronounced on the mantle, and vermiculated with dark ashy-grey. Back and rump as the hind-neck; upper tail-coverts ashy-grey with dark streak and faint vermiculations; tail feathers: central pair ashy-grey paling at margins and tips strongly vermiculated, others with basal two-thirds ashy with darker wavy cross-bars followed by a white subterminal bar, ends black with pale tips. Wings: marginal coverts ashy-grey with black centres and fulvous edges; these shade into a very dark series which form a bar across the wing, which in turn give place to another line of white coverts grey tipped; the median coverts are pale ashy-grey with distinct blackish or sepia shaft streaks, while the greater coverts are ashy-grey with blackish tips; primaries black-brown with some white on inner webs, the three to four outer mostly black with a white bar, the remainder with pale bases and black distally, the outer ones white tipped; secondaries basally whitish, distally black with the exception of the innermost ones already described. Eyes yellow; bill black at end, yellow-olive basally; legs and feet yellowish-grey-green. Wings, 195-205 mm. Bill, 40-48 mm.

IMMATURE :

Very similar, but dorsum more rufescent; wing and tail feathers more pointed, breast and sides of body more ochreous washed.

JUVENILE :

The young in down is greyish-ashy from the crown to the tail with blackish and darker ashy-grey spotting and mottling, with two lines on the dorsum, and some barring on the neck; the lower surface is mostly white with a wash of buffy on the breast.

HABITS :

These will be considered along with the western race.

BURHINUS VERMICULATUS BUTTIKOFERI (Reichw.).
WESTERN WATER THICK-KNEE.

Ref.: Reichenow, *Orn. Monatsb.* V., p. 182, 1898.

Type locality: Liberia.

DISTRIBUTION :

The western portion of Uganda.

DESCRIPTION. MALE AND FEMALE, ADULT :

Very like the typical race but with greyer upper side with the dark markings less defined and conspicuous; bill larger and longer. Bill, 48-53 mm. Wings, 200-220.



Nest of Water Thick-knee.

Photo: van Someren.



Water Thick-knee or Stone Plover (*Burhinus vermiculatus vermiculatus*, Cab.).

Photo: van Someren.



Water Thick-knee on nest.

Photo: van Someren.



Water Thick-knee on nest.

Photo: van Someren.

HABITS. BOTH RACES:

This species is essentially a bird associated with water; thus we find it occurring along the maritime coast, the larger rivers and lakes and swamps. It is particularly plentiful on the coast at Lamu and adjacent mainland. It then occurs fairly commonly through Kenya and again becomes plentiful on the shores of Lakes Victoria and Kioga, and merges into the western race on the shores of the central chain of lakes from Albert to Edward and George.

In general demeanour they resemble others of the group, but are not so given to squatting. They are, however, less shy than the spotted species, but like them, they are loath to take wing unless actually forced to do so, but their flight is short. They, however, have the same power of running.

Their chief food consists of various insects, crustacea and mollusca. All the Thick-knees are crepuscular and are most active as the sun goes down. One not infrequently hears them moving at night, the evidence being their distinctive call. I have heard the spotted species fighting over Nairobi on more than one occasion. The nesting season appears to vary somewhat and to extend over quite a long period; thus we have records which cover the months of March, April, May, June; August, September, October, November, and December. The nest situation varies; sometimes it is a mere depression on a sandy shore or sand spit; occasionally amongst drift-wood and debris on a mud-bank, often on a pebbly shore or perhaps on some rocky islet. The clutch is usually two, stone-grey to putty colour on the ground, spotted and blotched with varying shades of sepia and dark brown mostly round the larger end. The average size is 45 x 35 mm. though some go to over 50 mm. in length. These birds are often associated with crocodiles in their nesting areas.

I take the liberty of reprinting an account of the birds which we photographed many years ago.*

“ by a small stream the stealthy movements of a pair of Stone-plovers arrest one's attention, so one steps ashore and casts around for the nest, the while the birds move uneasily up and down the opposite bank of the stream. A low call from a native announces a find, and one is delighted to see the nest, a mere depression in the sand and lined with drift-wood, containing two handsomely marked stone-coloured eggs splashed with rich brown. . . .

“ A ' hide ' was constructed near the nest and the photographer took up his position within it. Soon a plaintive whistle announced the bird's return the female, after a quiet inspection of the structure (i.e. ' hide ') boldly walked up to her

* The full account appeared in *Journal* No. 2, Vol. 1, pp. 78-81.

eggs at which she seemed to gaze pensively for a few seconds. Finding all in order she sat down, till the click of the shutter sent her across the stream once more, where her mate was waiting. Latterly the bird did not move off even for the click of the shutter. . . . Her mate remained on the opposite bank uttering uneasy cries of warning; however, quite unheeding, she walked up to the nest and, after a glance at the camera, she gazed at her eggs for a few seconds, then with a quick motion she sidled breast first on to the eggs and shuffled around till a comfortable position was found. Even as the bird sat brooding it would snap up any passing insect. Occasionally the eggs would be turned by means of the feet before she brooded."

The above extracts will serve to show how really bold the birds are.

BURHINUS OEDICNEMUS OEDICNEMUS (Linn.). EUROPEAN STONE-PLOVER or THICK-KNEE.

Ref.: Linnaeus, *Syst. Nat.*, 10th ed., p. 151, 1758.

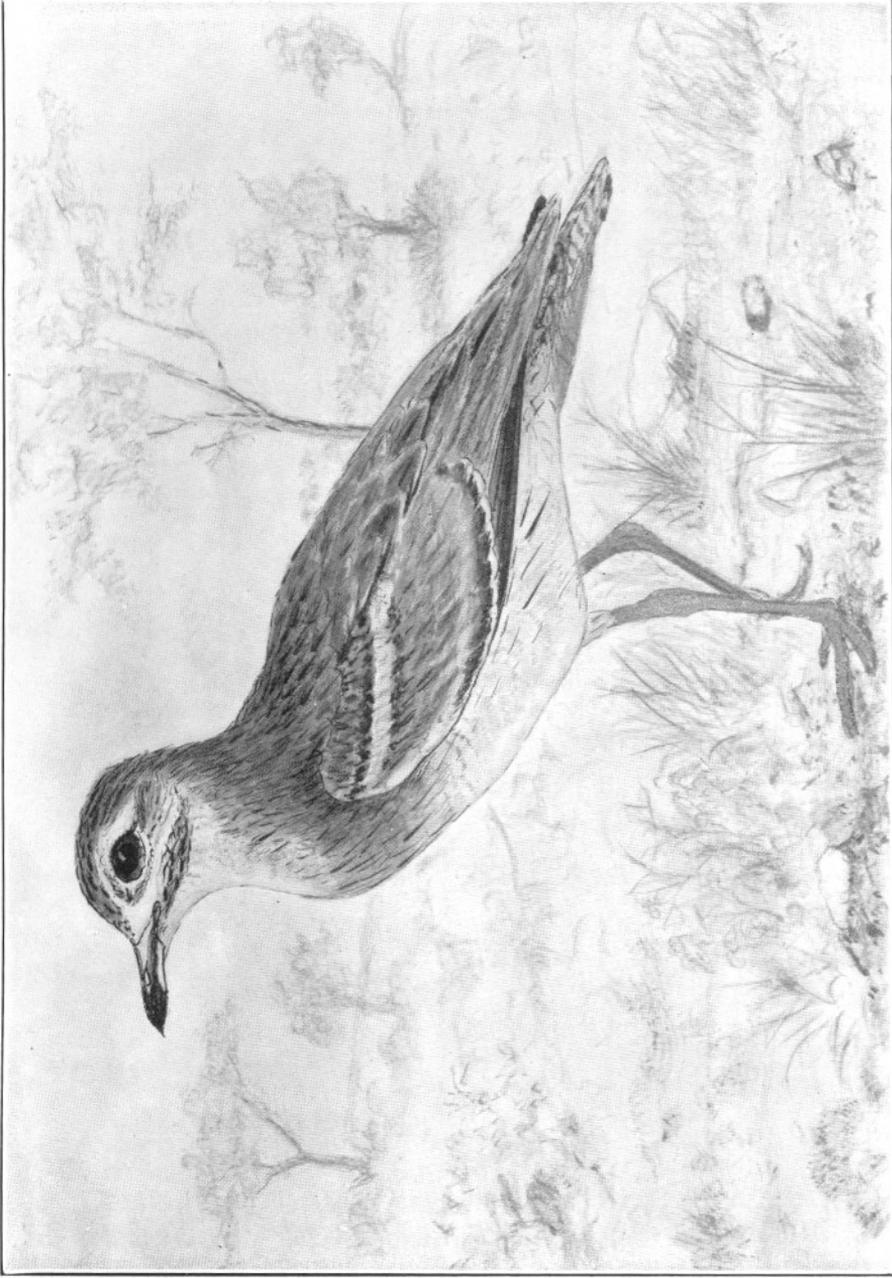
Type locality: England.

DISTRIBUTION:

A European migrant to Uganda and Kenya.

DESCRIPTION. MALE AND FEMALE, ADULT:

Forehead, lores, stripes above and below the eye, white, the first with a little blackish streaking, and in front of the eye a black area which extends below the eye, but not including the lower-lid, and reaches the upper ear-coverts; a streak from the base of the lower bill to the lower ear-coverts, the crown of the head to the hind-neck cinnamon-buff with black streaks; chin and throat white; fore-neck and chest creamy with dark blackish shaft-streaks, the whole washed with buffy, and cinnamon-buff on the sides of the chest. Rest of the under-surface to the basal under tail-coverts white, the feathers on the sides of the body with narrow black shaft-streaks, the rest of the under tail-coverts cinnamon-buff. Mantle, back, and rump ashy-grey with dark shaft streaks, widest on the mantle, feathers with cinnamon buffy edges; scapulars similarly coloured but with more buffy margins; long inner secondaries very similar but paler on the edges and with some grey irregular wavy lines sub-marginally; marginal coverts of wing at "elbow" ashy-grey, with cinnamon-buff edges and blackish shaft-streaks, followed by a darker series cinnamon-buff edged, then by a series which are basally white with narrow black shaft-streaks which widen out to racquet-shaped terminal spots; these are succeeded by the median series which are pale ashy-grey with a central sepia area terminating in dark pointed shaft streaks. The greater coverts are pale ashy-grey basally shading to whitish, each with a sub-terminal



European Stone Plover or Thick-knee (*Barbinus oedicnemus*, Linn.).

blackish bar. The wings therefore have a white bar edged above and below by a dark line, and a further whitish bar crossed by a blackish bar. The inner secondaries have been described, the basally whitish shading to blackish distally; the primaries are outer two black with irregular white bars, next four whitish basally, black distally, the next series with some white basally but mostly black with white tips. The upper tail-coverts are pale ashy-grey, tinged with buffy marginally, with black shaft streaks and greyish longitudinal wavy lines; the tail feathers are as follows: central pair ashy-grey with wavy sepia-grey cross-bars, the next pair mostly ashy-grey with black shafts, shading to blackish at terminal third, then followed by a pale ashy-grey bar, this bordered distally by further blackish; the other feathers are much paler in ground colour to almost white, with wavy sepia cross bars, a pure white sub-terminal bar and a black end, the outermost two being almost pure white with only the ends black. Eyes, pale yellow; legs and feet yellowish-grey-green; bill black at tip, basally yellowish-grey-green. Length of wings, 225-230 mm.

HABITS:

This species is a scarce though regular visitor to Kenya and Uganda, arriving here in October (earliest date recorded, but probably arrives earlier) and departing in late April. I have invariably found these birds in twos or small flocks of half a dozen, never singly, and always in bush-country or the acacia park-like country where scattered trees give shade over ground which is sparsely covered with grass or open, sandy, or rocky.

Their plumage is very cryptic, so that one does not see the birds until one is almost on top of them, but they on the other hand have detected one's presence long before, and have "blanked," that is, taken up an absolutely motionless position near some object against which their plumage blends. When one comes too near for their comfort, they run off, placing a bush or similar protective object between themselves and the observer. They then stand again, or perhaps one of their number will squat in some depression. They will allow one to approach two or three times to quite near distances before becoming sufficiently alarmed to actually take flight. They feed almost entirely on insects, but small mollusca and crustacea are also devoured. They do not nest here. One has heard their calls by night, as they flight either locally or when they are on regular migration. They are crepuscular to quite a degree, and one has actually picked these birds up with a spotlight from a car. A locality in which I have always seen these birds year after year, is on the plains round Elmenteita, and also on the shores of Lake Nakuru. One specimen was obtained in a coffee shamba at Kiambu; it was a bird from a flock which had been heard passing over, and this individual had come in contact with the telegraph wires and was injured.