CHARADRIIDAE. Continued.

CHARADRIUS (EUPODELLA) ASIATICUS, Pallas. CASPIAN or ASIATIC DOTTEREL.

Ref.: Pallas, Reise Russ. Reichs. 11, p. 715, 1778.
Type locality: S. Tartary.

DISTRIBUTION:
A migrant from S.E. Russia and the Altai. Wintering in Eastern Africa (Uganda and Kenya). Most plentiful on the open plains where the grass is short, but also occurs along the sea coast.

DESCRIPTION: MALE, SUMMER.
Forehead, lores, cheeks, throat, and superciliary stripe, white; a blackish spot at anterior angle of the eye shading to ashy-grey below the eye and extending to the upper ear-coverts. Crown, ashy-olive-grey, darker in front and lighter at nape; back of neck, mantle, scapulars, lesser and median coverts and long secondaries, and rump, olive-ashy-grey with pale buffy margins. A broad light-chestnut breast band sharply defined from the white of the throat, and merging into the ashy on the sides of the chest is separated from the white of the rest of the underside by a black bar. Upper tail coverts olive-ashy, buff edged; tail feathers ashy-grey, darker toward ends and tipped with buffy and white. Primaries and secondaries blackish-brown with white shafts. Legs and toes olive-brown; bill brownish at base, black at tip; eyes brown to hazel. Length of wing 145-155 mm.

WINTER:
Very similar to the above but with the chestnut breast-band paler, and hardly any black border; and the pale margins of the mantle feathers more pronounced.
FEMALE:

Very similar to the male but the ear-coverts darker, and the throat less pure white, the supercilaries tinged buffy, while the breast-band is ashy-grey pale edged and only slightly washed with pale chestnut. Wing, 139-145 mm.

WINTER:

Very similar to the summer, but the pale edging to the back feathers more pronounced: the breast-band darker more ashy, and without a trace of the chestnut wash.

IMMATURE: FIRST WINTER.

Somewhat like the female but the whole of the upper side rather darker in ground colour though the margins of the feathers are broader and more buffy to sandy giving the whole a strongly mottled appearance. The forehead, cheeks and supercilium are washed with buffy, while the breast-band is strongly ashy with pronounced buffy tips which wear off early.

JUVENILE:

As the species does not breed here, we need not consider this.

HABITS:

This is entirely a migratory species which breeds in S.E. Russia and spends the winter in Eastern and Southern Africa. The first arrivals have been noted as early as August 29th, but they usually arrive during the third week of September. By the first week of October large flocks, sometimes up to one hundred individuals or more, may be seen on the plains around Nairobi, and in fact anywhere where there are open plains with short grass. They are extremely partial to areas which have been burnt off. Their colour is extremely cryptic; so much so, that one may frequently be unaware of their presence until one has walked or driven almost on top of them when they will get up with a whirr, and after circling around for a while alight at or near the spot from which they were disturbed.

The white primary shafts are a conspicuous feature when these birds are in flight. When they settle they usually take up their position near some stone or hummock of grass and their colour so blends with their surroundings as to make them inconspicuous. The Asiatic Dotterel is by no means a shy bird, in fact quite the contrary. They seldom fly far even when flushed several times. During the heat of the day they are particularly loath to move; it is at evening time that they become more restless. These birds are often referred to locally as "Veldt Snipe," and hundreds are shot for the pot. After a month or two in this country they become extremely fat and are quite good eating.
They flight at night time, and it is then that one hears their rather shrill whistling call. On several occasions I have made a critical survey of all the individuals of a flock and have noted that all individuals arriving early are immature birds with one or two adult females. It is only towards the middle of October that one begins to see adult males, but by March most of the males have assumed full plumage and are then quite easy to pick out. In spite of their pronounced breast-band the general plumage harmonises well with the surroundings. As these birds rest at ease, they ruffle their body feathers out and become plump and rounded. They feed almost entirely on insects, but crop examination reveals a certain quantity of fine grass seed also.

The northward movement takes place towards the end of March, some few flocks remain till April and a few stragglers may even be met with in May. One exceptionally late bird was obtained on the 22nd June.

SQUATAROLA SQUATAROLA SQUATAROLA, L. EUROPEAN GREY PLOVER.

Type locality: Sweden.

Distribution:
Along the coast of Eastern Africa but occasionally on the larger inland waters.

Description: Adult, winter.
The whole of the underside from chin to vent, white; some slight dark streaking on the sides of the throat, greyish ashy mottling on the breast, centre of each feather dark streaked. Lores and cheeks white, dark streaked; forehead and supercilium white; crown of head, back of neck and mantle, back and rump ashy-grey to sepia with white tips and marginal spots. Lesser and median wing coverts similar but white more conspicuous. Secondaries ashy-grey-brown with white edges to outer webs, paler on inner; primaries dark sepia, with large white area on inner webs, shafts partly white; sixth primary with white on outer web. Upper tail-coverts white with sparse sepia bars; tail feathers white with sepia bars. Axillaries black. Legs and toes greyish-green; bill blackish, paler at base; eyes brown. Length of wing 190-195 mm.

Female:
Very similar.

Male: summer.
Many specimens arrive with partial summer dress which is quickly shed. By the time they are ready to move north the males have again
assumed almost full plumage which is as follows: Forehead white; cheeks, sides of neck and most of underparts, black. Crown, nape, mantle, scapulars, back and rump dark sepia with white tips and white notches on margins. Superciliium white, which colour continues down the neck thus separating the black of the fore-neck from the speckled sepia and white hind-neck.

**FEMALE: summer.**

Somewhat like the male, but the white tips on the upper surface not so conspicuous; the blackish of the underside rather brownish tinged and not uniform, being heavily mottled with white. Under tail-coverts white with brown-black bars. Wings 180-190 mm. Legs and feet as in the male.

**IMMATURE:**

Very similar to the adults, but upper plumage not so clearly marked, white rather tinged with creamy to buff most conspicuous on the median coverts.

As the birds do not breed here we need not consider the juvenile plumage.

**HABITS:**

The Grey Plovers found along the coast of Eastern Africa can at once be distinguished by the black axillaries. It is possible that those found toward the mouth of the Juba River belong to the eastern race *hypomelana*. These Plover are almost entirely confined to the maritime littoral though some few have been noted on the larger inland waters.

They occur in flocks of half a dozen up to a hundred and do most of their feeding at low tide or when the tide is on the ebb. Their food consists of various aquatic insects, mollusca, crustacea, also worms and occasionally seeds. When feeding they straggle out but when at rest they bunch into groups. There is a certain amount of local movement along the coast but this is nearly always relative to the tides and resting places. Evening flights are sometimes observed more particularly towards the time of the northward migration. These flights are usually accompanied to the low plaintive call note, somewhat like "tlui tlui" oft repeated.

The southward movement is usually observed in October and these birds remain in suitable localities until the end of April when the north migration takes place.
Genus \textit{STEPHANIBYX}.

\textit{STEPHANIBYX LUGUBRIS}, Less. \textit{LESSER GREY-BREASTED PLOVER}.


Type locality: Senegal. (Apud Grant.)

\textbf{Distribution:}

From the coastal belt inland through Kenya at altitudes under 9,000 ft. to Uganda.

\textbf{Description: Male, Female, Adult.}

Circular patch on forehead white; top of crown to nape dark ashy-grey; lores, cheeks, supercilium, ear-coverts and side of neck and chest dark grey, paling towards the middle of upper chest, turning white on throat and chin to black on lower edge of chest band. Rest of the underside pure white. Mantle, back, scapulars, lesser coverts, and long inner secondaries ashy-olive, slightly more brownish on the median coverts and greater coverts, the latter white-tipped. Primaries blue-black, less blue on inner webs, inner ones increasingly white-tipped; secondaries mostly white, with an increasing area of blackish basally, from in to outer. Axillaries white; base of rump dark ashy, rest white; upper tail-coverts white, tail feathers mostly white, the centre pair black for terminal inch, next three pairs with decreasing black at ends from within-out, but white-tipped.

The female has a less conspicuous white frontal patch and not so marked black chest-band.

Legs and feet dark-brown to blackish; black bill; eyes yellow to straw colour. Length of wing: 158-167 mm.

\textbf{Immature:}

Differs from the adult in having the breast less pure grey, rather tinged with dirty-ochreous, and there is no blackish breast-band. The throat is not so white. The forehead lacks the frontal patch, this area being only slightly paler than the rest of the crown which is similar in colour to the remainder of the upperside, viz., olive-ashy each feather with paler tips. The coverts of the wing are strongly tipped with ashy-brown giving this area a somewhat barred appearance. The upper tail-coverts are whitish with buffy tips; the dark bar on the tail is more brownish than black; the primaries lack the strong blue-black colour of the adults—they are brown-black with paler tips. The legs and feet are more brownish. Eyes brown or ochreous.

\textbf{Juvenile:}

The downy plumage is very similar to that of \textit{melanopterus}, and in fact to several of the larger plovers. The whole of the upper surface
is a mottled ochreous and black-brown, the ochreous colour predominating; there is of course the usual white neck band which, though conspicuous when the youngster stands up, is completely hidden when it is squatting. The whole of the underside is white with a greyish wash, slightly spotted on the breast; the back of the thighs are coloured like the back. Legs and bill brownish; eyes very dark brown.

HABITS:
The Lesser Grey-breasted Plover has a wide distribution over Kenya and Uganda, but it is not resident in any one locality throughout the year. Recorded localities include Lamu and the mainland opposite, places along the coast from the mouth of the Juba River to Dar es Salaam, Ukambani, Athi Plains, Nairobi, Naivasha, Nakuru, Sotik and Kericho, Uasin Gishu Plateau and the Cherangani, Turkana, Lake Victoria on the eastern side, and various localities in Uganda. One comes upon these birds in the more open grass country and plains, in small parties of four to a dozen or so, more often far from water. They are not shy when approached in a car, but dislike the too near inspection on foot. They avoid detection by remaining still, but if one comes upon them suddenly they scatter and run and only take flight if disturbed several times. They flight for a short distance in a circle and soon return to ground. Their flight is typically plover-like and rather slow. There is only one species with which these birds can be confused, namely the Greater Grey-breasted Plover, *Stephanibyx melanopterus minor*. The lesser species is olive above without the distinct purply sheen, so pronounced a feature of the larger bird; furthermore it is less blue-blackish on the breast and has less white on the wing.

In Kenya, the nesting season more or less corresponds with the rains; in Uganda eggs have been taken in January and September. The area selected for the nest is one where the grass is always short or sparse or devoid of herbage. The nest is a shallow scrape on a slight mound or stunted tuft of grass, with little or no material added. Two to four eggs are laid; typical plover shape—large at one end and tapering abruptly at the other. They are very similar to those of the Common Lapwing, but smaller. The ground-colour is olive-brown or putty colour with submerged umber-brown marks and blackish surface blotches. Size varies: average measurements 44 x 30 mm.

Incubation lasts 18—20 days. The young leave the nest almost as soon as dry. The parents are assiduous in their care and adopt the usual plover habit of feigning injury to a wing and fluttering along the ground, so as to distract attention from the young birds who in the meantime have squatted and thus become invisible. If search for the young is maintained, the parents become restless and will then fly around, making downward swoops towards the intruder. The food
consists almost entirely of insects and their larvae, but some grass seeds are also taken.

The young feather very quickly, but a considerable period elapses before they fly. They remain with their parents for over two months and when strong on the wing several families will unite and frequent the feeding grounds in an area, after which they migrate. There is not the slightest doubt that local migration takes place, but times and directions are very imperfectly known.

A small flock frequented a certain area in the south Game Reserve for a period of a month in March-April; they showed no signs of wishing to nest. On the other hand, very large herds of game were present and as usual had their regular resting places which soon became covered with droppings; it was on these places that one always found the plover. The attraction, of course, was the immense number of beetle larvae, mostly Scarab, present in the dung. One is led to wonder whether there is not some connection between the presence of plover and game in a given area, the migrations of the two being inter-related?


Ref.: Zedlitz, Orn. Monatsb. xvi, 1908.
Type locality: South Africa.

**Distribution:**
Kenya, occupying the highland plateau; not recorded from the coast.

**Description:** Male and female, adult.
Frontal band white; crown and nape lead grey; cheeks, supercilium and side of neck paler grey; lores dirty whitish with a darker gape streak; chin and upper throat whitish shading into lead-grey and then into blue-black over the chest-band. Rest of underside white. Mantle, scapulars, long inner secondaries and lesser coverts olive-ashy with a pronounced purply sheen; back ashy-olive. Median wing-coverts like the mantle ending in a black sub-terminal bar followed by a white tip; secondary coverts similar but white end very broad; primary coverts blue-black. Primaries blue-black with bases white; secondaries white with broad terminal oblique black ends widest externally and diminishing in width toward the long secondaries. Upper tail-coverts white; tail feathers mostly white with black terminal band, widest at mid-pair and diminishing toward outer-pair, each with a narrow white tip. Legs and toes dull carmine, brightest at thighs; bill brown at base shading to black distally; eyes yellow, straw or orange, with eyelids carmine. Length of wing 211-218 mm.
The female is very similar to the male but lacks any well marked white frontal band; the crown of the head is less blue-grey while the cheeks and ear-coverts are less pure grey, more ashy-ochreous-grey; the breast is less grey and the black shading not so strong.

**IMMATURE: 1ST FEATHERED STAGE.**

The first feathered plumage is as follows: Forehead only slightly paler than the rest of the face; crown dark ashy, each feather with ochreous-sandy tip; lores and cheeks ashy washed with ochreous-sandy, rather greyer below the eyes; throat whitish, gradually shading into the ashy-grey of the breast, each feather with buffy tips; the ashy of the breast sharply defined from the white of the rest of the underside but no black breast bar. The absence of the breast bar and dark nepe line differentiates this bird from the young of *S. coronatus*, of a similar age.

The mantle is dark olive-ashy with sandy tips to the feathers; scapulars and wing-coverts similar but sandy-ochreous tips and vermiculations wider and more pronounced. Legs ochreous-pink.

**IMMATURE:**

The second stage is very similar to the female but crown and neck only slightly more grey-tinged than the rest of the upper-side which is ashy-olive without any purply sheen. Wing-coverts more ochreous ashy with pale ends to each feather; white of secondary coverts tinged with ochreous at tips. Rump feathers tipped ochreous. Primaries black with little blue-gloss. Legs and feet brownish, with a little dull carmine at thighs.

**JUVENILE:**

The downy chick is very similar to that of *lugubris* but can be distinguished by the presence of a central dark line on the dorsum and a dark patch on either side of the pelvic region.

**HABITS:**

The Larger Grey-breasted Plover is an inhabitant of the open highland plains and grass lands. It is particularly plentiful on the Athi Plains and Ukambani, and again on the Kinangop-Laikipia plateau. They are usually seen in flocks of half a dozen up to fifty birds, but this of course is during the non-breeding season. They are associated with the presence of game as has been noted in the case of the previous species. The association is connected with the food supply. One observes these birds feeding on the places where the game lie up. They turn up the dung with a rapid side movement of the bill and amongst it they find the larvae of various beetles and flies and worms. They also hunt for this type of food on the edges of swampy ground where
decaying vegetation harbours the grubs. As the nesting season approaches, usually with the onset of the rains, these birds split up into pairs. The nest is an open scrape with little lining usually on a slight rise. Three to four eggs may be laid, but not infrequently only two form the clutch. They are putty-coloured with numerous black blotches and marks. Both parents will incubate the eggs but most of this task is left to the female. Incubation lasts about 20 days. They adopt the usual Plover tactics in an attempt to distract one's attention from eggs or young. They do not utter their alarm note unless unduly excited. The call is a harsh "che-che-che-cherek" uttered when on the wing or on the ground.

There is undoubtedly some local migration, but relative to what is unknown. In one locality outside Nairobi these birds appeared in March. They remained in the vicinity up to September 5th and disappeared, though hunted for over the plains for fifty miles. They had not bred during their sojourn, though their near relatives the Crowned Plover had brought off two broods! Much remains to be learnt about these birds.

Nests and young have been noted in May—July and in November—December on the Nairobi Commonage.

**STEPHANIBYX CORONATUS CORONATUS**, Bod. CROWNED PLOVER.

Type locality: Cape of Good Hope.

**DISTRIBUTION:**

Kenya, from the open plains country of Jubaland west through Ukambani and the Athi Plains, the Highland Plateau, Northern Frontier, and westward through northern Uganda to Ankoli. (In this distribution, are included birds which are recognised as a geographical form by Friedman, Cf. U.S.N.M. Bul. 153, pp. 161-166, 1930.) For remarks vide post.

**DESCRIPTION: MALE AND FEMALE.**

Forehead, lores and gape black continuous with a pronounced black supercilium which extends back to the nape in a Y and encloses a white coronal patch in the centre of which is a black area; ear-coverts, cheeks and side of neck ashy-grey with ochreous wash paler on the chin and throat and gradually shading to a deeper colour on the breast then to black, thus sharply defining the breast from the pure white of the rest of the underside. Hind-neck, mantle, scapulars, long inner secondaries, lesser wing-coverts ashy-grey with an ochreous-olive wash more particularly on the mantle. Rump similarly coloured. Median and secondary coverts like the mantle but with white ends, and primary
coverts mostly white thus forming a white band across the wing. Primaries mostly blue-black with increasing basal white from without inward; secondaries mostly white with black ends, the black increasing from within outward, but inner secondaries white with ashy-ochreous grey. Upper tail-coverts white. Tail feathers white with a broad subterminal black bar. Legs and feet madder; eyes yellow, orange or orange red; bill madder at base, tip black.

IMMATURE:

Coronal markings of the adult plumage indicated by a black-brown circlet tipped with buff; whitish area tinged with buff, median dark area heavily tipped buffy. Breast and whole of back light-ashy with ochreous wash transversely vermiculated with darker ashy and sandy-buff. Dark breast-band indicated by blackish feathers buff tipped. Primaries dull black; secondaries dull black tipped. White areas very much as in the adult. The downy buff and black tips are retained for a long time on the tail feathers. This plumage is retained for quite a month after the young is capable of strong flight. It is then gradually moulted; the head markings, black and white become purer, the breast more uniform, as also the mantle, but the vermiculations of the wing-coverts and the long inner secondaries are retained until the bird is about four months old when they are gradually shed. The complete moult into full plumage does not take place until after the first six months.

JUVENILE:

The downy plumage is typical of the plover tribe. Top of head dull blackish each downy tuft with broad sandy to ochreous tips; the coronal circlet is indicated by paler tipped down mixed with white; the black nape line is indicated by black down; throat, sides of head and hind-neck white; down on breast sandy-buff shading to ashy on the breast band; the whole of the upper-side mottled sandy-buff and dark ashy, with a median dorsal line of blackish down. Belly white. The wing feathers soon sprout; the white secondary coverts become conspicuous. Legs and feet pinkish. (Cf. note on Jubaland race.)

HABITS:

The Crowned Plover is widely distributed over the highland plateau and grass-lands frequenting those areas where the grass is short or sparse or even wanting. The species is commonest on the Athi Plains, Northern Frontier and Ukambani, extending through the Rift Valley, on to the high plateau of the Mau, Eldoret, and suitable localities in Uganda and become plentiful in the western province from Lake Albert to Ankole. It may be advantageous at this point to discuss the various geographical races which which been cited though not generally
recognised. I refer in particular to the opinions expressed by Friedman, United States Nat. Bul., 153, in which two races other than the nominate form are recognised. According to this writer, the nominate race extends from the south (Natal) through Tanganyika to the highland plateau excluding the Mau, to Uganda. Is darker more grey-brown on the upper parts. The birds from the Mau, he unites with a large north-eastern race of Abyssinia which he names *suspicax*. It is of interest to note then, that the Mau birds are separated from the Abyssinian form by miles of low country inhabited by the nominate form. It is suggested that altitude and environment have produced a form similar to the Abyssinian one. Such is possible, but I am very much disinclined to accept the validity of the statement.

The third race *demissus*, inhabits the lowlands of Somaliland. It is said to be more sandy-rufous above. It is also suggested that birds from Baralah, Northern Frontier, Kenya are intermediate between this and the nominate race, further that the form may range across Jubaland. The limited adult material at my disposal from Jubaland supports the pale colouration assigned to the race. However, young in down from Wagedud, Jubaland, collected in June, are very different to young of the same age from the Athi Plains. They are very much more rufescent-sandy. I incline therefore, to support the suggestion that Juba birds do belong to the Somali form. Birds from the Northern Guasso area to the Lorian are intermediate. The general habits of all the races are similar. They are most in evidence during the non-nesting seasons, for then they assemble in large flocks, sometimes numbering over 100 individuals. These flocks are made up of adult and sub-adult birds. The latter may always be recognised by the less conspicuously marked coronal colouration and the presence of pale tips to the mantle and wings which give these areas a slightly barred appearance.

These birds are vociferous when disturbed but when left alone hardly utter a sound. Nevertheless, one is always stumbling upon them, more often at some crucial moment when one is stalking a buck or other prey. They then get up and give utterance to their piercing harsh call likened to the syllables cre—cre—cre—cree-ip ... crie-ip, and every head of game in the area is on the "qui vive." Fortunately, unless they have eggs or young, their flight is not long sustained; circling round once or twice they alight, and uttering a plaintive whistle crie-ip, they soon settle down. If, on the other hand, they are approached when brooding eggs or young, they get up and after running a few paces they start calling when one is still some distance away and as one gets nearer they take wing and will then swoop down towards the intruder, in much the same way as does the European Lapwing. They are quite fearless in their attacks on dogs and more than once I have seen a dog cowering before the vicious onslaught. Jackals and Bat-eared Foxes are chivvied in the same way. They draw attention
from their young by feigning a broken wing or leg and as they flutter away they call persistently. The nesting season varies somewhat. We have observed eggs or young in down during March, April, to July and also September; and again in October to December. The rather prolonged nesting period is partly accounted for by the fact that more often than not, the first clutch of eggs are destroyed; ground vermin such as mongoose, foxes and jackal are particularly destructive, to both eggs and chicks.

The food supply for young and adults is plentiful throughout the year, for here again, much of it consists of various larvae obtainable from the accumulated droppings of the numerous game.

The nest is a shallow scrape either on bare pebbly ground or amongst tufty grass, more usually the former. The clutch varies: the commonest number is two, occasionally three and less often four. They are typically plover in shape, stone, putty or olive-tinged in ground colour covered with small blotches and marks of umber and blackish. There is some variation in size but average clutches measure $38 \times 28$ mm.

Young in down are cryptically coloured, and were it not for the fact that one sees them move, one could not detect them. Should they be feeding with their parents, when first observed, one notices the white underside and white neck ring, but almost at the first alarm note they squat with head tucked into the body, thus obliterating the greater part of the neck ring, and they are difficult to detect. The way to pick out the youngster is to disregard the adult birds and when the alarm is given to note some particular object near where the chick has squatted. One can then walk straight up to it and it will be found crouching, almost motionless. It will allow one to pick it up and replace it without running off. There is not the slightest difficulty in recognising these birds; the conspicuous coronal marks and the red legs distinguish it at once.

Night flighting is common in this species, more especially when there is a moon. One often hears them moving across the line of the Museum building in a north-easterly direction.

The Crowned Plover is considered by some as of interest from a sporting point of view; it must be tame sport, unless the shooting is done during the night flights.

When these birds have flocked, they break up into small companies at periods when they search for food, but unite again before sunset. Towards evening they indulge in playful antics in much the same way as do the Crowned Cranes, but they do not seem to have the same set "dance." It is an attractive sight more particularly when several or most will, as though at a pre-arranged signal, suddenly raise the wings perpendicularly over the back retaining them thus for an appreci-
able time, then bringing them smartly down to rest. The black and white under-surfaces are then conspicuous.

In my experience, these birds can be called confiding if treated properly; in a car one can approach to within a couple of yards before they run off. The photographs illustrating the birds were obtained from the car window, with a five-inch lens.

Quite apart from the slightly barred plumage of the sub-adult bird, one can generally pick these out by their behaviour; if a flock is seen and approached, these younger birds, having still some memory of the value of squatting, learnt as youngsters, will sit down and "flatten" and will remain thus until one is almost on top of them.

Genus **HOPLOPTERUS**.

**HOPLOPTERUS SPINOSUS SPINOSUS**, Lin. SPUR-WINGED PLOVER.


Type locality: Egypt.

DISTRIBUTION:

Through the north and eastern portions of Uganda, east to Rudolf, Baringo, the Northern Frontier, Jubaland, Tanaland, south Ukamba, Kavirondo, Lake Victoria.

DESCRIPTION: MALE AND FEMALE, ADULT.

Entire top of head from forehead to nape, blue-black; the feathers on the back of the crown elongated to form a pointed crest; sides of head and neck pure white with a blue-black streak running from the chin, down the centre of the front of the neck, and joining the blue-black of the breast and upper abdomen; rest of abdomen and under tail-coverts pure white. Mantle, scapulars, long inner secondaries and rump ashy-grey with an ochreous wash; lesser wing-coverts ashy-grey shading to whitish distally; median coverts paler; secondary coverts white with greyish tinge on inner web; primaries blue-black; secondaries white at base, blue-black distally; upper tail-coverts white; tail proximally white, distal half black, the outer pairs with white tips. Thighs white. Legs and toes black; bill black; eyes claret, red, ruby or crimson. Length of wing 182-203 mm.; average for females 185, males 195 mm. A marked spur on angle of wing, sometimes measuring 20 mm.

IMMATURE:

Crown and throat line and breast ashy-ochreous; rest of head dirty white; mantle ashy-grey with buffy tips to each feather; primaries and secondaries black; coverts dirty ashy-whitish. Legs and toes black; bill black; eyes dull red.
JUVENILB:
The nestling in down is unknown to me, and there appears to be no available published description.

HABITS:
This Spur-winged Plover has a wide range throughout Kenya and Uganda but does not appear to have been recorded from the central highland area of the former. My records are from Anasa on the Tana River, Kitui Ukambani, Lake Jipe, N. Guasso Nyiro to Marsabit and Lake Koroli, north and south of the Juba River, Baringo, Kendu Bay, Kavirondo, Turkana and Kobua River, Rudolf, Lake Kioga, Lake Kikarongo, Lakes Albert and Edward and Buddu. Wherever it occurs it is there in numbers, from scattered pairs to flocks of fifty or more. Like others of this group, they are very noisy, maintaining an incessant call when disturbed. The call is similar to the syllables hick-hick-hick, oft repeated, thus very like that of the Saddle-backed Plover, but less metallic. They are usually found in the vicinity of water. When undisturbed they stand with heads depressed between the "shoulders," and if a strong wind is blowing, all the birds face towards it. When on the ground and first disturbed, they run a short way, stand, and jerk their bodies up and down with abrupt spasmodic movements and quick lateral movements of the tail which end in a quick depression and partial fanning of the feathers. Where these birds are abundant, they nest in what may be termed colonies, for several will nest on a sand or gravel spit within a short distance of each other. In Kenya, no considerable nesting areas exist; the nests are usually scattered. My friend Mac Innes has already published an account of the nests of these birds in this Journal: (No. 47-48 p. 128.) he states: "It is often very difficult to see the bird on the nest, as it invariably leaves at the first sign of danger, and circles round the intruder, uttering loud cries. On closer approach the bird often becomes silent, settling on the ground some distance away, thereby disclosing the presence of the nest."

He also observes that in a clutch, one may find the eggs to be in different stages of incubation, and suggests that this may result in partial protection of the eggs, for they brood as soon as the first egg is laid, and some time may elapse between the laying of the first and last egg. The nest is a shallow scrape which may or may not be lined with bits of reed and other debris. Three to four eggs are laid, putty, stone, or slightly olive in ground colour, thickly spotted with black and sepia with underlying marks of greyish. Average measurements 40 x 28₄ mm. There is as much variation in these eggs as in those of the Lapwing of Europe. I have watched these birds brooding, usually they sit with head well drawn in on the back, but occasionally the head is laid flat, with neck partially stretched and chin on the ground. Though so conspicuous when standing upright, they harmonise wonderfully with
the ground when they are incubating. They feed on various insects, both larvae and imagoes, including diptera, beetles and termites. They take most of their food along the water's edge, however, and here they capture small crustaceans and molluscs. Stomach contents also reveal the presence of grass seeds in small quantities.

There is some local migration, but directions and times have not been ascertained with any degree of accuracy. Night flights are recorded from time to time, but most of these refer to passage from one feeding ground to another.

**HOPLOPTERUS ARMATUS**, Burch. SADDLE-BACKED SPUR-WINGED PLOVER.

Ref.: Burchell, Travels, 1, p. 501, 1822.
Type locality: Cape Province.

**Distribution:**
Limited to the lakes of the Rift Valley.

**Description:**
Forehead and greater part of crown, white; rest of crown and remainder of head, throat, neck and breast to upper abdomen, black; a white triangular patch, apex forward, at base of hind-neck, followed by a black interscapular triangle, apex pointing back and continuous with the base of a further black triangle, these two triangular areas forming a saddle or anchor-like patch on the back; lesser, median and greater wing coverts, very light grey fading to white on the distal edges of the median coverts, and slightly shaded with ashy on the long inner secondaries. Primaries dark blue-black; secondaries basally white, distally blue-black; under wing-coverts and axillaries white; a pronounced spur at the bend of the wing; back black with white tips; rump and upper tail-coverts white; belly and under tail-coverts white; tail feathers, basal two-thirds white, terminal third black, white tipped, except the outermost pair which are mostly white the black being limited to a sub-terminal bar; or the tail may be white with a terminal black bar lessening in width from central pair, outward. Legs and feet black; bill black; eyes crimson. Length of wing, 209-220 mm.

**Immature:**
Forehead with a narrow white band; chin and throat whitish; light patch on hind-neck dirty white; dark areas on head, sides of breast and dorsum dark black-brown, each feather tipped with sandy to buff, breast rather paler brown; abdomen, vent and under tail-coverts white; wing-coverts pale grey irregularly barred with sepia and sandy tipped,
the barring being most evident on the median coverts and long inner secondaries; primaries black; secondaries black at tips, white basally. Tail as in the adult but dark ends more brownish.

**JUVENILE:**

The nestling in down is mostly white below, with a breast bar of sandy and black mottling; a white neck ring is present, and the forehead is also whitish; crown and dorsum fairly evenly mottled sandy and sepia, the darker colour being predominant in the middle of the crown and as a line down the dorsum.

**HABITS:**

This Plover is frequently referred to as the "Blacksmith" Plover on account of its peculiar metallic call which resembles the sound produced by hitting an anvil with a hammer, hick-hick-hick-hick. They are noisy but mostly so when disturbed or during the mating season. They are always found in the vicinity of or not far from water, frequenting the mud flats or shore where the herbage is very short, or where banks are formed of rotting vegetation and other debris. They will frequent the open grassland, mostly of an evening, where herds of cattle have been grazing, for here they find an abundance of insect food among the dung. They are also partial to grass land that has been burnt off. They are resident where they occur; are usually observed in pairs or family parties, seldom in flocks. They feed almost entirely on insects, small molluscs, crustacea and worms.

The nest is a shallow depression in some slightly raised collection of debris, often not far from the water's edge, and may or may not be lined with bits of debris. Sometimes the nest is on a slightly raised ridge of gravel with sparse vegetation, which marks a former lake-level. Two to four eggs are laid, usually the former; putty, stone, or olive in ground colour with numerous black and umbel blotches and some underlying marks. Size average 40 × 29 mm. When the parents have been disturbed from a nest or young, they will fly around giving vent to their metallic cries, and swoop down at the intruder, as do Lapwings at "Home." They flight of an evening from one feeding ground to another, from the water's side to some open grass flat if a strong wind is blowing and the water is rough.

When hunting for larvae in the dung of cattle they turn over the edge of a "pad" with a sharp lateral movement of the bill, and if the "tail" end of a grub is seen they seize it, and setting their weight back will exercise a gentle strain until the creature lets go, when the grub is dropped, picked up, head in bill, and down it goes!
Genus **ANOMALOPHRYS**.

**ANOMALOPHRYS SUPERCILIOSUS**, Reichw. CHESTNUT-BANDED WATTLED PLOVER.

Ref.: Reichenow, J. Ornith., 1886.
Type locality: Marungu, West Tanganyika.

**Distribution:**
Kenya; limited, so far as our knowledge goes, to the eastern side of Lake Victoria; also to be found in the Kikorongo district of Uganda.

**Description: Male and Female, Adult.**

Frontal band cinnamon, followed by a blue-black crown ending in a nape crest. Chin dirty-white shading to ashy-grey, which colour extends over the throat and upper breast, cheeks, and side of the neck. This in turn shades into an ashy-olive on the mantle, scapulars, lesser and median wing-coverts and long inner secondaries, all these feathers with rusty tips. The greater coverts are more ashy-grey and have white margins to tip and outer web; primaries blue-black; secondaries white with broad black ends lessening in width from out inwards. Back and rump darker olive-ashy, upper tail-coverts white. Tail white with black bar at end lessening in width from central pair outward, all with white tips. Lower breast and belly to vent and under tail-coverts white. Legs and feet blackish; bill black, tip crimson-purple at base; eyes brown. Wattle and eyelids yellow to orange. Length of wing 184-186 mm. No spur on wing.

**Immature:**

Somewhat like the adult. The cinnamon of the forehead extends back much further over the crown and passing over the eyes forms a wide supercilium; the crown of the head is similar to the mantle—olive-ashy-brown but less olive than in the adults; posterior to the eye is a whitish line; the throat is dirty white, shading to grey on the sides of the head and neck where it changes to ashy-grey with an ochreous wash on the upper breast. Very often the breast is mottled with chestnut as moulting takes place. Rest of the body plumage as in the adults.

Juvenile in down is unknown.

**Habits:**
The Chestnut-breasted Wattled Plover is a rare species and has seldom been taken. In Kenya, I have obtained examples in the south Kavirondo area in which district it breeds; in Uganda, the only locality in which the species is noted, is round Kikorongo, north of Lake Victorias.
Edward. There is just a possibility that the species will be found to differ geographically when more material is available. Practically nothing is known regarding its habits, and certainly nothing about its nest and eggs. My only evidence that it breeds in the south Kavirondo district is that three-quarter grown young, in first feather, were seen with their parents on the Kano flats. They were of such an age that they could not possibly have migrated there.

The species frequents the open grass lands where the vegetation is stunted and sparse, or on plains where the grass has been burnt off. Stomach contents revealed the presence of insects and small molluscs only. Their general behaviour is similar to the Grey-breasted Plovers.

Genus *AFRIBYX*.

*AFRIBYX SENEGALLUS SENEGALLUS*, Linn. *SENEGAL WATTLED PLOVER.*

Type locality: Senegal.

**DISTRIBUTION:** Uganda.

This race is mentioned here to emphasise the fact that the typical nominate form occurs in the north-western districts of Uganda, both true to type and in an intermediate form between it and the southern *A. s. lateralis*. The chief point of difference is that the western race has no smoky to black on the flanks and the belly. The habits of the races will be mentioned together.

*AFRIBYX SENEGALLUS MAJOR*, Neumann. *ABYSSINIAN WATTLED PLOVER.*

Type locality: Mareb River, Abyssinia.

**DISTRIBUTION:**
Northern Frontier, Kenya and Jubaland.

**DESCRIPTION:**
This race is very similar to the next geographical form to be dealt with. It differs in lacking the dark areas to the flanks and upper belly and by its larger size. Wings 235-251 mm.
BLACK-FLANKED WATTLED PLOVER (Afrirbyx senegallus lateralis Smith.)
APRIBYX SENEGALLUS LATERALIS, Smith. BLACK-FLANKED WATTLED PLOVER.

Type locality: Natal.

Distribution:
The greater part of Uganda; in Kenya mostly restricted to the districts east of Lake Victoria, and southern Masai, Ukambani and the Tana region.

Description:
Forehead and fore part of crown pure white, distally bordered by black, which in turn shades off into smoky-ashy-brown dark streaked; the hind neck is lighter in ground but is still streaked; chin white; throat patch black; surrounded by the black and white streaked areas of the side and lower throat; ear-coverts finely streaked black and white; lores covered by a yellow to orange red double wattle, lower long and pendant, upper rounded and erect; eyelids yellow. The whole of the breast smoky-ashy-grey shading to black on the mid-flanks, this colour often extending over the upper belly; abdomen and thighs white; under tail-coverts white with isabelline wash; interscapular region, scapulars and long inner secondaries olive-ashy; lesser and median wing-coverts light ashy-grey with buffy tinge shading to white distally; greater coverts white mostly, basally ashy; primaries purply-black, white at extreme base; secondaries mostly white with distal black, long inner secondaries white basally ashy distally; back and rump olive-ashy, upper tail-coverts white. Tail feathers basally white with black bar at ends lessening in width from within-outward, tips white. Legs and feet light yellowish-olive, greenish-grey; bill olive-yellowish at base, black tipped; eyes lemon-yellow. Wings 220-237 mm. Spur present on bend of wing.

Immature:
Somewhat like the adults but without the white frontal patch; the black of the crown is missing so also the black throat line, and there is little trace of the dark colour on the flanks.

Juvenile:
Unknown to me in the downy stage. In first feather, they have most of the mantle, breast and wing-coverts tipped with rusty and sandy colour, and are thus mottled and barred.

Habits:
The Wattled Plovers, in the various geographical races, are here taken together, as their habits are alike. Throughout their distribution
in East Africa, they are only to be found at altitudes under 5,000 ft. so far as I know. The type of country frequented is one where vegetation is sparse and the grass short. They are not limited to the vicinity of water, for we have noted them in places where no water existed for at least 10 miles. Insect food is their principal diet, very largely coleoptera, but when found near lakes and pans various aquatic forms predominate. Like many of the other Plovers, these birds also consume a certain amount of grass seeds.

They are noisy and give warning to all and sundry at the slightest signs of danger, particularly so when they have nests or young. When in flocks composed of two or three families, they are less inclined to be vociferous unless approached too close or too suddenly.

The exact nesting seasons are not yet well known. We have noted eggs in the months of March—June (Kenya), August and September in Uganda. The nest is a shallow depression with scanty lining; two to three eggs, occasionally four, are laid. They are putty to pale olive brown in ground colour blotched and marked with black and dark brown. Average measurements 43 x 30 mm. The site of the nest is usually on a slightly raised patch of ground or collection of debris.

So far as we have observed, there are no outstanding points of difference in the behaviour of these birds to others of the group. Here again, we have noted evidence of local migrations but the influencing factors are unknown nor is there any information as to exact time and directions. Much more observation needs to be carried out.

Genus **SARCIOPHORUS**

**SARCIOPHORUS TECTUS TECTUS**, Bodd. CRESTED WATTLED PLOVER.

Type locality: Senegal.

**DISTRIBUTION:**

Northern portion of Uganda to South Rudolf to Laikipia and the Northern Frontier of Kenya.

**DESCRIPTION:**

A small frontal patch, chin and upper throat white; rest of crown blue-black, the feathers of the hind-crown elongate and forming a pointed crest; a V shaped white nape line passes forward through the lower eyelid and joins the white throat patch; sometimes this line is broken by the black of the lower throat extending up to the eye. Lores black; an orange to yellow wattle in front of the eye; neck encircled by a black collar, the black colour extending down the centre.
of the breast as a broad line; on either side of this line the breast may
be washed with ashy-grey or it may be uniform white as is the
remainder of the underside to as far as and including the under tail-
coverts; mantle, scapulars, long inner secondaries and lesser wing-
coverts ashy-ochreous-grey; the median wing coverts less ochreous and
some tipped white; the greater coverts broadly tipped white forming a
conspicuous white wing bar in conjunction with the white of the secon-
daries; primaries, basal half white terminally black; secondaries white
proximally with black distally, the black decreasing in width from out-
inwards; back and centre of rump ashy-grey; upper tail-coverts white;
tail feathers basally white with black bar at end decreasing in width
from central pair outward, all white tipped. Legs and feet plum-red
or crimson; bill red at base, tip black; eyes yellow to orange. Length
of wing, 180-190 mm. A small spur is present on the "bend" of the
wing.

Immature and Juvenile:

Immature birds have the front of the head dirty white; the black
areas are replaced by dark brown feathers tipped with rusty and sandy,
the mantle and wing-coverts tipped with sandy and buff, the inner
secondaries with some dark barring. No crest on the hind crown. The
juvenile in down is unknown to me.

Habits:

I propose to deal with these jointly under the next race.

SARCIOPHORUS TECTUS LATIFRONS, Reichw. SOMALI
CRESTED WATTLED PLOVER.

Ref.: Reichenow, Orn. Centralbl, 1881.
Type locality: Bardera, S. Somaliland.

Distribution:

From the Juba River to the Tana, and South Ukambani.

Description: Male and Female.

Very similar to the previous race. The chief point of difference is
in the greater width of the white frontal which extends back as far as
the mid-point of the eyes. The general tone of the upper sur-
face is paler; the ashy wash on the sides of the chest is more distinct
and the size is smaller. Wings vary from 163-180 mm. The colour of
the legs and feet are brighter red.

Habits: (Both races).

This species is restricted in its distribution to those areas which
are low-lying, i.e., below 5,000 ft. and during the non-breeding season
they are to be found in semi-arid country. Their general behaviour is very like that of the European Lapwing. They have the same curious habit of "tailwagging" when they have just alighted from a short flight. They are noisy and apt to be regarded as a nuisance if one is stalking game; for their cries give warning to all in the neighbourhood. They are not timid by any means, and will allow one within reasonable distance, merely walking slowly away as one approaches, but all the time they keep calling. Their call is very similar to that of *S. lugubris*, perhaps less harsh.

So far as I am aware, the nest and eggs of this species have not been recorded from these territories. Eggs taken in the Sudan are putty to earthy brown in ground colour blotched with dark brown and black. Breeding birds have been shot in June.

**Genus HEMIPARRA.**

**HEMIPARRA CRASSIROSTRIS CRASSIROSTRIS**, Hartl. **WHITE-SHOULDERED THICK-BILLED PLOVER.**

Ref.: Hartlaub, Jrl. Ornith., 1855.  
Type locality: Nubia.

**Distribution:**  
The northern portions of Uganda to Rudolf.

**HEMIPARRA CRASSIROSTRIS HYBRIDA**, Reich. **NYANZA WHITE-SHOULDERED THICK-BILLED PLOVER.**

Type locality: Tanganyika Territory.

**Distribution:**  
The country east and south of Lake Victoria.

**Description:**  
The whole of the head (except the nape) and the throat pure white, followed by blue-black which encircles the back of the neck, the sides and the breast; abdomen white so also the under tail-coverts except the two longest which have large black lateral areas subterminally. Mantle, scapulars and long inner secondaries smoky-grey, the last becoming darker and strongly washed with grey-green; primary coverts pure white; lesser and median coverts also white; primaries blue-black; secondaries black and white, the distal black increasing from in-outwards; back ashy-grey becoming darker, almost black at centre of
rump; upper tail-coverts white; tail feathers basally white, distally black, the central pair with very little white. Legs and feet carmine to red with dark blackish scutes on the tarsi and toes; bill red with a black tip; eyes red so also the eyelids. Wings measure 200-212 mm. A small spur is present at the "elbow."

IMMATURE AND JUVENILE:
These are unknown to me.

HABITS:
This species is almost entirely confined to the vicinity of water, indeed, they seem to spend quite a fair proportion of their time on floating islets and debris as well as along the water front. Furthermore, many of their nests are to be found on these islets. They are to be met with in pairs during the breeding season, and in small companies at other times, but not in very large flocks. During the "off-season" they are wary and dislike a close approach, but when with nest or young they exhibit a certain degree of boldness in their anxiety to protect their property. One may be certain that a pair is nesting, yet have some difficulty in locating the eggs. MacInnes records that one seldom has the opportunity of observing a brooding bird; this is due to the fact that the parent bird slips off the nest at the first sign of danger and runs off some distance. If they are flushed they fly a certain distance and circle back towards the spot. One has to go over the likely ground very carefully before the nest is found. As already mentioned, the nest is often on an island or raised platform of debris and the nest itself is made of debris and, according to MacInnes, sometimes mosses. Usually two eggs are laid, occasionally three, putty to earth-brown in colour rather heavily blotched with dark brown and black.