

THE BIRDS OF KENYA AND UGANDA.

PART VIII.

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DUCKS.

ANATIDAE.

INTRODUCTION.

Broadly speaking, the Ducks of Kenya and Uganda are of two categories, resident and migratory species, the latter being visitors from Europe.

The African species are, to a certain extent, local migrants and their movements are seasonal and climatic.

I propose to follow the arrangement of genera and species as given in Selater's *Systema Avium Æthiopicarum*.

The notes under each species must of necessity be brief and incomplete, as no detailed study of this group has ever been carried out in Africa. Little is known of the seasonal moults; the nesting seasons, juvenile plumages, and food, etc.

It is to be hoped that those interested in these birds will not hesitate to publish their observations in the pages of this Journal.

ERISMATURA MACCOA, Eyton. Red Diving Duck.

Ref.: Eyton, *Monogr. Anat.*, p. 169, 1838.

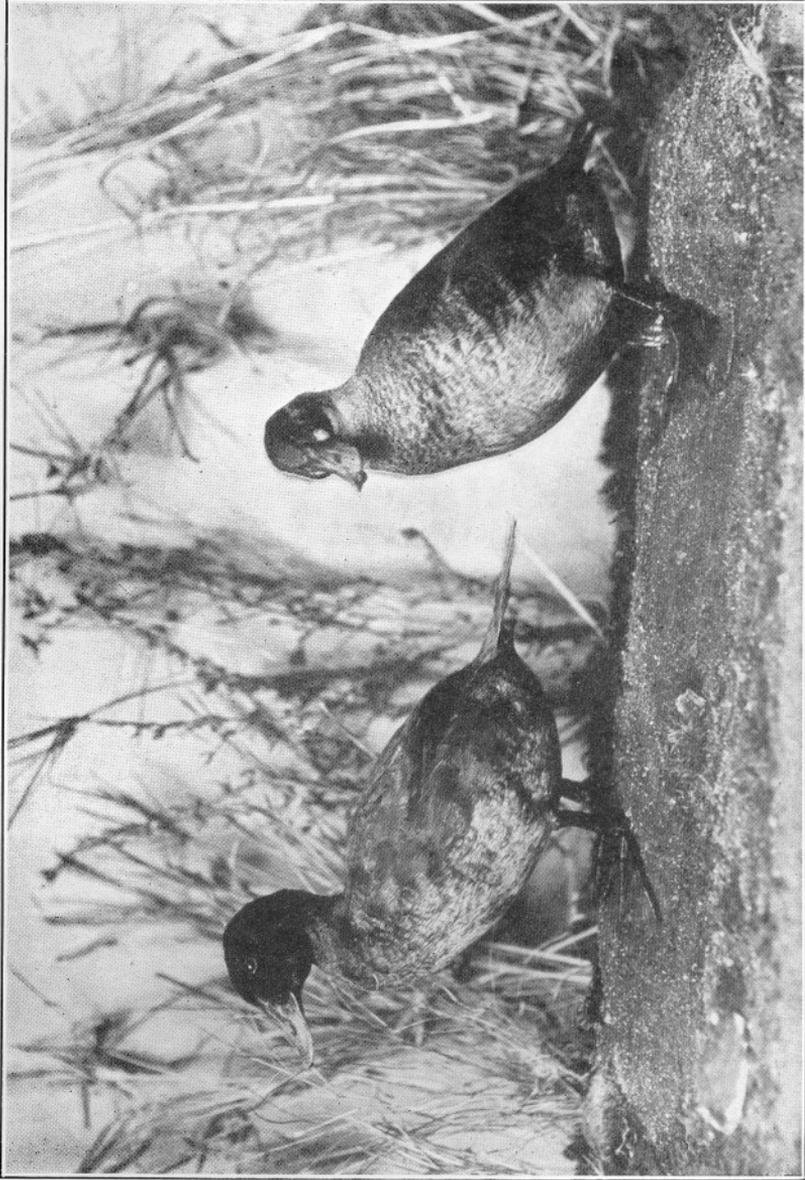
Type locality: South Africa.

DISTRIBUTION:

On all the permanent lakes of Kenya and most of those in Uganda, rather uncommon in the latter country. Found occasionally on some of the larger rivers, but should be considered a lake bird. At times, is also to be seen on dams and deep "rain pans."

DESCRIPTION, MALE, ADULT:

Head and upper neck, black; chin sometimes greyish. Lower neck, mantle, scapulars, lower rump and upper tail-coverts bright chestnut; rump dark brown slightly speckled with fine light brown. Breast, abdomen and vent, greyish-brown with silvery whitish tips to each feather giving to the lower surface an almost white appearance. Flanks light chestnut, with a slight freckling of lighter brown. Wings grey-brown, primaries and outer secondaries uniform, slightly paler on the inner webs, remainder of the feathers, especially the inner secondaries, strongly freckled with ochreous-brown. *No wing speculum*. Wings very short and almost hidden by the flank feathers.



RED DIVING DUCK (*Erismatura maccoa*, Eyt.).

Tail composed of long narrowly webbed, stiff blackish-brown feathers, 16-14. Bill short, high and broad, of a grey-blue colour, strongly serrated at the margins, and strongly toothed; length 55 mm. depth 28 mm., width 28-30 mm.; legs and feet greyish. Length 415-440 mm. Wings 160-180 mm.

The immature male is very similar to the female.

FEMALE, ADULT :

The whole of the upper surface from the hind-neck to the upper tail-coverts grey-brown strongly though finely vermiculated and treckled with light brown and buffy-white, giving to the whole area, a " salt and pepper " appearance. Top of head to a line just below the level of the eye, grey-brown, each feather with an ochreous tip; below this, an almost whitish line extending from the loreal spot towards the nape, but not meeting. Below this is a darker zone coloured as the crown and extending back to the upper neck. Chin and throat whitish gradually merging into the ashy-brown lower neck which is somewhat barred with the whitish tips of the feathers. Breast, abdomen and vent with a curious pale silky appearance due to the wide buffy-white ends of the grey-brown feathers. Sides and flanks ashy-brown, barred with buffy-white and slightly freckled. Wings and tail as in the male. Bill and legs slatey-grey and brownish-grey. Length 415-435 mm. Wings 150-165 mm.

HABITS :

The Maccoa or Red Diving Duck has a wider distribution within our boundaries than has been supposed. Jackson states that he has only seen it on Lake Naivasha, but I have records from Lakes Jipe, Naivasha, Nakuru, Baringo, Marsabit, Karole, Rudolf and the north end of Kioga, and have been informed on good authority that it is occasionally seen on Bunyoni. It is however most numerous on Lakes Naivasha and Nakuru where they breed regularly.

Certain characters distinguish this bird at once from any other duck. When on the water, the short thick neck, the conspicuous blue bill, the bright chestnut colour of the back, and the upright position of the tail make the male distinguishable at a glance. The female has the same general outline, and the greyish colour with conspicuous white line passing through the mid-line on the side of the head are characteristic. Both sexes sit low in the water and are capable of depressing themselves until almost to water level. The only other species which might at first glance be confused with a cock bird is the male of the African Pochard in full plumage, but the thick neck and the angle at which the tail is carried make the Maccoa separable at once. The thick neck is such that whereas in other duck the back of the neck has to be split to skin the head out, in this species the head can be passed through the neck with ease.

As with other diving ducks this species is very loath to take wing, preferring to escape notice by submerging and remaining motionless, or if disturbed it will dive repeatedly. If forced to take flight, it propels itself on the surface of the water with rapidly moving legs before sufficient impetus is obtained to raise the heavy body by flight alone. Once on the wing, flight is strong but no height is reached nor is it sustained; the first chance of dropping into a sheltered clump of water-lilies is seized. The type of water preferred by these birds is one which is well sheltered and carrying large expanses of water-lilies and other aquatic weeds.

The food (from stomach examination) would appear to be mostly vegetable, consisting of seeds, roots and algae, but a quantity of larvae and small molluscs is also eaten. The bulk of the food is obtained by diving and is sub-aquatic.

The nesting season has not been clearly defined; nests have been found in January, June, and July, and breeding birds obtained in May and October. The nest is a floating one, somewhat like that of the Crested Grebe; a mass of sodden vegetation raised about four to five inches, with a depression in the middle lined with reeds and other aquatic vegetation. No down has ever been found in the nest by me nor is such recorded by other observers. The eggs are large, rather rough in texture, pale greenish or bluish white in colour, measuring 50 x 66 mm. The full clutch is not exactly known; the greatest number I personally have found is five, but broods of ducklings observed by me have not contained more than three to four individuals.

Unfortunately I have been unable to examine the ducklings in down and can give no detailed description, nor can I find any published account of them.

No periods of "fighting" have been observed by me and taken all round, this species does not offer a great deal of sport to the gunner. Their great reluctance to rise makes them appear absurdly tame.

For the most part, these birds are remarkably silent. I have heard them utter a low wheezy note and the apparent equivalent to the quack of an ordinary duck is a most peculiar note which might be rendered thus: AOW-U-U-U-U-; the sound is made when the bird raises its head and depresses it on to the breast. My friend Capt. Dent likens it to the noise produced when "gargling" without any liquid in the mouth!

MOULTS:

No examination has ever been made to ascertain the form or periods of moults. From specimens available, a complete wing moult takes place in September and October; beyond this we have no records.



WHITE-RUMPED DIVING DUCK (*Thalassornis leuconotus*, Eyt.).

THALASSORNIS LEUCONOTUS LEUCONOTUS, Eyton. White-rumped Diving Duck.

Ref. : Eyton, *Monogr. Anat.*, p. 168, 1838.

Type locality : South Africa.

DISTRIBUTION :

On practically all the lakes and swamp-margined rivers and many artificial dams in Kenya and Uganda.

DESCRIPTION, MALE, ADULT :

Top of head blackish, feathers with marked black central shaft and slight ochreous margins and bars; this colour extends down the back of the neck to the mantle. A large white patch is present in the concavity at the side of the bill and extends through the gape to the base of the mandible; chin and throat black; sides of the head and neck ochreous-straw coloured, the former area spotted with black. A marked constriction is present at the base of the neck accentuating the ochreous neck colour from the barred upper breast and mantle. The whole of the mantle and scapulars are barred with alternate bars of ochreous and blackish-brown, the bars increasing in width and intensity of colour from the upper mantle to the end of the inner secondaries. Thus the upper surface has a rufescent, rather mottled appearance. Covered over by the wings and the scapulars, the back, to as far as the upper tail-coverts is white, becoming mottled with black just above the tail. The tail feathers are narrow, stiff, and very short; dark blackish-brown with pale marginal edges and irregular marks.

The undersurface shades from the upper breast to the vent from a finely black-brown barred ochreous to broadly barred ochreous to rufescent on the flank to a grey brown on the abdomen which may be slightly barred or almost uniform. In some freshly moulted specimens the whole of the breast has a uniform sandy-ochreous appearance due to slight development only of the dark barring.

Most of the wing feathers with the exception of the outer primaries are blackish-brown tipped and barred with rufous. Legs and feet lead-grey or olive-grey; bill, greyish olive-brown with the lateral areas mottled with yellowish; base high, 25 mm. width broad, 23 mm, length 48-50 mm., tip strongly toothed. Length from bill to tip of tail 365-389 mm.; wings 155-175 mm.

FEMALE, ADULT :

Very similar to the male but slightly smaller.

JUVENILE :

I can find no record of a description of the young in down nor of the immature bird in first feather.

MOULTS :

No detailed study of the sequence or season of moult has been carried out. Birds which had moulted all the flight feathers were observed in August, but at the same time others were strong on the wing. Some February and October birds are in fresh body plumage while others taken at the same time are very much worn. This is a field of study which would well repay time spent in the investigation.

HABITS :

This singular looking duck, with its curiously-shaped compact body, and legs set well back, is especially evolved to suit its environment. The ease with which it dives and swims through thick aquatic vegetation is proof of this. It dives and swims under water as well as any Grebe, and being an expert in this direction, it is not surprising to find that its powers of flight are not too good. Its reluctance to rise off the water is marked; rather does it trust to its remarkable resemblance to its surroundings and its power of submergence. At any time, the body floats deep in the water, but the bird is capable of further flattening itself to the water surface, and by remaining still escapes detection. The curious rounded head, with its peculiar colouration and constriction round the neck bears a strong resemblance to the often speckled and yellowing heads of the water-lilies; similarly also, the variagated colour of the back, blends with the mottled colour of the lily leaves, for these leaves are usually mottled by injury and disease marks and usually have the margins raised in a wavy line above the surface of the water. The type of water frequented is one rendered quiet by the mass of water-lilies and other vegetation growing in it.

If a bird is forced to take flight, it rises with a considerable amount of splashing and the feet are used with energy over a long distance before sufficient way is obtained for the bird to depend on wings alone; even then, the legs and feet are held pendent, with the toes outspread, ready for action as soon as the bird drops to water, which it does with alacrity. Though reluctant to fly, once on the wing and kept on the move, these birds have quite a fair speed, but they remain so near the water and are unsatisfactory from the sporting point of view. A winged bird will give a lot of trouble when hunted for; they dive under the vegetation and hold on, and when forced to take breath will project the bill and part of the head only above water. As already indicated, the species is to be found on practically all lakes, and where dams have been made of fair size and have become overgrown, there these birds will turn up, and if undisturbed, will stay for lengthy periods. Certain small swamps along the coast of Kenya are frequented by the "White rump," and even some of the rivers with sluggish backwaters are visited periodically. During the non-breeding season these birds are seen in pairs or singly,



PINK-BILLED TEAL or CAPE WIGEON (*Anas capensis*, Gmelin.).

but when the young are hatched small parties of a dozen are encountered. Because of their propensity for diving and swimming submerged, these birds have been badly victimised by the netting which has up to now been allowed on Lake Naivasha. Five inch gill nets set for *Tilapia* have accounted for dozens. This bird seldom takes to land; the position of the legs render it difficult for walking. They more or less "squat on their haunches." The nesting season has not been ascertained with any exactitude; Jackson found nests in June and July, I have seen them in May to July and shot a female with well-formed eggs in the beginning of November. The nest is either placed on a well-sheltered floating islet, or just within the edges of papyrus and reeds. It is a depression lined with leaves or reeds and other vegetation, with a trace of down. Old coot or grebe nests are sometimes adapted. Most nests have a distinct approach or "run," so that when disturbed the bird can slip off quickly and quietly. The eggs are large in comparison with the size of the bird; an average egg will measure 66 x 48-50 mm. In colour they are a warm-buffy-brown, smooth, and with a slight gloss. Six to ten eggs form an average clutch, but Jackson records as many as fourteen.

The courtship display has not been recorded, and here is a line of observation well worth carrying out.

The note of this bird is a rather wheezy whistling one of three notes, uttered when they are disturbed, or chasing one another. They also have a curious full hissing sound, like the escape of air from a faulty tyre valve.

NYROCA NYROCA NYROCA, Gulden. White-eyed Pochard or Ferruginous Duck.

Ref.: Guldenstadt, *Nov. Comm. Petrop.* XIV, pt. 1, p. 403, 1770.

Type locality: South Russia.

DISTRIBUTION:

This species is a rare winter migrant to eastern Africa from central and southern Europe, its breeding range being south-eastern Europe to Tibet.

DESCRIPTION, MALE, ADULT:

Head, neck, breast and sides of the body rusty chestnut-brown, rather darker on the crown of the head. Chin patch white. Mantle, scapulars and inner secondaries dark blackish-brown with rusty brown freckling, the whole with oily green sheen in certain lights.

Wings dark blackish-brown, primaries with large almost white patch on inner webs, secondaries with conspicuous white speculum bordered with black. Back and rump very dark brown, almost black; tail slightly lighter in colour; lower breast, abdomen and under tail-

coverts white, with a tinge of brown in the region of the thigh and vent; feathers behind the thighs vermiculated. Eyes conspicuously white; bill olive-green with blackish ridge, 40-48 mm. in longest exposed area, 23 mm. high, 20 mm. at widest part. Legs and toes greenish-black, with yellowish mottling.

Immature males are less chestnut and tinged with brown on the undersurface. Eyes brown.

FEMALE, ADULT :

General scheme of colour as in the male, but the chestnut areas are browner and darker; wing speculum less white; and the abdomen is tinged with brownish. Eyes brown, bill and legs as the male.

HABITS :

The White-eyed Pochard, as already stated, is a visitor from the north. Its distribution within our territories is very restricted, so far as we know. There are only two definite records supported by skins, one by Jackson of a bird shot from a small flock by Archer, at Butiaba, Lake Albert; the other shot on Lake Naivasha in February, 1925, and now in my collection. Other unsupported records are of a bird shot on Naivasha in January, 1920, and another on Nakuru in the same month. It will be seen therefore that either the bird is an occasional visitor to our parts or possibly it has been overlooked by sportsmen and ornithologists alike. When on the water, the dark back, white under tail-coverts and the chestnut head should enable one to recognise this bird easily. There are however some species which might be confused with it, viz., the male African Pochard which in full plumage has a dark chestnut head, a dark underside to the body and dark undertail-coverts. The female might be mistaken for either the African Pochard or the female of the Tufted Duck; but in both cases the white under the tail should distinguish them.

This bird prefers the quiet waters of a reedy bed to the more open water, and it obtains most of its food by diving. The food is mostly vegetable, but insects crustacea and mollusca are also taken.

According to Bannerman, Eagle Clark describes its call as Kerrere-kirr.

NYROCA ERYTHROPTALMA (Weid.). African Red-eyed Pochard.

Ref.: Weid, *Beitr. Nat. Bras.* 1v, p. 929, 1833.

Type locality: Bahia.

DISTRIBUTION :

On all the lakes in Kenya and Uganda; often on dams and temporary lakelets and swamps during the rainy season.



AFRICAN RED-EYED POCHARD (*Nyroca erythroptalma* (Weid.)).

DESCRIPTION, MALE, ADULT :

Face, crown, nape, back of neck, front of throat, black with strong purply sheen; side of head and sides of neck, chestnut with a strong purple bloom and sheen. Chin frequently with a white patch. Lower neck and breast very dark black-brown, almost black, with a strong sheen. Abdomen, vent and under tail-coverts grey-brown with slightly paler tips to each feather; these tips are worn off quickly. Sides of body and flanks with a rusty shade, finely vermiculated and spotted with greyish; mantle, scapulars, and secondary coverts and lesser wing coverts dark brown finely vermiculated with greyish-brown; primaries dark brown with paler inner webs; secondaries dark brown with an oily green sheen crossed by a white speculum outlined in black; rump and tail dark brown to black. Feathers at side of tail black.

Bill short, 50-55 mm. long, 25 high, 23 wide, blue-grey in colour, with a black nail or tooth. Feet and legs lead grey; eyes red to scarlet.

MALE, IMMATURE :

In general scheme of colour, very much like the female, but rather paler below and much lighter above. The change of body plumage is preceded by a complete shedding of the wing feathers (primaries and secondaries) then the coverts. Then follows a gradual replacement of all the body and head feathers, the latter being completed first, followed by the mantle, back, breast and abdomen. The tail feathers are replaced last.

MOULTS :

There is no recognised "eclipse" plumage, nor is there a definite period when the adults shed their flight feathers. I have records of adults in flightless condition, in August, September, and February, but at the same time one can observe others which are in full wing.

FEMALE, ADULT :

Crown and back of neck brown, slightly darker on the former; sides of head brown, with a white patch at the sides of the base of the bill, extending to the chin and throat; lower eye-lid white; a whitish post ocular streak which widens out and surrounding the brown "cheek" patch joins the whitish of the throat; upper breast and sides of body brown with silky-ochreous tips; lower breast and abdomen greyish-brown, each feather broadly tipped with silky greyish-white, giving the whole a shiny pale appearance; vent and lower tail-coverts ashy-brown. The pale tips to the breast and abdominal feathers wear off and the undersurface becomes a darker ashy-brown. Mantle, scapulars, and long secondaries dark brown with slightly paler edging, the last area with an oily greenish-brown sheen. Wing coverts dark brown; secondaries dark brownish at ends,

with greenish sheen, rest white forming a conspicuous speculum. Primaries brown with paler almost whitish inner webs and bases. Tail dark brown. Bill and feet as in the male, but the former less blue. Eyes red-brown or brown.

FEMALE, IMMATURE :

Very similar to the above, but paler throughout, the post-ocular stripe ill-defined; the long inner secondaries buffy-grey. The change of plumage into adult follows the same sequence as in the male.

HABITS :

Next to the Yellow-billed Duck, this species is quite one of the commonest. Its distribution is wide, extending as it does from the coast right through to Uganda. Jackson gives a long list of localities which include all the permanent and semi-permanent waters (swamps and lakes) in Kenya and Uganda. With the construction of artificial waters such as dams, the species is even more widely spread than before, but at the same time I very much doubt if the yearly aggregate of numbers is any greater.

On most of the larger lakes, this species is resident, but there is a local migration from smaller to larger and vice versa; this former movement being due to lack of food and suitable environment as the waters decrease in size, with the onset of the dry season.

There is a further movement of this bird where it occurs on the larger lakes; a movement which synchronises with the times of flighting. The flight is usually from the shallower feeding grounds near the shore to the deep water in the middle. One can always find these birds in large numbers during the day in the middle of Lakes Nakuru and Naivasha. Shore-fighting also occurs from one favourite feeding ground to another.

As the bulk of the food consists of aquatic vegetation, in the form of seeds, roots and shoots, which grow under the water, this species has become an expert diver. Larvae, crustacea and small aquatic molluscs are also eaten.

In certain of the lakes, where there is more or less of a beach, or clear mud flats, one can observe these birds on land; they are by no means "land" birds, their walk being ungainly and wobbly.

This species has two nesting periods, March to July, and October and November. It is uncertain whether any one pair breeds twice in the year, but at the periods stated, both eggs and young can be seen. The nest is placed in thickish reeds, built up well above water level, but not on dry land. It is constructed of leaves of rushes and broad-leaved aquatic plants and is more or less dry. The usual clutch consists of six to eight eggs, rather oval, of a creamy colour, measuring on an average 56 mm. x 48.



EUROPEAN TUFTED DUCK (*Nyroca fuligata*, Linn.).

The duckling in down is very dark brown with paler patches, on the back, with yellowish tinge on the neck and undersurface. No detailed description can be given as I have been unable to handle specimens, nor is there a published record.

As a sporting bird, the African Pochard is one of the best as its flight is fairly strong and sustained. They can be driven over guns several times, but if the water is a large one, they eventually find their way to the centre.

A point of interest in the matter of plumages is that prolonged residence on Lake Nakuru or any of the other soda lakes produces a bleaching so that eventually some birds become buffy.

NYROCA FULIGULA, Linnaeus. The European Tufted Duck.

Ref. : Linnaeus, *Syst. Nat.*, p. 128, 10th Ed., 1758.

Type locality : Sweden.

DISTRIBUTION :

A winter visitor to most of the larger lakes in Kenya and Uganda.

DESCRIPTION, MALE, ADULT :

The whole of the head, neck and upper breast black, the first with a strong purple tinge, the latter with bottle-green reflections. Top of head with a long crest of purple-black feathers; sometimes there is a small triangular white patch on the chin; lower breast brown-black with whitish tips; the whole of the under surface white, slightly vermiculated on the sides of the body, and streaked on the lower abdomen; feathers on side of vent blackish, and vermiculated; vent and under tail-coverts black-brown with paler tips. Mantle, scapulars, back and rump,, brown-black to black, the first two areas finely freckled with lighter brown. Primaries and primary coverts dark brown, the former with paler inner webs and black tipped; secondaries with a conspicuous white speculum bordered with black; wing coverts dark brown to black-brown. Tail black. Bill, grey with black nail, shortish, 40-45 mm., width 22 mm., height at base, 25 mm. Legs and feet blue-grey. Eyes golden yellow. Length 430-460 mm. Wings 190-200 mm.

MALE, IMMATURE :

General scheme of plumage as in the female.

FEMALE, ADULT :

Head, neck and upper breast dark brown, with slight darker mottling on the cheeks and with a greeny sheen; back of crown with elongated feathers forming a tuft, but not so well developed as in the male. A whitish patch is present on the face at the curve at the base of the mandible. Mantle, scapulars, and wings dark blackish-

brown, with slightly paler tips and faint peppering, the whole with greenish sheen. Lower breast and abdomen, white, slightly mottled and freckled on the side of the body, and faintly barred on the abdomen; vent and under tail-coverts whitish barred with pale brownish. Rump and tail dark brown. Long flank feathers ashy-grey with freckling. Wings as in the male; white speculum obvious. Bill slate grey; feet and legs slate grey. Length 420 mm.-435 mm.

HABITS :

The Tufted Drake in full plumage is very distinctive and should not be confused with any other; females on the other hand might possibly be confused with the female of the White-eyed Pochard if viewed from a distance. The Tufted Duck has of late years become a widespread species during the winter months. Most of the lakes are frequented, and so even the larger swamps. Where large dams exist, small flocks may be seen. They are however not common.

These birds are usually seen in small companies of four to a dozen or so. In the morning and evening they keep to the more sheltered lagoons and bays where they obtain their food by diving (their diet consists of vegetation crustacea, molluscs, small fish, and insects), but during the greater part of the day they seek deep water.

The earliest date of arrival in Kenya so far as my records go is early November, and the latest date before departure, April 3rd.

I have seen specimens from Nakuru, Naivasha, and Kinangop and Jackson records birds from Lake N'kugule and Kikorongo in Western Uganda. H. B. Sharpe states that the species visits Marsabit lake between November and March.

The call of this bird is curious, somewhat like the syllables karoo karoo; but they also have a long drawn whistle.

The moults of the Tufted Duck as they occur here present some interesting features; to mention one point, birds shot in March, in otherwise full dress, have the primaries exceedingly worn and faded; would these be entirely shed and renewed before the birds made their northward journey?

SPATULA CLYPEATA (Linnaeus). European Shoveler.

Ref. : Linnaeus, *Syst. Nat.*, p. 124, 1758.

Type locality: Sweden.

DISTRIBUTION :

On all the permanent and semi-permanent lakes and swamps of Kenya and Uganda, during the winter.

DESCRIPTION, MALE, ADULT :

Head and neck glossy green, darker on the top of head and throat; breast pure white followed by light chestnut or cinnamon brown to



EUROPEAN SHOVELER (*Spatula clypeata* (Linn.)).

as far as the abdomen where slight barring is present; sides and flanks deeper chestnut shading to rusty-ochreous finely vermiculated with blackish-brown. Mantle and back blackish-brown, with paler brown edges; rump and upper tail-coverts blue-black to green-black; short scapulars white; median ones white and black, long ones French blue streaked with white and black internally. Coverts of wing blue; speculum on secondaries metallic green bordered by white secondary coverts; primaries dark earth-brown paler on the inner webs and with white shafts. Bill long and spatulate, black in colour, and carrying strongly developed comb-fringe on inner side of edge. Length 70-74 mm., width 35 mm. Eyes orange to yellow; legs and feet orange, short and comparatively small.

MALE, IMMATURE :

Very like the female but markings bolder, and the bill is darker and larger.

MOULTS :

The variation in plumages of male Shovelers as observed in this country is well worth studying. As is well known, this species has what is called an "eclipse" plumage, i.e. a change of plumage from the breeding dress to one almost identical with that of the female. The change takes place while the female is brooding or with young, May to August. This dress is retained until August to September when the winter and full dress is again assumed and should be complete in December. These points are mentioned to help in the elucidation of the various plumages in which we find males in this country. Throughout many years' observation, I have noted very few males in full plumage on arrival at the end of October or November. Such birds are seen in January to April, but even then few are complete. Of over fifty skins examined by me, fully two-thirds are birds of the year in first winter plumage. The adult male still in eclipse can usually be recognised from a young male or a female, by the more strongly developed, darker bill; the darker streaking of the head and neck; the darker more green-black feathers of the back and rump; the more decided and wider white bar in front of the speculum; the bluer coverts; and more strongly marked underside.

One frequently sees males which have partially green and black heads; with an indication of a white breast but with brown or blackish horse-shoe marks on the white, and with pinky-cinnamon abdomen; white scapulars hardly showing—these are young males of the previous year in first summer dress. They would subsequently pass into eclipse and later, August to December, moult into the fully adult breeding plumage.

FEMALE, ADULT :

Head and neck pink- or sandy-buff, streaked with blackish-brown, more heavily on the former; chin and throat paler buffy-white; mantle and scapulars sepia brown with crescentic discal mark and edges of pink-buff; long scapulars broadly edged and of a darker more greenish black, tipped and pointed with buff. Breast and underside pink-buff with the darker bases of the feathers more pronounced on the upper breast and lower abdomen; sides of body sepia-brown with broad buff edging; back and rump dark sepia with crescentic and angular discal marks and narrow buffy edges. Wing coverts dull bluish-grey; secondary coverts tipped with white; secondaries with green speculum, not so bright as in the male, and white tipped; primaries blackish brown, white shafted. Bill greenish-brown on dorsum shading to yellow marginally; not so long as in the male. Feet and legs orange yellow.

FEMALE, IMMATURE :

Very like the adult but generally paler and not so streaked; wings, especially the speculum duller, the latter hardly greenish.

FEMALE, ECLIPSE :

Very like the spring bird, but with less developed buffy margins. This plumage is difficult to distinguish from the first winter; this latter however is usually paler and speculum is not developed.

HABITS :

The Shoveler is a migrant from the north and does not breed in Eastern Africa. The earliest record of arrival which I have noted is the last week of October; the bulk appear in November and December and remain until March, a few remaining until late April. These last are birds of the previous year and would not breed.

The species is found on all the lakes, swamps, and dams and those rivers which at times overflow their banks and produce lagoons and backwaters. The Shoveler is partial to shallow water; thus it is mostly seen in pools, backwaters and shallow lagoons where reeds are plentiful and vegetation profuse. Unless compelled, it seldom resorts to deep water. The most marked character by which this bird can be distinguished is the long spatulate bill; the drake in full plumage is of course at once recognisable by his conspicuous colouring.

When swimming, the breast is sunk low, but the remainder of the body is fairly high, though the tail is not held at an angle.

The habit of this bird in keeping to the shallow reedy beds has been the death of quite a number, especially on Lake Nakuru; here the pythons lurk, and many an unwary bird has fallen victim. In one instance I shot a moderately sized python with three Shoveler inside it; another one had two. A noticeable feature with these birds, when resting on land, is the shortness and smallness of the legs and feet.

The Shoveler gives very good sport both when driven and when flushed, and owing to the preference for shallows, can be made to fly from one feeding ground to another several times. The flight is rather weak.

The curious spatulate bill is especially adapted to the method of feeding; the head is outstretched and the bill held flat to the surface of the water; with side to side movement the water is taken in and sifted through the strongly developed combe or lamellae at the sides of the bill. Seeds of aquatic plants, algae, crustacea, small molluscs, and even tadpoles go to form the diet of this bird.

SPATULA CAPENSIS (Eyton). Cape Shoveler.

Ref.: Eyton, *Monogr. Anat.*, p. 135, 1838.

Type locality: South Africa.

This species is mentioned because of a record published by Major Boyd Horsburgh, "Game Birds and Waterfowl of South Africa," page 143, who states, "It is supposed to be confined to South Africa, but I shot a fine male in British East Africa, in company with some European Shovelers." Further, Selater mentions, "one unsatisfactory record from Abyssinia." The author of the East African record was well acquainted with both species of Shoveler, and would hardly make an error in identification. This record is not referred to by Selater in his *Systema Avium Æthiopicarum*, but I consider it worth mentioning, in the hope that some collector or sportsman may some day secure undoubted examples.

DESCRIPTION, MALE, ADULT:

Very like the "eclipse" male of the European Shoveler, but rather more strongly marked below and more speckled with sepia to brown; long scapulars metallic dark green; upper tail-coverts and tail feathers very dark brown to blackish with some indication of brownish bars. Bill black.

ANAS PLATYRHYNCHOS, Linn. European Mallard or Wild Duck.

Ref.: Linnaeus, *Syst. Nat.*, 10th Ed., p. 125, 1758.

Type locality: Sweden.

The Mallard is a winter migrant to the Sudan and Abyssinia, and there appears no reason why it should not on occasion extend as far south as Kenya, but the only record is one by H. B. Sharpe, who records it from Marsabit Lake, *Bateleur*, Vol. II, No. 4, p. 106, 1930. He writes as follows: "I shot a male on Marsabit Lake in February, 1928. Both males and females at the end of January and in February, 1929. One male in full plumage; young males and females, shot on different occasions and observed at other times." Also shot on Koronli Water, 36 miles W.-N.-W. Marsabit. No specimens were preserved as Sharpe was unaware of the particular interest of the record.

The species has not been recorded from Kenya or Uganda prior to the above.

ANAS UNDULATA UNDULATA, Dubois. Yellow-billed Duck.

Ref. : Dubois, *Orn. Gall.*, i.p. 119, pl. 77, 1837.

Type locality : Cape of Good Hope.

DISTRIBUTION :

On practically all waters throughout Kenya and Uganda, lakes, dams, temporary swamps, and larger rivers; more plentiful on the larger permanent waters.

DESCRIPTION, MALE, ADULT :

Head and neck blackish brown to black, streaked with fine greyish white (light margins to the feathers). Top of head and face darker. Lower neck, breast, abdomen mottled, each feather being grey-brown to sepia with broad whitish margins and looped discal marks; the abdominal feathers with slight freckling on the white margins; the flank feathers with more clearly defined discal loop and often with a white streak along the shaft. Mantle and short scapulars blackish-brown with greyish-white narrow edging; long scapulars of a similar colour but with an olive sheen. Wing coverts grey-brown with white edges; secondary coverts grey-brown with a sub-terminal white oblique bar followed by a velvety black tip. Secondaries on the outer web metallic green or purple-blue according to the angle of view, with a wide sub-terminal black bar bordered by terminal white; long inner secondaries with the outer web velvety black. Back and rump black; upper tail-coverts brown-black with whitish margins; tails brownish-black edged with whitish, the central pair pointed and with a purply gloss, not upturned. Under tail-coverts black-brown with whitish margins and discal angular marks. Bill yellow, with black on the dorsum, the nail, and at the base; mandible brown with yellow end, black nail. Feet and legs, grey-brown, brownish-yellow or greyish. Eyes brown or sepia. Length 480-500 mm. Wings 250-265 mm.

MALE, IMMATURE :

Somewhat like a female, but lighter in colour; the feathers on the under surface smaller, with less defined dark centres, giving to the whole a streaky appearance. Light margins to the upper side more ochreous tinged, dark areas more brownish. Wing speculum with little green, more blackish. Much smaller than adult. Wings 210-220.

FEMALE :

Very similar to the male in pattern and colour, but the dark areas of the feathers more brownish not so black, the pale edging more tinged with ochreous, thus the mottling is not so contrasty. Wing speculum not so developed. Size smaller; wings 230-245 mm.



YELLOW-BILLED DUCK (*Anas undulata undulata*, Dubois.).

IMMATURE FEMALE :

As male of same age.

JUVENILE IN DOWN :

Upper surface including the crown of the head, dark brown with an olive tinge; a slight yellowish patch on the sides of the head; yellow patches on the wings, the scapular region and the side of the pelvic ridge; the whole of the under surface yellow fading to whitish on the vent.

MOULTS :

The moults have not been studied closely. The wing moult takes place in August and late July and specimens in this condition have been taken by me in February, these latter immature birds of the previous year.

HABITS :

The Yellow-bill is widespread over Kenya, being found in temporary swamps along the coast, on permanent waters in that region, and on lakes, swamps, dams and some rivers in the interior. It occurs on Lake Marsabit throughout the year and is found in Uganda from east to west. Local movements take place from permanent waters to temporary ones during the rains and just after, but few breed on the non-permanent swamps. I have actually shot the species on the Nairobi stream below Pangani Village. The breeding season is, in this species, more defined than with most; the birds which have paired on the commencement of the rains in March, start nesting at the end of April, and both eggs and ducklings can be seen up to late July. A few birds undoubtedly nest in October-November. The nest is placed away from water, sometimes as much as 200 yards, and in this the Yellow-bill resembles the Mallard. A shallow hollow is scraped out under some thick scrub or tufty grass, and grasses or a few odd leaves are placed in it and round about. As the clutch nears completion, down is plucked and added to the nesting material, so that the nest then appears much deeper than before. The eggs, usually six to eight, seldom more, are creamy and smooth and typically duck-egg shape, 55 x 43 (average). Some eggs have a slight greeny tinge.

The hen bird sits close, and if suddenly disturbed will make off at once, but often returns and adopts the "broken-wing stunt" in an endeavour to distract one's attention from the nest. This dodge is more frequently resorted to if the eggs are hard-set. The incubation period is just on a month (28 days). The courting display of the male is very like that of the Mallard; the call note is also very similar; the male note may be likened to QUEERK QUEERK, while that of the female is a more decided QUACK. When the nesting season is

on, one may see two or three males together or even single birds, and if accompanied by females, they are probably young birds. During the off season, congregations of twenty are common, but on the larger lakes where feeding grounds are numerous, individual bunches are not so large.

When Glass' Island was in existence on Naivasha, dozens of Yellow-bill nested there: the place was literally thick with nests. Crescent Island is still a favourite ground.

The food consists of vegetation, seeds, aquatic insects, mulluscs, and crustacea, frogs and tadpoles. The species is easy to keep in captivity and will breed in large enclosures with plenty of water available.

As a sporting bird, the Yellow-bill ranks high. It has a strong sustained flight, can be driven, and has morning and evening flights, the direction of which can be ascertained with a little trouble. This species is particularly amenable to ordinary methods of wild duck preservation, and for this reason it should be conserved by these methods in order to keep up its numbers. It is to be hoped that the suggested Conservancy Board for Naivasha will take the matter in hand.

ANAS UNDULATA RUEPELLI, Blyth. Abyssinian Yellow-billed Duck.

Ref.: Blyth, *Jrl. Asiat. Soc. Beng.*, xxiv, p. 265, 1856.

Type locality: Inner N.E. Africa.

This northern race is mentioned here as being of interest in that undoubted intergrades between it and the southern bird are found in Northern Uganda, and possibly in the Northern Frontier Province of Kenya. The differences in colour between the two races is slight; the northern race having a more decidedly blue speculum which in certain lights is lilac-blue, and the underside is whiter.

ANAS SPARSA, Eyton. Black River Duck.

Ref.: Eyton, *Monogr. Anat.*, p. 142, 1838.

Type locality: South Africa.

DISTRIBUTION:

On rivers and streams in the higher altitudes of Kenya and Uganda; on some of the crater lakes, and occasionally on dams fed from permanent streams.

DESCRIPTION, MALE, ADULT:

Crown and sides of head black, streaked with greyish to white, rather darker on the former; throat and neck more equally streaked blackish and white, sometimes with a half ring of white feathers at the base of the neck. The whole of the underside from breast to vent



BLACK RIVER DUCK (*Anas sparsa*, Eyton.).

ashy-brown-black, each feather edged at tip with greyish; flanks rather darker; undertail coverts dark brown-black with white bars. Mantle back and rump ashy-black, the last two with an olive sheen, with very faint greyish tips; upper tail-coverts darker, almost black, with white bars. Tail dark brown-black with white bars or spots; scapulars ashy-brown-black, the longer ones with conspicuous large white spots and bars; lesser wing-coverts ashy; secondary coverts, basally white with broad velvety-black ends; secondaries with wide bottle-green speculum, distally edged with black followed by a terminal white bar; innermost secondary deep velvety-black on outer web, outer secondaries ashy on inner webs. Old males develop a blunt spur just below the end of wing. Bill pink, with a black "saddle" and black nail; legs and toes yellow to orange, webs black. Total length 500-520 mm. Wings 245-260 mm.

MALE, IMMATURE :

Somewhat like the adult above, but browner, the white spots smaller and less clearly defined; the feathers of the back and rump wildly tipped with greyish; those of the breast likewise, while the remainder of the underside is almost whitish, with a certain amount of ashy-brown mottling. Vent feathers tipped with white; tail brown-black with smaller and more irregular white spots. Wing speculum not strongly developed.

FEMALE, ADULT :

Like the male but smaller, the whitish and greyish tips to the feathers of the mantle and underside wider. Top of head not so dark. Wings, 200-240 mm.

JUVENILE IN DOWN :

Very like that of the Yellow-bill but darker and with a greyish brown tinge, pale marks similarly distributed but more olive, less yellow.

MOULTS :

Have not been studied by me and no records published.

HABITS :

The Black Duck is essentially an alpine river species frequenting those streams and rivers from about 5,000 feet to the icy-cold streams and crater lakes at 13,000-14,000 feet. They are usually seen in pairs, or small family parties when the breeding season is just over. As soon as the young are strong on the wing they are driven off by their parents. The species is timid and retiring, taking shelter, under some overhanging bank or spaces between boulders, at the first sign of danger.

Their colour harmonises with their surroundings to such a degree that one can easily pass by a hiding bird without detecting it. The best way to observe these birds is to take up a position in some concealed spot, with clear views up and down stream; at some time during the day these birds will be seen. They have the habit of either systematically working up stream or down, seldom taking to flight or leaving the water. They have their selected spots for spending the night or the heat of the day, and these places can usually be detected by the presence of a few feathers dropped when preening. Their food consists very largely of vegetation, but larvae, crustacea, and molluscs also form part of their diet. If there are native shambas in the vicinity of their haunts, a certain amount of cultivated grain is taken; this habit has led to the death of many individuals, for the wiley native having detected the "runs" used by the birds as they leave the water to enter the cultivations, scatters a few grains of corn along the trail and sets a snare half way along. Sudden strangulation meets the unwary intruder! Feeding takes place during the late evening and dawn.

The nesting season is in May, June and July, and November-December, but the state of the rivers is an important factor in the chances of locating nests; sudden flooding accounts for many nests. On one occasion I located two nests in as many miles on the upper Maragua; within twenty-four hours the sites had been swept bare by sudden rising of the river. Nests are sometimes placed on the banks amid thick reeds or stunted bushes, or often on little reed covered rocky islets in mid-stream. The nest is of the usual duck type, and the clutch of creamy coloured eggs seldom numbers more than six. The death rate amongst ducklings is large, and seldom more than three are raised to maturity. Mongooses and otters take their toll of eggs and young.

As a sporting bird, the Black Duck is of little value. The paucity of numbers, the habitat, and the fact that they fly low, make this bird of little interest to the gunner.

ANAS PENELOPE, Linn. European Wigeon.

Ref.: Linnaeus, *Syst. Nat.*, 10th Ed., p. 126, 1758.

Type locality: Sweden.

DISTRIBUTION:

A rather rare winter visitor to the lakes of the Rift Valley, Naivasha, Nakuru (possibly on Rudolf and Baringo).

DESCRIPTION, MALE, ADULT (spring):

Head and neck light chestnut, with a wide central stripe of pale golden straw colour extending from the base of the bill to the occiput; slight black flecks on area distal to the orbits and on the throat.

Breast vinous, shading to purply-grey on the sides, some blackish mottling on the upper part; lower breast, abdomen to vent pure white; sides of body, mantle, and scapulars vermiculated, black and white; under tail-coverts velvety black. Wing coverts ashy brown with paler edges, some feathers almost white and forming a conspicuous patch; secondary coverts with black tips; secondaries widely black on the outer web, white toward the tip, carrying a bottle-green central area which forms part of the "speculum"; innermost secondaries elongated, and velvety black, widely edged with whitish. Primaries blackish-brown, paler on the inner webs. Back and rump black-brown, with paler tips; upper tail-coverts, centrally white laterally black. Tail feathers pointed and long, ashy-brown with pale edges, central pair dark ashy. Bill bluish greyish, end black; feet and legs grey-brown. Length of wing 235-250 mm. A small duck measuring 420-445 mm.

MALE, IMMATURE :

Head, neck, mantle, and scapulars, ashy-brown with blackish mottling on the head, and paler barring on the other areas; breast, abdomen, and vent, white; under tail-coverts ashy-grey-brown with whitish bars; wing coverts ashy-brown with pale edges; speculum green, black bordered; primaries ashy-grey; tail feathers, central pair ashy-grey, remainder more whitish with pale edges. Bill bluish-grey, terminal third black; feet dark grey-brown.

FEMALE :

Head, neck rusty-brown, flecked with black; throat whitish; breast and sides of body, pale chestnut with greyish tinge, paler tipped and obscurely barred with darker brown; mantle and scapulars blackish-brown with rusty brown bars and paler brown margins; wing coverts ashy-brown with buffy margins; secondary coverts with black tips; secondaries dark greyish on outer webs terminally blackish, *no metallic speculum*. Primaries dark blackish-brown with whitish quills and paler inner webs; breast to vent white; under tail-coverts white with angular black bars; tail feathers ashy-grey with buffy-white margins; upper tail-coverts, rump and back blackish-brown with whitish bars and edges. Bill blue-grey with terminal third black; legs and feet grey-brown; total lengths 420-430; wings 230-235 mm.

HABITS :

As indicated under distribution, the European Wigeon is a rather rare migrant to Kenya, very few specimens having been seen or obtained. Some half dozen specimens have been taken on Naivasha and a few noted on Nakuru. Most of the birds were noted in 1925. Both male and female being conspicuously coloured, it is unlikely that the species has been overlooked to any extent.

This species prefers the more shallow water of lagoons and backwaters and does not occur in the open; it is actually partial to places where there are mud flats with a gradual shelving shore and an abundance of water weeds on which it feeds. The call of the male is a high shrill whistle of two notes. The Wigeon does not breed in Kenya, and its nesting habits need not concern us.

ANAS CRECCA, Linn. European Teal.

Ref.: Linnaeus, *Syst. Nat.*, 10th ed., p. 126, 1758.

Type locality: Sweden.

DISTRIBUTION:

A northern migrant which is found on the lakes of Uganda and Kenya in considerable numbers during the winter.

DESCRIPTION, MALE, SPRING:

Head and neck bright chestnut rufous, with a metallic green "comma" patch on the side, extending from the front of the eye, and passing back to the nape and hind neck, where it becomes dark blue; this patch is outlined above by a buff or creamy line which starts at the base of the maxilla and ends at the nape; the lower line starts at the anterior angle of the eye and skirts the lower edge of the green patch, and gradually fades out. Chin black. Mantle, scapulars, sides of chest and sides of body white with close wavy black lines; outer web of outer scapulars pure white with black edging forming a conspicuous white and black line; chest white spotted with large black marks; lower breast and abdomen white, slightly barred on the latter; long flank feathers barred ending in a wide white bar, contrasting with velvety black feathers at the sides of the tail, and followed by the buff lateral under tail-coverts which again give place to velvety black ones, the whole forming a very conspicuous black and white patch on the sides of the tail. Wing coverts ashy grey with olive tinge; secondary coverts white; secondaries, outer ones velvety blue-black, middle ones metallic green ashy-grey with velvety-black border on outer web; primaries ashy-brown. Rump ashy-brown with paler tips and freckles; upper tail-coverts blackish-brown rather pointed and with buffy edges. Tail feathers with blackish centres paling to ashy-brown at the margins. Bill slaty-grey, rather long for size of the bird and very narrow. Legs and feet olive-grey. Wings 180 mm.-190 mm.

MALE, IMMATURE:

Very like the female, but darker and more strongly marked.

MALE, ECLIPSE:

A very large proportion of the birds which visit this country are either immature or males which have not yet shed the eclipse plumage. In fact it is quite the exception, even as late as the month



EUROPEAN TEAL (*Anas crecca*, Linn.).

of April, to find a really full plumage male. The main distinguishing features from immature birds are as follows: Feathers on head and neck with dark brown centres and pale buffy edges without a noticeable dark line through the eye; ends of the feathers of the mantle rounded obtusely almost straight, and with dark centres. Wing speculum strongly developed; breast mottled with roundish black spots, but lower breast and abdomen not mottled, more nearly uniform with slight barring on the flanks. Tail feathers darker in centre.

FEMALE, ADULT :

Head and neck feathers with dark black-brown centres and buffy edges, these edges being narrow on the crown giving this area a dark appearance, and wide on the sides of the head and on the neck, causing these to be pale; feathers of upper breast whitish or with a slight buffy tinge, with dark brownish bar sub-terminal, so that the breast has a mottled appearance; lower breast and abdomen more whitish, but still with slight mottling; flanks and side of body greyish-brown with a whitish to buff discal angular mark and edges of the same colour giving these areas a somewhat barred appearance. Mantle and scapulars very dark blackish-brown with rusty brown margins; wing coverts dark ashy-brown; primaries blackish-brown; wing speculum black-blue distally, green proximally. Rump and upper tail-coverts dark brown with paler brown edges; tail feathers dark ashy-brown with narrow paler brown margins; under tail-coverts whitish with dark brownish centres. Bill grey, long and narrow; legs and feet grey-brown. Wings 170-180 mm.

HABITS :

This little Teal in full plumage should not be confused with any other species; immature birds however, and even perhaps females, might possibly be confused with female Garganey or immature birds. When resting on the water, the points of greatest interest are: the teal has a mottled breast, not barred; the top of the head is darker and lacks the pale line running through the eye; if the wing-coverts are exposed those of the Teal are dark, not grey; the speculum is green not dull. If the under surface is visible, the mottled breast is not sharply differentiated from the white abdomen. There is one stage of the immature Garganey which very closely resembles the immature Teal or the female; it however has no green wing speculum, and further, the bill is shorter and wider.

When in flight, away from one, the difference in the colour of the wing-coverts should at once be obvious.

The European Teal begins to arrive at the Uganda and Kenya lakes about the beginning of October, but most birds appear in November. Their numbers are augmented at the end of December. Their northward passage starts in March but a few remain until well into April; these latter are probably birds which would not breed.

The type of place to look for these birds is the shallow, sheltered, reed grown bays; open patches of water amongst high reed and papyrus and on sheltered dams. It is particularly active at dusk, and most of the feeding is done at night. Aquatic vegetation of various kinds, insects, crustacea, and small molluscs form its diet. They flight at evening from the places where they have been hiding up, to their favoured feeding grounds; these are mostly the shallows on the landward side of the papyrus fringes (Naivasha) and in amongst the rushes at such places as Nakuru Lake, Solai, and Elmenteita.

Their flight is swift and strong and from a sporting point of view, Teal rank high.

Though the species is now fairly wide-spread in Kenya during winter months, it is not found in large flocks; six or so individuals usually form a party, but several may associate when on the feeding grounds.

The call of the drake is a sharp "krik krik," while that of the female is a high-pitched "quack." The species does not breed in Africa.

ANAS QUERQUEDULA, Linn. European Garganey Teal.

Ref.: Linnaeus, *Syst. Nat.*, 10th ed., p. 126, 1758.

Type locality: Sweden.

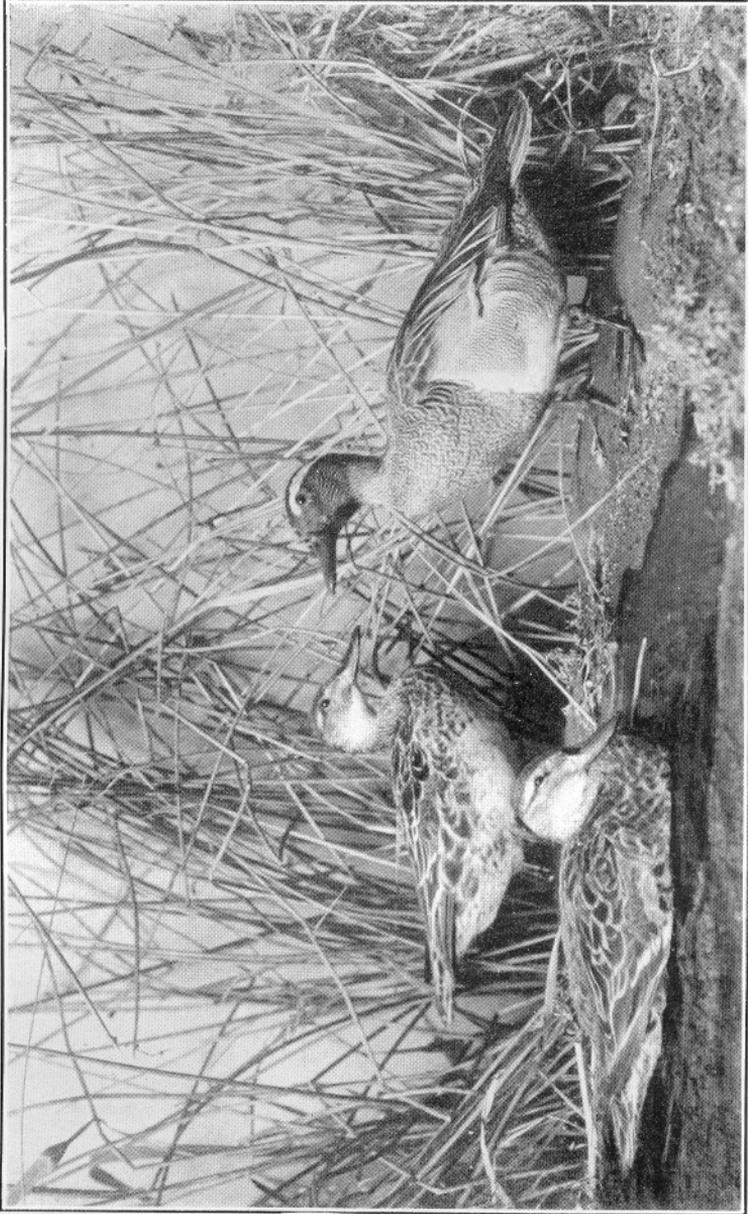
DISTRIBUTION:

A northern migrant which is found on the lakes of Uganda and Kenya from October to April, and often on the tidal areas of the larger rivers, Tana and Juba.

DESCRIPTION, MALE, SPRING:

Forehead, deep chestnut shading to black on the hinder crown to nape, finely flecked on the crown with brown; sides of face, head and neck chestnut-brown finely streaked with white; a broad white streak commencing just above and anterior to the eye, extends back to the nape where it gradually diminishes in width and meets its fellow of the opposite side, thus forming a white V, if viewed from behind. Chin and upper throat black, latter with whitish streaks. Upper breast and sides of chest ochreous-brown often with a rusty tinge, barred with blackish on the former and with crescentic marks on the latter; lower breast and abdomen white, the latter with slight mottling and barring, while the flank feathers are finely barred with wavy black lines, the longest feathers with gradually increased spacing until just before the end, where there is a wide white bar outlined in heavy black, followed by a blue-grey zone at the tip; these long feathers form a conspicuous treble bar cutting the line of the wing. Under tail coverts white with large brownish-black cordate spots.

Mantle and short scapulars ashy-grey-brown, each feather with pale ashy-grey margins; long scapulars very elongated, blackish on



EUROPEAN GARGANEY TEAL (*Anas querquedula*, Linn.).

the inner web, shading to grey with a metallic green sheen on the outer web, the entire length of the shaft being accentuated by a broad conspicuous white line. These plumes hang gracefully over the wing. Lesser wing coverts pale dove-grey; secondary coverts mostly pure white; secondaries brownish on the inner web, dull metallic green on the outer web distally tipped with white. Viewed in certain lights this speculum appears greyish. Back and rump blackish with greyish-green edges to each feather; upper tail-coverts blackish-brown with irregular buffy to cream bars. Tail blackish-brown with lighter edges. Bill black; legs and feet lead-grey; eyes brown. Wings 188-200 mm.

MALE, ECLIPSE:

Top of head blackish-brown, with ochreous edging; sides of head, throat and fore-neck whitish to buffy, the first and last streaked with blackish, more particularly over the ear-coverts and a dark streak through the eye. The breast is more mottled not so barred, and the fine vermiculations of the flanks are replaced by sepia mottling. The mantle is not so distinctly scaly and the long scapulars are replaced by olive-sepia ones. The general plumage is very like the female adult but more strongly marked and with bluer grey wings and brighter speculum. Bill, black.

MALE, IMMATURE:

Top of head dark brown with rusty-buff edges; lores and throat whitish buff; sides of head and lower neck creamy-buff, finely streaked with dark brown; a dark brown streak passes through the eye; mantle and scapulars sepia with broad buffy edges; wing coverts ashy-grey; no metallic speculum, this area being grey-brown with white distally; primaries outwardly greyish-brown, inner webs brown; back and rump and upper tail coverts dark sepia with wide whitish margins. Breast mottled with sepia on a whitish ground; abdomen whitish and mottled, under tail coverts with larger mottling; flanks sepia with irregular whitish bars and wide buffy white margins. Bill dark brown; legs and feet brownish-grey. It is this plumage which somewhat resembles the immature Teal, but the lack of the speculum and the wider bill distinguish it.

FEMALE, SPRING:

Top of head dark brown with paler edges; sides of head and fore neck brown streaked, on a whitish base; chin and throat whitish, a stripe above the eye of the same colour outlined below by a dark streak through the eye. Mantle dark brown to blackish with pink-buff edges; scapulars darker, with a slight olive green sheen on the longer feathers and with buffy edging; wing coverts duller blue-grey than in the male, and with a duller speculum; breast buffy-brown to light chestnut mottled with black and with slight barring; abdomen

white with blackish vermiculations on the vent and mottlings on the under tail-coverts; flanks sepia-brown with whitish bars and margins. Bill blackish-brown; legs and feet grey-brown; eyes brown.

HABITS :

There is not the slightest doubt that the Garganey has become of recent years one of the commonest migrants, and is spreading to localities where it was unknown even as a straggler. It is of course only a winter visitor from the north; the earliest record which I have noted is October 8th when a small flock of six were seen on Lake Naivasha, all young birds. The usual date of arrival is toward the end of November (Uganda and Kenya) and their numbers are increased until January. Duck shooting is allowed on Naivasha from the end of December, and as a result there is a decided diminution in numbers after January, due mostly to a dispersal to other waters. In late March and early April there is an influx to Naivasha of birds travelling north from more southerly waters; amongst these are many males in full plumage. These birds are usually seen in small flocks of half a dozen to two dozen individuals, but just before the northward move much larger flocks are seen. According to Jackson, Archer recorded the birds in thousands on Lake Wamala in Uganda, 1924. Such numbers are not seen on the Kenya lakes, but these waters are of greater expanse and numbers of a given species are difficult to arrive at. In my note on distribution I have mentioned that the Garganey is found on tidal rivers; I have specimens taken at the mouth of the Juba in March, and others in February on the Tana.

A strong preference is shown for sheltered, shallow water where aquatic vegetation is plentiful and reeds are not too thick or high; thus one finds the birds in the shallows behind the fringe of papyrus and rank reeds, and it is in these localities that most of the feeding is done. If however, the lake possesses large areas of water lilies one sometimes finds the Garganey there busily devouring mollusca, larva and crustacea. Besides this food, leaves and seeds of aquatic vegetation is taken, as also small tadpoles and "fry" of fish. The call is likened to the two syllables "ka-nak." As a sporting bird, the Garganey is hard to beat; its flight is very swift and strong and its small compact build is no mean target. The species does not breed in Africa.

ANAS CAPENSIS, Gmel. Pink-billed Teal (or Cape Wigeon).

Ref. : Gmelin, *Syst. Nat.*, pt. 2, p. 527, 1789.

Type locality: Cape of Good Hope.

DISTRIBUTION :

The lakes of the Rift Valley: Nakuru, Elmenteita, Naivasha, Baringo, Hannington (Jackson), Rudolf, and Lake Koroli, Northern Frontier.

DESCRIPTION, MALE, ADULT :

The whole of the head and neck white, with small black speckling extending over the forehead, crown, cheeks and hind neck. Chin and throat white; feathers at the nape elongated and capable of being raised as a crest. Lower neck and upper breast white with blackish-brown bars; lower breast, abdomen to vent white with ashy-brown bars and cordate spots, fairly well defined, giving a spotted appearance to this area; under tail-coverts white with ashy-grey bars and cordate spots but immaculate at the ends. Mantle and short scapulars dark blackish-brown with pinky-buff bars and rusty-buff edges, more rusty on the scapulars; long scapulars elongated though not sharply pointed, dark ashy-grey-brown with broad pinky-buff to whitish borders; wing coverts ashy-grey with paler edging; secondary coverts ashy-grey with broad white ends; secondaries, 2-3 outer ones pure white, next two with white ends and a velvety black mid-area, followed by the next few with a metallic green area distally outlined with velvet black and white tipped, third and fourth inner ones with a velvety black patch shading to ashy-grey and white tipped on the outer web, two innermost ashy-grey with pinky-buff border. The wing speculum is thus white on three sides, with velvety black outlining the metallic green, above, below, and distally. Primaries and coverts dark grey-brown, edged with ashy-grey. Back and rump ashy-grey-brown with paler edges and grey-buff bars and large subterminal spot; tail feathers ashy-grey with pale edges. Bill, black at the base, rest bright pink with a slight purple tinge below the nostril. Legs pinkish-ochre, or pink-grey, yellow-ochre toes, black webs. Wings, 190-200.

FEMALE :

Very similar to the male but much whiter below, and with the long scapulars and inner secondaries much less elongated. Rather smaller than the male; wings 180-195 mm.

IMMATURE :

General scheme of colour as adults, but the lower surface is not so pure, rather tinged with greyish, and the mottling and barring though more numerous is not so defined; the pale margins to the feathers of the mantle and scapulars is rather paler, more whitish.

Juvenile in down is unknown to me, and there appears to be no published description.

MOULTS :

No systematic work has been done on the seasonal moults of this species, and here lies a field of investigation of great importance.

HABITS :

The position of the Pink-billed Teal or Cape Wigeon is rather a puzzling one. Is it really a bird of passage in Kenya, as suggested by Jackson, or is it a resident breeding species?

I personally have never found the nest, nor seen the ducklings. On the other hand if we consult dates of actual specimens of birds seen, the following records are available: Specimens obtained on Koroli and Baringo in July; Naivasha, September, October, January, Nakuru, October, November, December; Elmenteita, December, January; Magadi, October. This leaves a span of five months, February to June, during which I have no records of the species in Kenya. Do they occur in Kenya during this time? Admiral Lynes reports the species as breeding in El Fasher in summer and records "near breeding" birds in April in Darfur, South Africa. Littledale records several nests in July. The nest is described as of the usual duck type and lined with down when the clutch is laid; the position is usually hidden under a stunted bush. The eggs are described as cream coloured and with no gloss, but smooth.

The Pink-bill is so characteristically coloured that there should be no difficulty in recognising the bird either on the wing or on water. Its very pale colour and whitish head make the bird appear almost white as it flies. The Red-billed Pintail is the only species which might be confused with it, but the dark-brown cap of the Pintail is a conspicuous character even at a distance. These birds feed in the shallows where vegetation is profuse and their diet is a mixture of seeds, leaves, insects, and small molluscs.

In the early morning or evening one frequently finds the Pink-bill resting on shore near the margin of the water, where there is a flat piece of land devoid of vegetation; here they preen themselves or doze quietly until the sun is well up, after which take to deeper water. Lake Naivasha is not much frequented by this species, doubtless because it has no stretches of mud or gravelly beach. The call of the male is a high whistle, and that of the female, a high-pitched quack.

Flight is fairly swift and good sport can be obtained during evening fighting, but attempts at driving are not usually successful, as the birds take to deep water.

ANAS ERYTHRORYNCHA, Gmel. Red-bill or Cape Pintail.

Ref.: Gmelin, *Syst. Nat.* 1, pt. 2, p. 517, 1789.

Type locality: Cape of Good Hope.

DISTRIBUTION:

The lakes of Uganda and Kenya; sometimes on temporary swamps and dams, and larger rivers.

DESCRIPTION, MALE, ADULT:

Forehead, crown to nape ashy-brown, slightly darker on the crown; cheeks, throat and sides of head creamy-white gradually shading into ashy-grey-brown on the upper neck; lower neck creamy with ashy-brown barring. Upper breast, abdomen to vent, greyish-white, with ashy-grey-brown discal bars; flanks same ground colour with

large ashy-grey-brown central areas and broad pale edges. Under tail-coverts with dark grey-brown central area and whitish margins. Mantle ashy-brown with buffy margins; scapulars dark ashy-brown with broad pinky-buff margins; lesser wing coverts dark ashy-brown; secondary coverts dark ashy-brown at base with pinky-buff tips; secondaries, basally brown shading to black with metallic greenish sheen, with very broad pink-buff ends shading to whitish distally. This forms the wing speculum. Innermost secondaries ashy-brown, elongate and with buffy margins. Back, rump, and upper tail-coverts, ashy-brown with buffy margins. Tail ashy-grey-brown with paler edges; central pair elongated. Bill reddish pink, purple at base, patch on culmen dark brown. Legs and feet grey-brown. Eyes light brown. Length 430-440. Wings 215-225.

FEMALE, ADULT :

Very like the male but head and back paler, more brownish; size smaller; wings 200-210. Bill pink and brown.

Juvenile unknown to me.

MOULTS :

These have not been studied; and no records have been published.

HABITS :

The Red-Bill has a wide distribution and is rather a common species, being found in quite large companies on Lakes Naivasha and Nakuru when not nesting; a flock sometimes consists of as many as forty birds. During the nesting season one sees them in pairs (April to June, November).

They frequent the more shallow parts of the lakes, where the vegetation is short; and their partiality to this type of water induces them to frequent temporary swamps and the flooded banks of rivers (mouth of Tana, Kibos River). This species is one of the tamest ducks on Naivasha, except during the open season, and not difficult to approach either by boat or along the shore. The reddish-pink bill is very conspicuous and when in flight the pinkish wing speculum shows up clearly and renders the species easy to "spot."

The nest is usually situated in a well-concealed spot, among rushes and reeds, some little distance from water. It is of the usual duck type, a shallow depression lined with sedges and other leaves and with down when the clutch is almost complete. These eggs, five to seven, are a light duck-egg green, smooth but with no gloss.

We have never seen the young in down nor does there appear to be a published description. The female does the incubating and is a close sitter, and if flushed from the nest when the eggs are about to hatch, she returns immediately and dropping down a little distance away will flutter along the ground, doing the "broken wing" stunt to draw attention from the nest.

As a sporting bird, the Red-bill ranks fairly high; its flight is swift but not very sustained.

ANAS PUNCTATA, Burch. The Hottentot or Green-winged Teal.

Ref.: Burchell, *Travels*, 1, p. 283, 1822.

Type locality: Zak River, Cape, S.A.

DISTRIBUTION:

The lakes and swamps of Kenya and Uganda.

DESCRIPTION, MALE, ADULT:

Forehead and upper part of head to level of eyes blackish-brown, with brownish tips to the feathers on the fore-part; throat and cheeks and side of head, creamy to buff, with a whitish-cream line outlining the dark patch on the crown and meeting at the nape; sides and back of neck, buffy heavily spotted with blackish; breast and abdomen, vent, under tail-coverts, and lateral upper tail-coverts rusty-ochreous, the breast spotted with blackish, the remaining areas closely though not very distinctly barred and vermiculated with blackish. Feathers on side of body light greyish-brown, the shorter ones slightly mottled, the longer ones very broad, with straight ends and uniform buffy-grey fading to whitish at the tips. These feathers are held over the wings in a fan-shape when the bird is at rest. Mantle feathers umber-brown with broad light brown edges; those of the scapular region similar at the basal area, but dark greenish distally and with a rusty-buff streak on the inner web. Innermost secondaries elongated and similarly coloured dark green. Lesser coverts dark green-black with oily sheen; secondary coverts purer green; secondaries blackish on inner web, bottle-green on outer web with broad white ends and a sub-terminal black bar. This forms the speculum. Primaries black; rump black with rusty tips. Tail feathers blackish-brown with paler margins. Bill french blue; legs and feet greyish olive. Eyes brown. Total length 295-310. Wings 150-155.

FEMALE:

Very like the male but slightly smaller and with a paler underside.

IMMATURE:

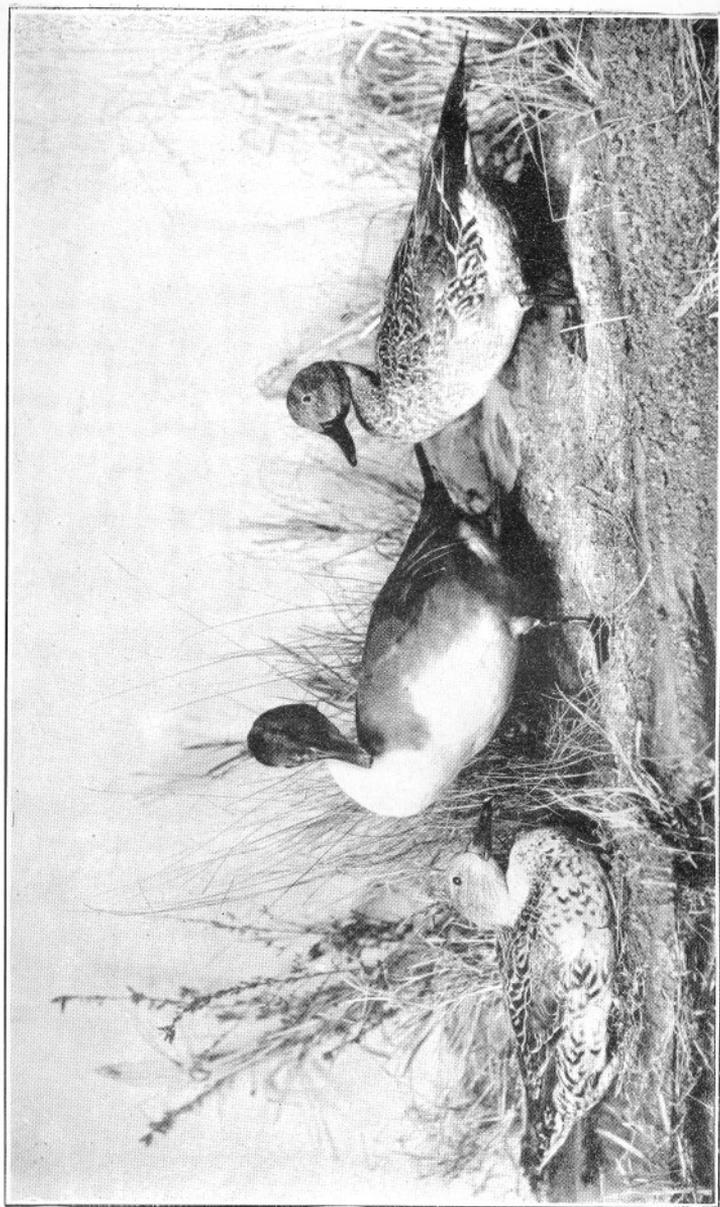
Somewhat like the female, but the whole of the underside pale or more buffy, less brownish, and spotted from chest to vent. Lesser coverts of the wing blackish-brown with pale tips and hardly any greenish sheen on secondaries, but white tips present. Mantle like the female, but long scapulars rounded umber-brown with putty-coloured streak on inner web; rump blackish with pale tips; upper tail-coverts pale brownish with darker centres.

JUVENILE IN DOWN:

Unknown to me.



THE HOTTENTOT TEAL (*Anas punctata*, Burch).



EUROPEAN PINTAIL (*Dafila acuta* (Linn.)).

HABITS :

This handsome, compact little Duck is the smallest of the group and withal is a sporting little person when once roused out of its natural retiring habits. One would almost imagine that it counts on its insignificant size to escape detection; time after time one has almost walked on top of these little fellows as they remained stationary amongst the reeds on a mud flat, the while every other feathered creature within a hundred yards or so circles around vociferously protesting against one's intrusion into their haunts.

Quiet sheltered waterways, with a stretch of mud bank or a sandy spit, a fair amount of reeds, not too thick or tall: such are the spots loved by this little Teal. It is entirely a surface feeder, and loves paddling around in shallow pools on the landward side of a bank of papyrus. It seldom takes to deep water and then only if hard pressed. During the greater part of the year one sees these birds in small flocks of half a dozen or so, but during the nesting season, or rather just before, they appear in pairs. They would appear to nest in May to June, but personally I have not had the fortune to find a clutch of this species. The nest is described as a shallow depression, with a few bits of reeds and rushes, placed not far from shallow water; and the eggs as of a creamy colour, 45 x 37 mm.

As with other Teal, this little bird can give great sport, for when once aroused they go with a zip and steer a rather erratic course, making pretty though deceptive targets.

DAFILA ACUTA (Linn.). European Pintail.

Ref.: Linnaeus, *Syst. Nat.*, 10th ed., p. 126, 1758.

Type locality: Sweden.

DISTRIBUTION :

On most of the lakes in Uganda and those of Kenya during the winter months and early spring.

DESCRIPTION, MALE, SPRING :

Entire head and front of upper throat, ashy-brown, darker on the crown and with a purply sheen on the cheeks and a greenish sheen on the hinder part; back of the neck black with brownish tips on the lower half; separating the brown of the throat from the black of the neck is a creamy white line; this colour continues down to the lower throat, breast, and upper abdomen. Sides of the breast and sides of the body finely vermiculated black and white; abdomen whitish with obscure wavy vermiculations giving this area a greyish appearance; feathers at sides of base of tail buffy-cream sharp cut from the lateral upper tail-coverts and the under tail-coverts which are velvety black. Mantle and hinder part of lower neck strongly vermiculated black and white; scapulars basally of this colour but long scapulars elongate,

black with strong white streaks distal to the mid-rib and longer ones with whitish or greyish-brown margins, the whole forming a series of hackle-like plumes which curve down over the wings. Back and rump ashy-grey with blackish centres and vermiculations laterally; upper tail-coverts light greyish with black shaft streak; tail feathers, central pair very elongate and pointed, upward inclined, blue-black with purple sheen, others greyish with paler margins and dark area on outer web; lesser wing coverts grey; secondary coverts rufous at ends forming an internal border to the speculum; secondaries purple-green for the most part on outer web, white tipped with a subterminal black bar, inner secondaries black and elongate, inner webs grey. Primaries brownish-black with pale edges and inner webs, shafts white. Eyes yellow; bill bluish-grey; legs and feet grey-brown. Wings 270-280 mm.

MALE, IMMATURE:

Very like the female, but rather more brownish on the head and upper parts darker.

FEMALE, SPRING:

Head and front of neck pale buff to cinnamon with black streaks, more pronounced on the top of the crown; lower throat whiter but with more numerous black streaks; hind-neck greyish with black streaks and barring; breast, abdomen to vent, whitish, the former slightly mottled with ashy-grey, the abdomen mottled, the feathers being greyish with white subterminal spots and pale edges; flank feathers barred with brownish and white; under tail-coverts white with black-brown streaks. Mantle, short scapulars black-brown with buffy to pale cinnamon bars; long scapulars blackish-brown with pink-buff to cinnamon edges and longitudinal wavy lines; lesser coverts brown-black with pale buffy tips; secondary coverts ashy-brown with white ends; secondaries pale brownish with wide white ends, mottled with black on outer webs and uniform grey-brown on inner webs, thus the speculum is quite different from that of the male, but sometimes with a greenish or coppery tinge; innermost secondaries elongate sepia with buffy-white margins and irregular cinnamon markings. Primaries ashy-brown paler on the inner webs. Back and rump black-brown with U-shaped marks and light buff bars; upper tail-coverts sepia with pinky-buff to cream bars and margins; tail feathers ashy-brown with pale edges and incomplete creamy bars. Wings, 267-270 mm.

FEMALE, ECLIPSE:

Somewhat like above but pale markings lighter; under surface more mottled.

FEMALE, IMMATURE:

Almost identical with the eclipse.

HABITS :

As the species is only a winter visitor the nesting habits need not concern us. The bulk of the visitors make their appearance in Uganda in October and November in Kenya, very few of them being in anything like full plumage. By February and March quite a number of males are conspicuous in their resplendent spring dress and can be picked out at once whether resting or in flight. The general elongate appearance, due to the exceptionally long neck and long tail at once distinguishes this species from any other. When the bird is swimming the tail is held high, and the whole aspect is one of buoyancy.

The type of water preferred by these birds during the day is the deeper areas where they rest and dose but of an evening they come to the shallows where they feed. The food consists largely of leaves and seeds of various aquatic plants, but insects, molluscs and crustacea are also taken. The Pintail is very fond of resting on sheltered mud flats or sand banks where they usually perform their toilet; they are however, very wary and do not allow of a close approach. These birds flight well and as they are powerful on the wing, good sport is always obtainable whether they are fighting naturally or are driven.

The numbers which visit the Kenya lakes seem to vary very considerably from year to year, probably due, very largely, to the variation in rainfall and consequent level of the water; actual shooting can have little to do with it as the open period is now limited.

(To be continued.)