

DESCRIPTIONS OF SOME S. AFRICAN BIRDS' EGGS

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THE following descriptions of eggs of S. African birds may prove to be of use to workers in this branch of ornithology, even though they are not all unknown to science. They represent such as appear to have some special interest in this particular collection, either because they are new to science, or because they have been imperfectly described elsewhere or because they are uncommon. Besides these, the collection contains a fair number of eggs that were described for the first time, either in the *Journal of the S. African Ornithologist's Union*, in a special article by Sir J. A. Bucknill (vol. iv), or in the course of general articles by myself in other journals, or in these *Annals*. Nevertheless, there are still a surprising number not represented in the collection, and with a view to letting oologists know what they are, so that the generously disposed may fill these requirements, a separate list is appended. In this connection I may state that it will not be possible to effect exchanges, not only because there are few duplicates available, but also because it is a mistake for public institutions to part with the material entrusted to them, since the quantity of material available, even when duplicated, is all-important when comparisons are made for the purpose of confirming identifications. Museum collections are for the promotion of science, as repositories of material, so that it becomes available for present and future workers, and I fear that many collectors do not realize that by retaining material simply in the collector's spirit of possessing something which no one else possesses, they are hampering the progress of knowledge. It seldom happens that duplicates cannot be procured by oologists who have discovered where to look for particular eggs, and they would be serving a good purpose by donating these to the public institutions they patronize. I particularly ask this to be remembered, since it frequently happens that the knowledge of a collector passes at his death and his collection at the same time may become lost, either through the lack of interest in the subject by his heirs or by sale to parties having no knowledge of the value of the eggs. Also, collections donated by way of legacy have not that value which they furnish when donated while the collector is alive, since it often happens that some eggs may be of uncertain identification and such questions as they give rise to can only be answered by the collector himself.

I do not believe in obstructing the collecting of eggs of birds, since I am firmly convinced oology has been responsible for a very considerable addition to our knowledge of the birds as well as their eggs, and collecting eggs in the proper spirit promotes rather than checks the protection of birds. Nevertheless, the duty of oologists to public

institutions is not always carried out, and I sincerely hope that this reminder will have the desired effect of inducing oologists to fill some of the requirements of the Museums they patronize. Since an active interest is taken in this particular branch of ornithology in the Transvaal Museum, I trust that this will be borne in mind by the generous-minded collectors, though this is said in no spirit of parochialism nor in derogation of other Museums. It frequently happens that eggs are sent to the Transvaal Museum for confirmation of their identification; but it is hardly possible to give satisfactory replies unless the collection is a fully representative one. Fine as some of the public and private collections are in this country, the eggs of quite a number of species are not yet known, and special efforts should be made to procure them.

Pternistis castaneiventer

Clutch of three eggs, taken by Mr R. H. Ivy, at Koonap, C.P., December, 1892. These are cream coloured and measure 48.1×35.5 , 47.8×36.8 and 47×35.7 mm.

Pternistis swainsoni

Four clutches and a single egg, as follows:

1. Single egg from Pienaars River, Pretoria, October, 1893.
2. C/3 Slagkraal, Rustenburg Dist., P. Krantz (no date).
3. C/7 Matabeleland, C. Wildé (no date).
4. C/3 Aapies River, Pretoria, presented by M. Carlisle, 17th December, 1922.
"Nest placed in a hollow, lined with grass, well hidden under a heavy growth of weeds and grass on a ridge between two ditches."
5. =/2 Quickborn, north of Okahandja, presented by R. D. Bradfield, 26th May, 1921.

Nos. 1 and 2 are white, 3 and 4 are more or less pale pink with white pore-marks and yellowish nest stains, and 5 are dull pale yellow. They measure (1) 43.7×36.8 ; (2) 43.1×34.5 , 42.5×35.2 and 44.1×34.5 ; (3) 44×35.6 , 43.8×35.7 , 43.5×35 , 43.2×35.7 , 42.8×35.2 , 42.8×35 , 42.3×35.5 ; (4) 44.7×35.2 , 44.5×35.2 , 44×35.2 ; (5) 45.5×34.8 and 45×34.7 mm.

Chaetopus capensis

A single egg picked up amongst some scrub at Lormarins, Frenchhoek Valley, C.P., in September, 1917, by A. A. Adendorff. This cannot be of anything but the Cape Pheasant. It is pale pink and measures 53.7×41 mm.

Chaetopus adspersus

Clutch of six, presented by R. D. Bradfield, Quickborn, north of Okahandja, 3rd December, 1921. Nest described as a depression scratched in the ground amongst long weeds. They are dull pale yellow in colour, with white pore-marks and some dark nest stains, and measure 45.3×33.5 , 44.7×33.6 , 44.5×33 , 44×33.5 , 43.8×33.7 and 43.2×33.4 mm.

Scleroptila levaillanti

Two eggs, from a clutch of four, taken by me at Mollissima, Dalton, Natal, 22nd August, 1900. They are dull dark yellowish, with a few minute brown speckles, and measure 39.5×31.8 and 38.5×31 mm. Nest: a hollow lined with grass between two grass-tufts in open veld.

Scleroptila afra

Clutch of five eggs, taken by me at Klaver, C.P., 30th September, 1917. Nest: a hollow, lined with shreds of grass, in a patch of short grass in the open veld. Colour: dull yellowish in three cases and darker, brownish, in the other two, all of them more or less speckled with chocolate colour. They measure 37×29 , 36.8×29.2 , 36.7×28.7 , 36.1×28.8 and 36×28.9 mm.

Scleroptila gariiepensis

Clutch of two eggs, taken at Pretoria by my native assistant, Phillip, who also trapped the male at the nest, on 18th October, 1923. Nest: a hollow under a tuft of grass in stony ground. Colour: dull brownish yellow, with a few minute brown speckles at the obtuse end. Dimensions: 35×28.8 and 34.4×28.8 mm.

Ortygornis coqui

In several incomplete clutches the colour is white, but in a fine clutch of six eggs, taken by an unknown donor at Pretoria in December, 1905, the colour is yellowish with a shade of pink and immaculate. They measure 32.5×27.5 , 32.3×28.6 , 31.7×28.2 , 31.5×27.2 , 31.4×28.2 and 31×27.3 mm.

Calopteroles burchelli

Clutch of three eggs, presented by R. D. Bradfield, Quickborn, 3rd July, 1920. A similar clutch, since exchanged, was taken by me at Bothaville on 3rd July, 1920, from a nest in short grass, a hollow lined with a few shreds of grass. The eggs were greenish when fresh, but faded later to the same colour as the present one, namely, dull creamy white, heavily marked all over with underlying purplish slate and overlying markings of shades of red-brown to brown; the markings are irregular in size and shape. The eggs measure 36.8×25.3 , 36.3×25.8 and 35.4×25.8 mm.

Nyctiperdix bicinctus

A number of nests were seen and some clutches taken by me in the Limpopo mopani-veld during July, 1913, and again in July, 1924, and they usually consisted of three eggs, always of the same colour but varying slightly in the extent of the markings. The nests were usually placed in short grass, especially under cream-of-tartar trees, and were a depression in the ground lined with shreds of grass. The ground colour of the eggs is pinkish, and the markings vary in shape and size, some being fairly large, others minute, either in the purplish slate underlying or in the red-brown and brown overlying markings; sometimes the markings form a fairly distinct zone over either end, but as a rule they are fairly evenly distributed. Two clutches of three each measure 38.6×27.5 , 37.7×27.5 , 37.5×26.8 and 38.2×26.7 , 37.7×27 , 37.7×26.1 mm.

Vinago delalandei

There are three eggs of this Pigeon in the collection, one from Hector Spruit and two from Mokeetsi, the latter taken on 16th October and 27th November, 1922, respectively, all by F. Streeter. They are rather more acute at the thin end than other pigeon eggs and are pure white. They measure, in the order given above, 30×23.7 , 31.7×23.3 and 30×23.8 mm.

Aplopelia larvata

A clutch of two eggs—similar to others seen at the same place—taken by me at Kilgobbin, Dargle District, Natal, 1st April, 1900. These eggs are cream coloured and measure 28.2×22.2 and 27.3×21.8 mm. The nests were situated in matted bushes covered with creepers on the edge of openings in the forest, usually 3 or 4 feet from the ground. Young ones seen at the same time were beautiful balls of golden down before the feathers appeared.

Eggs of *Tympanistria* are smaller (Port Elizabeth, R. H. Ivy, January, 1899, 24.6×18.3 mm.; Durban, H. D. Millar, November, 1900, 23.5×19 and 23.7×18.5), but of about the same shade of cream colour. Those of *Turtur chalcospilos* are very similar to those of *Tympanistria* (Grahamstown, R. H. Ivy, 28th December, 1905, 23.5×18 mm.); but the eggs of *Oena capensis* are decidedly yellower and still smaller, but vary as follows:

Matabeleland, C. Wildé: 19.8×15.7 and 19×15.7 mm.

Potchefstroom, Austin Roberts: 22×15.7 and 21.3×15.7 .

Lamberts Bay, Austin Roberts: 23×15.6 and 22.3×16 .

Crecopsis egregia

Clutch of two eggs, taken by E. P. B. Arnold, Weenen, Natal, without date, very similar to those of *Rallus caeruleus*, but smaller. They are pinkish white in ground colour, with some large patches of mauve-slate at the obtuse end in one case, and a large patch of red-brown at one side in the other case, but otherwise with small spots and speckles of mauve-slate and red-brown fairly evenly distributed, though rather more at the thick than the thin end. They measure 34×24.2 and 32.8×24.6 mm. The eggs of *Rallus caeruleus* measure, in a clutch of three taken by me at Potchefstroom on 4th November, 1901, 38.4×27.8 , 37.3×27.3 and 37×28 mm. In another clutch taken at Potchefstroom by my brother, Rev. N. Roberts, on 25th November, 1901, the eggs measure 38.8×27.8 , 37.4×27.4 , 37×28.5 and 36.5×28 mm.

Schoenocrex pusilla obscura

Two clutches, taken by E. P. B. Arnold at Weenen (no date) and by me at Potchefstroom on 4th December, 1901. Nest: a bed of marsh grass placed just above the water level in some short rushes in an open marsh, the green tops curved over to hide the nest. The former clutch is of a brownish olive colour, and the eggs measure 27.3×19.6 , 26.9×19.4 , 26.8×19.5 and 26×19.5 mm. The latter clutch is more greenish olive with a lighter ground colour, barely perceptible, and the eggs measure 28.2×19.5 , 27.9×20 , 27.8×19.8 , 28×19.8 and 27.8×19.5 mm.

Porphyrio madagascariensis

A number of nests were seen by me at Potchefstroom during the end of the Anglo-Boer War and subsequently, and the eggs showed very little variation. A clutch taken at the time is now in the Transvaal Museum collection, 2nd December, 1901. Colour: dull pinkish in ground colour, with scattered, but fairly evenly distributed, markings of purplish slate, red-brown and dark brown. Dimensions: 54.7×38.5 , 54×38.2 , 55×37 and 53×37.3 . The nests were always placed on the top of clumps of bulrush in large marshes, and were composed of dry blades of bulrush curled round to form a hollow.

Gallinula chloropus brachyptera

Clutch of six eggs, taken by me at Potchefstroom, 27th November, 1901. The nest was composed of dry rushes, curled into a hollow in the centre of a clump of bulrushes; others were placed amongst matted reeds. Colour similar to those of the typical Moorhen, and measurements are 42.8×30.5 , 41.5×29.5 , 41.4×30.3 , 40.7×30.8 , 40.2×30.5 and 40×31 mm.

Porphyriops angulata

A clutch of two eggs from Potchefstroom, but without other data or indication of the collector (perhaps the late Thomas Ayres), are probably of this bird. They are coloured like the eggs of the Common Moorhen, but are much smaller: 32.7×25.7 and 29.7×23.5 mm.

***Caloardea leuconota* (*vide ante*)**

Clutch of four eggs, taken by me at Hennops River, Pretoria, 20th September, 1907. The nest was composed of small sticks, placed on a branch of a tree just above the water-level of a quiet stretch of the river. The eggs are greenish white and measure 44.5×35.2 , 43.7×35.5 , 43.5×35 and 43×35 mm.

Mr G. A. H. Bedford has recently taken a very similar clutch and furnishes the following particulars:

"3 fresh eggs collected at Bon Accord near Pretoria on 9th September, 1923.

Eggs: very pale greenish blue, almost white. Measurements: 48×33.5 mm.; 46.5×33 mm.; 44.5×34 mm.

Nest: saucer-shaped, composed of sticks and lined with small pieces of reed, about 14 inches across, situated on the branch of a tree overhanging the Aapies River, and about 1.5 feet above the water.

The male bird, which was shot on the nest, was identified in the Transvaal Museum."

Rhinoptilus chalcopterus

A clutch of one egg, presented by R. D. Bradfield, Quickborn, 9th July, 1923. No nest, the egg being placed on the bare ground at the side of a bush. Ground colour creamy yellow, over which is a profusion of thin brownish scrawlings and underlying scrawlings of slate-grey. It measures 32.6×25.5 mm., and in both size and colour resembles the egg of *Smutsornis africanus*.

Afribyx lateralis

A single egg, saved from a clutch of three on the point of hatching, taken by me at Moordrift, 13th December, 1924. Ground colour buffy, overlaid with dark grey and heavily superimposed black spots and irregular blotches; the eggs measure 48.3×34.5 mm. A fine clutch of three eggs, taken by C. Wildé in Matabeleland, but without further data, is very similar, not quite so heavily marked, and the eggs measure individually 48.8×32.8 , 48.7×32.5 and 47.8×30.7 mm.

Trigonoceps occipitalis

A fine egg of this Vulture has been recently presented by Mr R. D. Bradfield, taken at Quickborn on 11th August, 1922. The nest was a large one of sticks, placed on the small branches at the top of a thorn tree, and lined with regurgitated hair. The egg measures 94.5×67 mm. and in colour it is dull white, smudged with buffish brown and blotched with slate and light brown, the former in greatest quantity and predominating at the thinner end, where

it forms a dense cloud of light brown; otherwise the egg is fairly evenly marked with equal quantities of slate and light brown marks of small and medium size, except at the thick end, which shows few markings. The texture is fairly smooth to the touch, but shows fine pitting, roughness and occasional nodules upon close examination. The cloud of slate and light brown at the thin end of the egg gives it a very handsome appearance.

Milvus parasitus

A single, addled, egg taken from a nest containing two young ones, in a wattle tree on the Berg River, C.P., November, 1917, is very prettily marked with a profusion of slate-blue underlying markings and rich brown superimposed, concentrated mainly at the thin end of the egg. It measures about the same as those recorded by Sir John Bucknill in the *Journ. S.A.O.U.* iv, p. 99, 1908, namely 49.5×40 mm.

Circaetus cinereus

A very fine egg of the Brown Harrier-eagle has been presented to the collection by Mr R. D. Bradfield, of Quickborn, 22nd November, 1920. It was taken from a nest of sticks in a large camel-thorn tree, and is of a smudgy white ground colour, beautifully marked over the thin end with wavy scrawlings of umber-brown, one streak nearly an inch in length; scattered over the markings are a few smudges of buffy brown that do not look like nest stains; over the rest of the egg are a few widely scattered marks of reddish brown and some fine speckles of the same colour. Texture: smooth to the touch, but rougher upon inspection under magnification and not showing pitting. Its dimensions are 61.3×51.3 mm.

Melierax canorus

Clutch of two, one badly broken in transit, presented by R. D. Bradfield, taken at Quickborn, 10th August, 1923. Colour: greenish white, partly nest stained; dimensions of the sound egg 54.5×43.7 mm. The nest was composed of sticks and placed in the fork of a camel-thorn.

A similar egg, taken in July, 1924, on the Magalakuin River, was presented by Mr M. Carlisle, who took it in my presence, together with two other clutches of one and two eggs about the same time, from a nest situated in a large thorn tree, composed of sticks and lined with hair, a nest of *Anthoscopus* and other soft material.

Micronisus gabar

Presented by R. D. Bradfield, a clutch of three eggs taken at Quickborn on 27th December, 1923. The nest is said to have been composed of sticks placed in the fork of a thorn tree. The eggs are white, with nest stains of buffy, and measure 41.3×31.2 , 41.2×32.3 and 39.7×30.5 .

Turacus corythaix phoebus

A clutch of two eggs, much incubated and on the point of hatching, were taken by me at Woodbush on 26th December, 1924. The nest was a thin platform of sticks, placed amongst the matted branches of a tree covered with creepers that overhung a path through the bush, about 12 feet from the ground. The bird could be discerned from below upon careful scrutiny. The eggs are glossy white, almost spherical in shape, measuring 39×32.7 and 36.5×32.3 mm.

Oxylophus cafer and Turdoides jardinei

Reference was recently made in the *S. African J. Nat. Hist.* (11, p. 94) to an egg of this Cuckoo being taken from the oviduct of one which had been shot, and described as being exactly like that of *Turdoides jardinei*. It is, therefore, of interest to record two clutches of the Babbler which appear to contain eggs of this Cuckoo. One is a clutch of four eggs, taken by F. Streeter at Mokeetsi, 2nd December, 1922, in which one is very much larger than the rest and probably of this Cuckoo. The eggs are all of the usual glossy blue-green colour, but the largest one is more pitted than the others. They measure 25.1×19.2 , 24.8×19 , 23.7×18.8 and 27.5×19.5 mm. Another clutch of two, taken by W. Krienke, Beatrice Mine, Rhodesia, shows another case, one egg measuring 24.8×19 and the other 26.8×20.2 mm., and being also most likely of this Cuckoo.

Mr W. L. Dawson has drawn attention to my statement that the eggs of our Jacobin Crested Cuckoo are always white, pointing out that this Cuckoo always lays greenish eggs in Asia, and I may therefore state for general information that I had already noticed this and compared birds from Ceylon and S. Africa, without discovering that there was any tangible difference except in size. The Ceylon birds are smaller than those from the mainland, and the difference, so far as one can make out with so little material accessible, is that African birds are only larger on the average. The fact that these birds, though so closely related, lay definite types of eggs in the two continents is of considerable importance, as Mr Dawson suggests, and the matter needs investigation. As they show so little difference in external characters, I suggest that their call-notes differ. Dimensions of 28 specimens from S. Africa are: wing length 152 to 160, exceptionally 163; tail 176 to 190, exceptionally 195 mm. In 16 specimens of *serratus* the dimensions are the same as in the normal ones of S. African *jacobinus*. The earliest name applicable to the White-breasted or Jacobin Crested Cuckoo of Africa is apparently *pica* (Hempr. and Erhenb. 1828), given to north-east African specimens. I cannot satisfactorily separate *hypopinarius* from the white-breasted form, but I have little material from the south.

Lampromorpha cuprea

There are a number of eggs of this Cuckoo in the collection, showing a wide range of variation in colour characters. The commonest type is sparrow-like, no doubt as a result of the Cape Sparrow being its favourite host, but immaculate pale green or white are not uncommon. In the dry thornveld area of the west it is practically the only Cuckoo of its size, and as it is very common and breeds there in fair numbers, there can be little question about the identity of the eggs.

The following birds are the hosts, and their eggs are compared with those of the Diedrik in the same clutch:

1. **Passer melanurus:** Grahamstown, R. H. Ivy.

A. Host's egg: White, marked with pale slate-blue, overlaid with very dark brown, the latter principally in a zone round the thick end; size: 21×14 mm.

B. Diedrik's egg: Greenish white, evenly marked all over with pale slate-blue and yellowish brown; size: 21.2×14.3 mm.

2. Same host: Potchefstroom, Austin Roberts, 30th December, 1901.

A. Host's eggs: One greenish white, lightly marked with greyish yellow to brownish where massed at the thick end (evidently not a fully pigmented egg), measuring 20×14.5 , the other darker, with heavier markings of dark

grey to brown, heaviest in a zone round the thick end, measuring 19.8×14.3 mm.

B. Diedrik's egg: Like No. 1, only rather more marked with brown and measuring 21.8×15 mm.

3. *Hyphantornis capensis olivaceus*: Karkloof, Natal, A. R., 1st January, 1900.

A. Host's egg: Greenish blue, 23.8×17 and 23.7×16.5 mm.

B. Diedrik's egg: Like No. 1, and measuring 21.1×14.5 mm.

4. Same host: Karkloof, Natal, Rev. N. Roberts, 11th November, 1900.

A. Host's egg: Similar, measuring 25.5×16.7 mm.

B. Diedrik's egg: Like No. 1, measuring 20.5×15 mm.

5. Same host: Potchefstroom, A. R., 26th December, 1902.

A. Host's egg: Similar, but paler blue, measuring 26×16.3 mm.

B. Diedrik's egg: Greenish white, sparingly dotted with mauve-brown and light brown, measuring 22.7×15.2 mm.

6. *Hyphantornis velatus*: Potchefstroom, A. R., 21st December, 1902.

A. Host's eggs: Pale green, with blotches, spots and speckles of red-brown and brown—a common type—and measuring 21.8×14.5 and 21.5×14.2 mm.

B. Diedrik's egg: White, uniformly covered with purplish slate and light brown speckles, and measuring 20.5×15.5 mm.

7. Same host: Potchefstroom, A. R., 20th December, 1902.

A. Host's eggs: Like the last, measuring 21.3×15 , 21.5×15.3 and 21.2×15.2 .

B. Diedrik's egg: Rather elongate in shape, white, with slate and grey-brown speckles and spots, rather more at the thick end (an uncommon feature, the eggs being usually very evenly marked), measuring 23×14.2 mm.

8. Same host: Pretoria, Rev. N. Roberts, 13th February, 1909.

A. Host's egg: Pale blue-green, speckled and spotted with purple-slate and brown, measuring 20.7×13.4 mm.

B. Diedrik's egg: Similar to No. 1, though spots are rather larger than others of the type, and measuring 21.2×15 mm.

9. Same host: Pretoria, A. R., 16th December, 1921. (Messrs V. Wager and C. van der Veen were present when I took them.) Unusual in that there are two Diedrik's eggs and one of the host, all different, one Diedrik's egg nearly fresh, the other, like the host's, half incubated.

A. Host's egg: Pale greenish, with scattered large spots, most of them dark brown with paler shaded borders and some underlying dim purplish spots, a common type of egg of the species, and measuring 20.5×14.6 mm.

B. Cuckoo's egg (half incubated, feet examined and apparently zygodactyle): White, with underlying slate-blue and overlying greyish brown markings, scattered over the whole egg, but rather more at the thick end, measuring 21.2×15 mm.

C. Cuckoo's egg (slightly incubated): Brighter greenish than egg of the host, but differing also in the abundant and smaller markings of yellowish brown, increasing slightly from thin to thick end, and a little underlying slate colour, measuring 21.6×14.5 mm.

10. Same host: Pienaars River, Pretoria, A. R., 9th November, 1910.

A. Host's egg: Pinky white, with large blotches of purplish brown and smaller spots and speckles of same colour, measuring 20.5×14.2 mm. This is a common type, too.

B. Diedrik's egg: Chalky white, measuring 20.8×14.2 mm. This egg had two holes in it and the nest was deserted, which seems to show that it had been left in disgust by the hosts.

11. *Sitagra cabanisi*: Zoutpan, Pretoria, A. R., 23rd December, 1909.

A. Host's egg: Pure white, measuring 22.5×14.8 mm. The eggs of this Weaver never vary in my experience.

B. Diedrik's egg: Greenish white, with a very few fine purplish brown and red-brown specks, mainly at the obtuse end, measuring 21.6×13.8 mm.

12. *Pyromelana orix*: Pretoria, Rev. N. Roberts, 13th December, 1909.

A. Host's eggs: Greenish blue, measuring 18.8×14.2 and 18.5×14.3 mm.

B. Diedrik's egg: Same as No. 1, sparrow-like type, but with the markings less definite and overlapping, measuring 22.5×15.7 mm.

13. Same host: Pretoria, Rev. N. Roberts, 6th December, 1907.

A. Host's eggs: As above, 20×14.3 , 19.8×13.7 and 18.2×13.3 mm.

B. Diedrik's egg: Pale greenish blue, 24.2×15.6 mm. (But for its peculiarly pale coloration, I should question the correctness of its identification—naturally easily misleading in the case of these parasitic birds—as it is a much larger egg than any of the others, but I think it must be correct.)

14. Same host: Same district and collector, 15th November, 1909.

A. Host's eggs: Similar to last, measuring 19×14.5 and 19.5×14 mm.

B. Diedrik's egg: Similar in colour to host's, 22.8×15.5 mm.

15. Same host: Pretoria, A. R., 15th December, 1910.

A. Host's eggs: As above, 19.5×13.5 and 19.3×13.8 mm.

B. Diedrik's egg: Like the host's, but less glossy and paler, measuring 21.1×14.6 mm.

16. *Parisoma subcaeruleum*: Modder River, Bloemfontein, R. H. Ivy.

A. Host's egg: White, with mauve-brown and brown spots, measuring 18.5×13 mm.

B. Diedrik's egg: Immaculate white, measuring 23.2×15.9 mm.

17. *Hyphantornis xanthops jamesoni*: Mokeetsi, F. Streeter, 16th February, 1922.

A. Host's egg: Pale green, with fine spots of reddish and pale purplish slate, measuring 24.8×15.7 mm.

B. Diedrik's egg: Ground colour very pale greenish, almost completely hidden by mottling of very dark grey-brown, only slightly more concentrated at the thick end than the thin, and measuring 20.3×14.2 . It is possible that this egg is that of some other parasitic bird, but there is an absence of evidence on this score, and I therefore presume it to be of the Common Diedrik, which occurs there.

Pogoniulus bilineatus

Clutch of three very much incubated eggs, taken by me, together with the male now in the collection, at Myiai, west of Daressalaam, 6th January, 1917. These eggs are pure, rather glossy, white, and measure 18.3×12.2 , 18.3×13 and 18×12.7 mm. The nest was in a decayed branch of a tree in the low forest of the locality. Dr Grote described and figured the egg as blue (*J. Orn.* 1912, p. 523, p. 8 +, fig. 1); but obviously the native that brought in the bird and egg must have made a mistake. Natives are so unreliable that it is never safe to trust them in procuring eggs, and I fear many errors have already been perpetuated by trusting to them. We see this very frequently in the writings of Le Vaillant and other travellers of long ago.

Epicypselus horus

Clutch of two eggs, taken by me, together with several adult and young ones from a nest, at Koster, Transvaal, on 2nd May, 1922. There were a number of nests together in holes in a high sandbank, containing two or three young ones nearly ready to leave the nests, and it was not until about half a dozen nests had been opened that this clutch of nearly fresh eggs was found. The eggs were laid on a thick pad of hair, hay and feathers, at the end of the tunnels, which looked very much as though they had been made by sand martins or small bee-eaters earlier in the year. The eggs are of the usual elongate type of Swifts' eggs, glossy white, and measure 22.7×15 and 21.8×14.5 mm.

Colleoptera affinis abessynica (vide ante)

Clutches of three, two and one, taken by me at Modder River Station, 12th February, 1925. Numerous nests were found attached to the projecting roof of a building, most of them containing only a single egg. These nests were composed almost exclusively of feathers glued together with saliva and to the iron roof against the wooden beams, the entrance being usually over the beam along the fluting of the iron, the nest chamber being on the opposite side. Very often two or three nests were in contact. The eggs are glossy white, usually long and elliptical in shape, and measure 24×15 , 23.7×14.5 and 23.4×13.8 ; 24.5×15 and 24.5×14 ; and 22.5×14.8 mm.

Eggs of *Caffrapus caffer*, taken from the deserted nests of Swallows of the genus *Cecropis* or holes in rocks, are also glossy white, and usually elongate, but taper more as a rule. They measure as follows:

Klaver, C.P., A. R., 3rd October, 1917: 23×14.8 and 22.5×14.5 mm.

Karkloof, A. R., 4th March, 1908: 23.1×15.5 and 23×15.2 mm.

Pretoria, A. R., 27th March, 1909: 23.2×14.7 and 21.8×15.1 mm.

Pretoria, A. R., 16th December, 1923 (partly incubated): 22.7×14.5 mm.

Platysteira peltata

A single egg and nest, taken by P. G. Kropf, and seen by me *in situ*, at Daressalaam, 5th November, 1916. The nest is like that of the Batis flycatchers, a neat bowl-shaped affair composed of fibrous bark, lined with fine roots and externally covered with soft white fibres, and placed between the forks of an upright twig, well up inside the main branches of a mango tree. The egg is pale greenish, heavily marked all over with small irregularly shaped spots of light to dark brown, and with underlying marks of dim slate-blue, the markings more concentrated at the thick than the thin end. It measures 17.1×13 mm.; in shape like the egg of the Batis flycatchers, as also in colour when compared with *B. molitor*, though rather more heavily marked.

Alseonax adustus

A single, half-incubated egg, taken by me at Woodbush forest, 29th December, 1924. The nest is a mass of black and white fibrous lichen, other fibres, "wild-man's beard," and with a few rootlets and feathers by way of lining in the bowl-shaped hollow; it was placed in a fork of a tree covered with lichen, standing on the edge of a plantation. The egg is white in ground colour, fairly well covered by cloudy masses of fine pink, concentrated mainly around the thick end. It measures 17.5×13.5 mm. This egg is not so heavily clouded nor darkly marked as a clutch of eggs of *Cichlomyia caerulecens* from Boror (cf. *Journ. S.A.O.U.* VIII, p. 30).

Chloropeta natalensis

A clutch of two eggs, slightly incubated and one broken in transit, taken by me at Woodbush, 2nd December, 1924. Special search was made for these eggs for ten days, and after finding a number of nests ready for eggs, which the birds deserted, and others with young ones (one of which was photographed by Dr H. Friedman), I was at last rewarded. The nests were placed either in the fork of certain smooth-barked shrubs growing plentifully along the banks of streams, or in other small, straight-stemmed trees and suspended between the uprights, usually right on the edge of the running streams. They exactly resembled the nests of Reed-warblers in composition and shape; the male calls exactly like the male of the large African Reed-warbler (*Calamocichla*), and the young, from the time they get their feathers onward, are uniform dark yellow below, so that it looks very much as though this bird is a Reed-warbler which has taken to the habits of a Flycatcher, as regards the manner of taking its insect food, and in that way has developed the Flycatcher's broad bill and long rictal bristles. Some nests contained three young, but others two, and both therefore appear to represent the common numbers. Another single, quite fresh, egg was taken at Haenertsburg on the 3rd. This egg and one of the two of the first clutch, and the remains of a shell picked up under a nest with young ones, were white, beautifully marked with a few pink or pinky brown streaks and dots and a number of minute similarly coloured specks at the obtuse end, the greater part of the eggs pure white; the second egg in the first clutch is immaculate white. The two eggs measure 17.5×13.6 mm. in both.

Chlorophoneus sulphureipectus similis

Two clutches of eggs, taken by me near Myiai, west of Daressalaam, vary considerably, though I had a close view of the bird on the nest in both cases and there can be no doubt as to their identity, unless one is that of some parasitic bird. The first clutch of one egg was slightly incubated, and the other of two eggs much incubated, taken on 29th December, 1916. The single egg measures 19.5×13.7 mm. and is whiter in appearance than the two, the markings more scattered, of a light brown colour overlying a few markings of slate-blue and tending to form elongate longitudinal lines. The two eggs are darker, more heavily covered with a muddy or dun-coloured brown, almost hiding the ground colour, and measure 20.5×15.5 and 19.7×15.2 mm.

Chlorophoneus rubiginosus

Two clutches, taken by me at Woodbush on 26th November and 1st December, 1924 respectively, are different from a clutch taken by R. H. Ivy at Grahamstown, but very similar to another egg taken at the same place by the same gentleman. The Woodbush specimens are pale greenish white, marked with slate-blue and greyish brown as speckles, spots or elongate dashes, forming somewhat a zone round the thick end and more scattered towards the thin end; in one clutch there are more markings than in the other. They measure 24.2×16.6 and 23.8×16.5 , and 23.2×16 mm. in the second clutch, of which one egg became broken in transit. The similarly coloured egg from Grahamstown measures 22.5×16.8 mm. The other differently coloured clutch from Grahamstown has the ground colour dull white, covered with masses of dark slate-blue and brown, and between the masses fine speckles of the same colour; the eggs measure respectively 22.7×16.5 and 22.4×16.5 mm.

Andropadus importunus noomei

Two clutches of eggs of this Bulbul were taken by me at Woodbush on 26th November and 26th December, 1924. In one case the nest was placed in the bunched twigs of a full-leafed tree growing over a bush path and in the other amongst the leaves and twigs of a long-spiked thorn tree on the same path. The nests were composed mainly of moss, basin-shaped and lined with fine red-brown roots. The eggs in the two clutches differ somewhat. In the first clutch the ground colour is glossy white with markings of yellowish brown, brown and slate-blue, almost entirely concentrated round the thick end; they measure 24×17.5 and 24.8×17 mm. In the second clutch of two, the ground colour is also white, but more or less clouded by faint smudging over the thinner half and heavily marked in a broad zone with slate, yellowish and brown at the thick end, often forming thin scrawlings; they measure 22×16 and 23.2×16 mm.

Other eggs from Natal and Grahamstown are very similar to the large clutch, whereas the smaller Woodbush clutch is coloured like two eggs taken with the bird at Daressalaam, of *insularis*, but not so small, the dimensions of the *insularis* eggs being 20×15 mm.

Ayresillas flavostriatus

A single fresh egg of this bird was taken at Woodbush on 23rd December, 1924, and is like that taken by Swynnerton and figured in the *Ibis*, 1908, pl. VIII; it measures 23.5×16.7 mm. The pink ground colour, with spots of red-brown, dark slate and dark brown, is very different from the colour of *Phyllastrephus* eggs.

Lioptilus nigricapillus

Clutch of two eggs taken by me at Woodbush, 1st December, 1924. The nest was situated in a bunch of growing twigs of a tree of the genus *Hypericum*, which was one of a large patch growing in a marsh on the outskirts of the indigenous forest. It was a shallow basin composed of twigs and a little moss, and lined with fine red-brown roots. Another nest was discovered in the same kind of tree, but on the edge of the forest, at a later date, and it contained two eggs on the point of hatching which differed not at all from the first. In both cases I was attracted to the proximity of the nest by hearing the wild, whistling notes of the male, in the first case procuring the birds in support of the identification and in the second seeing the female sitting on the nest at a distance of only a few feet. The eggs are large for the bird, measuring 24.3×17 mm.; one egg became broken in transit and cannot therefore be satisfactorily measured. In colour they are dull white, with rather elongate markings of light brown over the whole egg, rather more of them at the obtuse end, where there are also underlying markings of slate colour, forming a dark zone. One egg is more heavily marked than the other.

Bessonornis humeralis

A clutch of two eggs kindly presented by Dr H. Friedman, who discovered them while studying the parasitic birds of S. Africa, at Maribashoek, Pietpotgietersrust, on 6th December, 1924. They were about three-parts incubated. The nest was composed of roots and fibres, placed in a hollow surrounded by decomposing leaves and other vegetation at the foot of a large tree and half-sheltered by a rock, in a patch of dark bush at the foot of a kloof. The eggs are creamy white in ground colour, but so obscured by the dark speckling of pink that the latter colour pervades the whole egg. They are

matched by some very dark eggs of *Caffornis caffra* in the collection, and in dimensions they are also practically the same, measuring 23.5×15.7 and 22.5×15 mm.

Pseudoturdus guttatus

A clutch of three eggs, taken by H. H. Swinny, Ngqeleni, Pondoland, 10th January, 1908, together with the nest. The latter is composed of dry twigs, a large number of roots, and lined with brown and black fibres; no mud has been used in its composition, as is usual in the nests of other Thrushes. The eggs are pale greenish blue, with large and small spots of slate-brown, light and dark brown, especially at the thick end. They measure 28.1×19.8 , 28×20.2 and 27.2×20.1 mm.

Nephelicola mystica

A clutch of four eggs, taken by Mr V. Wager and myself at Groenkloof, Pretoria, 3rd January, 1922. The nest was placed on the ground in the centre of a small tuft of green grass, the ends of which had been curled over so as to hide it; the nest itself was composed of dry grass blades externally, very warmly padded inside with the usual soft grass and flowering tops and silky fibres of weeds, with the entrance at one side near the top. The eggs are pale greenish, speckled with dark brown, and all measure, within a tenth part of a millimetre, 15.5×12 mm.

Nephelicola immaculata

A clutch of three eggs, presented by Mrs L. C. Thompson, Woodbush (type locality of *Hemipteryx minuta* Gunning), taken on 22nd January, 1923. The nest was described to me as similar to that given above for *N. mystica*. The eggs are pale green, minutely and sparingly speckled with red-brown, which forms a zone round the obtuse end, in one case, however, forming a patch at one side of the thin end instead of a zone. One measures 15.8×11.3 mm., the other two 15.6×11.5 mm.; it will be seen that they are more elongate than those of *mystica*. No doubt they vary much in colour like the eggs of all these grass-warblers.

Drymodyta rufipilea

A single egg taken by me, together with the parent, at Myiai, Dares-salaam, 21st January, 1917. The nest was of the usual type of *Drymodyta* nest, placed in a bunch of grass and weeds in a clearing. Colour green, speckled with red-brown which is mainly in a zone round the obtuse end, and very scattered over the rest of the egg; it measures 16×10.6 mm. and is elliptic in shape, the thin end being little narrower than the thick and rounded.

***Drymodyta erythropros* (Hartl.)**

The following description of eggs of this Warbler has been kindly supplied by Mr G. A. H. Bedford:

"3 eggs (a week old) collected in the Ntambanana Valley, Zululand, on 29th January, 1923.

Eggs: greenish blue with reddish brown blotches, more numerous at the obtuse end. Measurements: 19×13 mm.; 18.5×14 mm.; 18.5×14 mm.

Nest: cup-shaped, lightly built, composed of grass and lined with cottony seed. Attached to leaves of a plant about 3 feet from the ground by means of silk threads, the leaves being wound round and over the nest, completely hiding it, the bird gaining an entrance near the top.

The female bird was shot as she flew off the nest and was presented to the Transvaal Museum." (This constitutes the most southerly record for the species.)

Euprinodes neglecta

A clutch of three eggs, taken by me at Myiai, Daressalaam, 6th January, 1917, and bird captured on the nest.

The nest was situated in a bunch of grass at the side of the main road to Maneromango, and was composed of shreds of grass, lined with soft cottony material, with the entrance at the side near the top. It looked so much like a Grass-warbler's nest when first seen that I could not believe my eyes when the bird flew out, and I therefore left it untouched until the return journey of the patrol, when I sneaked up and seized the nest before the bird could escape, placing its identification beyond dispute. The eggs are unlike any of the many varieties of Warbler eggs I have seen, though the distinction is not easily described: they are greenish white, profusely covered with thin red-brown speckling and fine spotting, and indistinct grey underlying speckling. They measure 15.4×10.8 , 15.7×10.7 and 15.1×10.8 mm.

Eremicinnyris fuscus

A clutch of three eggs, presented by R. D. Bradfield, taken at Swakopmund, 12th February, 1925. The nest was composed of soft grass, flowery grass tops, a large amount of shreds of tissue paper and a few feathers. It was suspended to the branches of a Kareebos, 2 feet from the ground. The eggs are white, with very dark slate-blue and dark brown speckles and scattered spots, principally at the thick end; one egg is lighter coloured than the other two, as is usual when three eggs form the clutch in birds of this family. They measure 15.5×11.8 , 15.1×11 and 14×11.5 mm.

Cheimocinnyris tahatali

Clutch of three eggs taken by me in the bushveld of Pretoria district on 19th December, 1919. This is evidently an abnormal time for nesting, as I saw quite a number of nests newly made and with young in the bushveld of the Limpopo valley during July, 1913. The nest was of the usual Nectarinid type, suspended from the ends of a branch of a large Kareebos overhanging a washed-out hollow of a bank. In colour they are very similar to the eggs of *Eremicinnyris fuscus*, being only slightly more thickly marked and lighter coloured and larger: 16.5×11.8 , 16×11.7 and 15.5×11.8 mm.

Anthoscopus minutus damarensis

A single egg, presented by R. D. Bradfield, taken at Quickborn, Okahandja, 6th March, 1923, is pure white and measures 13.7×9.3 mm.

Parisoma layardi

A clutch of three eggs, taken by A. A. Adendorff and myself at Klaver, C.P., 3rd October, 1917. The nest was cleverly concealed in a bush on the side of a stony, bush-covered koppie. In fact, I saw the bird fly from the bush and searched without seeing it, and Mr Adendorff, who was with me, then looked in and spotted it within a few inches of my hand! It was a thin affair of fibres and roots, in the shape of a shallow bowl, placed on the twigs and amongst some leaves just inside the bush. The eggs are somewhat like the eggs of *Parisoma subcaeruleum*, but rather less glossy, the markings less greenish coloured and covering the egg more. The markings are mainly slate-blue with overlying touches of light yellowish brown. The eggs measure 18.9×14 , 18.5×13.7 and 18.2×14 mm.

Xanthomelana xanthomelana

A clutch of three eggs, presented by Mrs L. C. Thompson, Woodbush, January, 1923, is rather duller coloured than those of *X. capensis capensis* and *X. capensis approximans*, and a clutch of the Zambesi form of *xanthomelana* is still greyer, which seems to show that the eggs of the two species are distinguishable on colour grounds. Eggs of the Cape Town form, *capensis*, represented by a single egg presented by G. B. Clark, measure 21.5×15 mm., and are pale greenish, with some brown, but more slate-blue, markings tending to elongation longitudinally. A clutch of three eggs of *approximans* from Wakkerstroom, taken by me on 15th January, 1922, measure 20×14 , 20×14.3 and 21×14.3 mm., and are similar in ground colour and are much marked with dark slaty brown and some slate-blue. Another clutch, from Howick, taken by me on 9th February, 1901, measures 19.8×13.9 , 20.2×14.2 and 20×14 mm., rather paler in ground colour and rather more thinly marked than those from Wakkerstroom. The Woodbush eggs measure about the same, 20.6×14.8 , 19×14 and 18.6×14.5 mm., but are greyer, the overlying marks being grey-brown and brown, the underlying markings slaty coloured. Eggs of the smaller race, *X. x. zambesiensis*, from Beatrice, Rhodesia, W. Krienke, 5th March, 1901, are very similar to the eggs of *Sporopipes squamifrons* in colour, the greenish white ground colour almost hidden by the slate-grey and slate-brown markings, but naturally larger, that is, 18.2×13.6 and 17.7×13.5 mm. It will be seen that these eggs conform in size with the size of the birds themselves as seen in the local forms.

Hyphantornis xanthops jamesoni

Two clutches of eggs, taken by me on 25th January, 1923 (only one egg, quite fresh and apparently incomplete as a clutch) and 26th November, 1924 (clutch of two). The first was taken from a nest comprising one of a small, scattered colony of nests, which were suspended from the drooping ends of thorn bushes amongst long weeds and tambooti grass, and the second was a solitary nest suspended from the flowering top of a reed overhanging a stream. The nests were externally woven strips of reed or grass blades, thickly and loosely lined with strongly scented flowery tops of grass; in shape they were rough ovals and the entrance was *at the side*, under a projecting hood, very different from the nests of most yellow weavers, which have the entrance *from below*. This difference leads me to question the advisability of retaining the species in the genus *Hyphantornis*, as the character of the nests is of considerable phylogenetic importance. The eggs vary in colour, the single egg being pale greenish blue, speckled with slaty brown and brown, and measuring 22.8×15.8 mm., and the other two being white, speckled with pink, brown and a mauve shade of slate colour, in size measuring 24.8×16.5 and 24.8×16.3 mm.

EGGS OF S. AFRICAN BIRDS WANTED IN THE
TRANSVAAL MUSEUM

(Nomenclature as given in the "Synoptic Check List," 1924)

- | | |
|---|--|
| 3. <i>Pternistis humboldti</i> .
4. <i>Pternistis afer</i> .
5. <i>Pternistis castaneiventris</i> , subsp. B and C.
6. <i>Chaetopus capensis</i> (complete clutch wanted).
8. <i>Chaetopus natalensis</i> .
9. <i>Peliperdix hartlaubi</i> . | 11. <i>Dendroperdix sephaena</i> and subsp.
12. <i>Scleroptila atra</i> (from southern and eastern veld).
13. <i>Scleroptila levaillantii</i> (complete clutches from southern and eastern veld).
14. <i>Scleroptila shelleyi</i> . |
|---|--|

15. *Scleroptila garipeensis* (complete clutches) and subspp.
 18. *Coturnix delegorguei*.
 19. *Excalfactoria adansoni*.
 20-24. Complete clutches of Guinea-fowl eggs.
 27. *Eremialector gutturalis*.
 28. *Pterocles namaquus* (complete clutch).
 29-31. *Vinago* spp.
 35. *Turturoena delegorguei*.
 37. *Streptopelia ambigua*.
 40. *Turtur afra*.
 41. *Turtur chalcospilos* subspp. B and C (full clutches).
 47. *Porphyrio alleni*.
 49. *Porphyriops angulata* (full clutch with data).
 56. *Limnobaenus marginalis*.
 57. *Coturnicops ayresi*.
 58-60. *Sarothrura* spp.
 62. *Microparra capensis*.
 63. *Podica petersi*.
 64-65. *Turnix hottentotta* and *T. nana*.
 68. *Proctopus nigricollis gurneyi*.
 71-97. Species of sea-birds.
 99. *Gelastes cirrocephalus*.
 100. *Bruchigavia hartlaubi* (complete clutch).
 101-118. Species of Terns and Skuas (complete clutches).
 126. *Leucopoliu rufocinctus*.
 132. *Stephanibyx lugubris*.
 134. *Xiphidiopterus albiceps*.
 136. *Hemiparra leucoptera*.
 161. *Hemerodromus cinctus*.
 162. *Smutsornis africanus*, subspp. A and C.
 163-164. *Glareola* spp.
 165. *Galachrysis emini*.
 166. *Dromas ardeola*.
 167. *Oedicnemus vermiculatus*.
 169. *Choriotis kori*.
 173. *Eupodotis barrowi*.
 175. *Afrotis afra*.
 177-178. *Heterotetrax* spp.
 184. *Geronticus calvus*.
 186. *Hagedashia hagedash*, subspp. B and C.
 187. *Platalea alba*.
 189. *Sphenorhynchus abdimi*.
 193. *Melanopelargus niger*.
 194. *Hiator lamelligerus*.
 195. *Ephippiorhynchus senegalensis*.
 196. *Leptoptilos crumeniferus*.
 202. *Casmerodius albus melanorhynchus*.
 203. *Mesophoyx intermedia brachyrhyncha*.
 208. *Melanophoyx ardesiaca*.
 209. *Erythrocnus rufiventris*.
 210. *Ardeiralla sturmi*.
 213. *Nycticorax nycticorax*.
 216. *Phoenicopterus major*.
 217. *Phoeniconaias minor*.
 218. *Plectropterus gambensis* subspp.
 219. *Sarkidiornis melanotus*.
 220. *Nettapus auritus*.
 221-2. *Dendrocygna viduata* and bicolor.
 223. *Alopochen aegyptiacus*.
 224. *Casarca cana*.
 225. *Melananas sparsa* (complete clutch).
 226. *Afranas undulata*.
 227. *Faecilonitta erythrorhyncha*.
 228. *Notonetta capensis*.
 229. *Micronetta punctata*.
 230-231. *Spatula* spp.
 233. *Erismatura maccoa*.
 234. *Nyroca capensis*.
 238. *Microcarbo africanus*.
 242. *Parasula dactylatra*.
 243. *Piscatrix sula*.
 244. *Fregata minor* (= *aquila*).
 245. *Scaephaeton rubricaudus*.
 246. *Leptophaeton lepturus*.
 247. *Metapelecanus roseus*.
 248. *Neopelecanus rufescens*.
 250. *Gyps rüppelli*.
 254. *Neophron percnopterus*.
 255. *Necrosyrtes monachus*.
 257. *Gymnogenys typicus*.
 260. *Pseudocircus macrourus* (exotic).
 261. *Melanocircus maurus*.
 262. *Pygargus pygargus* (exotic).
 264. *Melierax mechowi*.
 267. *Neonius melanoleucus*.
 270. *Accipiter rufiventris* (complete clutch).
 271. *Accipiter ovampensis*.
 272. *Hieraspiza minulla* subspp.
 273. *Buteo vulpinus*.
 275. *Buteo rufofuscus* (full clutch).
 276. *Gypaetus ossifragus*.
 280. *Stephanoaetus coronatus*.
 283. *Anomalaietus ayresi*.
 284. *Hieraetus pennatus* (breeding in S. Africa?).
 286. *Lophoaetus occipitalis*.
 287. *Kaupifalco monogrammicus* (complete clutch).
 289-291. *Circaetus* spp.
 292. *Terathopus ecaudatus* (complete clutch).
 293. *Cuncuma vocifer* (complete clutch).
 294. *Gypohierax angolensis*.
 297. *Machaerhamphus anderssoni*.
 298. *Pernis apivorus* (exotic).
 299. *Aviceda verreauxi*.
 300. *Rhynchodon peregrinus*.
 302. *Falco subbuteo* (exotic).
 304. *Chiquera horsburghi* (complete clutch).
 305. *Chiquera ruficollis*.
 306-307. *Erythropus* spp. (exotic).
 308. *Dissodectes dickinsoni*.
 311. *Tichornis naumanni* (exotic).
 316. *Scotopelia peli*.
 317. *Nyctaeus lacteus*.
 318. *Bubo capensis* (complete clutch).
 322. *Pisorhina capensis* subspp.

323. *Strix woodfordi*.
 327. *Poicephalus rüppelli*.
 328. *Poicephalus fuscicapillus*.
 329. *Poicephalus robustus* subsp.
 330. *Agapornis roseicollis*.
 332. *Agapornis lilianae*.
 333. *Coracias garrulus* (exotic).
 338. *Cornopio glaucura*.
 339. *Megaceryle maxima* (complete clutch).
 341. *Alcedo semitorquata*.
 344. *Halcyon cyanoleucus*.
 345. *Halcyonopa senegaleus*.
 346. *Pseudhalcyon pallidiventris*.
 348. *Chelicuti chelicuti damarensis*.
 349. *Bucorvus schlegeli* (complete clutch).
 350. *Baryrhynchus cristatus*.
 354. *Tockus damarensis*.
 355. *Tockus erythrorhynchus*.
 356. *Xanthorhynchus leucomelas*.
 357. *Nototockus monteiri*.
 359. *Phoeniculus purpureus angolensis*.
 360. *Phoeniculus damarensis*.
 361. *Rhinopomastus cyanomelas*, subsp. B and C.
 364. *Blepharomerops superciliosus*.
 365. *Melittotheres nubicaoides*.
 366. *Micromerops böhmi*.
 367. *Coccolarynx bullockoides*.
 369. *Dicrocercus hirundineus*.
 371. *Nycticircus trimaculatus*.
 373. *Nyctisyrignus fervidus*.
 375. *Crotema fossei*.
 376. *Capripeda natalensis*.
 378. *Notatrapus sheppardi*.
 379. *Telecanthura stictilaema*.
 380. *Tachynautes parvus*.
 381-384. *Micropus barbatus*, aequatorialis, apus, murinus.
 386. *Tachymarptis melba*.
 389. *Colius colius*.
 392. *Apaloderma narina*.
 393-394. *Gallirex* spp.
 395-397. *Turacus* spp.
 404-406. *Cuculus* spp.
 410. *Adamatornis klaasi*
 411. *Chrysococcyx intermedius*.
 412. *Centropus senegalensis flecki*.
 414. *Centropus superciliosus* and subsp.
 415. *Megacentropus cupreicaudus*.
 416. *Grillia grilli*.
 417. *Ceuthmochares australis*.
 419. *Melipodagus variegatus*.
 421. *Prodotiscus regulus*.
 424-5. *Smilorhis leucotis* and *sowerbyi*.
 426. *Stactolaema woodwardi*.
 427-429. *Pogoniulus* spp.
 433-434. *Chrysoptilopicus abingoni* and *smithi*.
 435. *Notopicus notatus*.
 436. *Campethera cailliautii*.
 437-438. *Dendropicops* spp.
 439. *Thripias namaquus*.
 440. *Mesopicops griseocephalus*.
 441. *Iynx ruficollis*.
 442. *Pitta angolensis*.
 443 a. *Hirundo angolensis*.
 446. *Uromitris smithi* (complete clutch).
 450. *Phoenichelidon monteiri*.
 454. *Hemicecrops dimidiata*.
 455. *Pseudhirundo griseopyga*.
 456. *Psalidoprogne holomelaena* (complete clutch).
 457. *Psalidoprogne petiti orientalis*.
 462. *Fiscus collaris subcoronatus*.
 466. *Laniarius ferrugineus*, subsp. B, E, F, G.
 467. *Tschagra tschagra natalensis*.
 471. *Antichromus anchietae*.
 473. *Chlorophoneus olivaceus*.
 474. *Chlorophoneus rubiginosus bertrandi*.
 475. *Cosmophoneus abbotti*.
 476. *Calophoneus quadricolor*.
 478. *Malaconotus poliocephalus hypopyrrhus*.
 479. *Nicator gularis*.
 481. *Eressornis retzii*.
 482. *Knestrometopon scopifrons*.
 486. *Nilaus nigritemporalis*.
 489-490. *Graucalus murinus* and *pectoralis*.
 492-494. *Parus* spp.
 495-496. *Anthoscopus minutus* and *caroli*.
 499. *Myioparus plumbeus*.
 500. *Bias musicus*.
 501. *Smithornis capensis*.
 504. *Batis fratrum*.
 506. *Batis puella soror*.
 508-510. *Trochocercus* spp.
 514. *Erythrocerus livingstonei*.
 515. *Cryptolopha ruficapilla*.
 516. *Cichlomyia caeruleascens*, subsp. B.
 517. *Alseonax adustus* (better clutch).
 520-521. *Bradornis murinus* and *griseus*.
 522. *Haganopsornis infuscatus*.
 526. *Lanioturdus torquatus*.
 527-529. *Hyliota* spp.
 536-537. *Calamocichla cunenensis* and *leptorhyncha*.
 541. *Priniops ocularia*.
 543-544. *Bradypterus babaeculus* and *brachypterus*.
 546. *Bradypterus bedfordi*.
 547. *Caffrillas barratti godfreyi*.
 548-549. *Caffrillas sylvaticus* and *pondoensis*.
 550. *Cryptillas victorini*.
 551. *Euryptilla subcinnamomea*.
 552-553. *Calamonastes* spp.
 554. *Catriscus apicalis*.
 555. *Melocichla mentalis*.
 556. *Sphenoeacus afer*, subsp. A and B.
 557. *Eremomela flaviventris*, subsp. A, D and E.

- 558-559. *Eremomeloides icteropygialis* and *damarensis*.
 560. *Magallais usticollis*.
 562. *Tricholais scotops*.
 565-566. *Hemipteryx tatrix* and *egregia*.
 570. *Neocisticola pusilla*.
 577. *Drymodyta rufilata*.
 578-579. *Drymodyta semitorques* and *erythroptus*.
 582. *Drymodyta fulvicapilla*, subsp. A.
 584. *Heliolais kirbyi*.
 586. *Camaroptera griseoviridis* all subsp.
 587-589. *Apalis chirindensis*, *rhodesiae* and *claudiei*.
 590. *Apalis thoracica*, subsp. D and F.
 591. *Euprinodes flavida*.
 594. *Euprinodes ruddi*.
 595. *Pycnonotus capensis*.
 597. *Pycnonotus tricolor ngami*.
 600. *Andropadus oleaginus* and subsp.
 601. *Chlorocichla flaviventris occidentalis*.
 602. *Arizelocichla milanjensis*.
 603. *Sclaterillas debilis*.
 604. *Ayresillas flavostriatus* (complete).
 605. *Phyllastrephus strepitans*.
 606. *Phyllastrephus terrestris*, subsp. B, C, D and E.
 607. *Aethocichla gymnogenys*.
 609-611. *Turdoides hartlaubi*, *melanops* and *jardinei kirki*.
 613. *Afrocichla swynnertoni*.
 615. *Peliocichla libonyanus verreauxi*.
 616. *Chamaetylas gurneyi*.
 620. *Colonocichla angolensis*.
 621. *Colonocichla brevipes*, subsp. A.
 622. *Notiocinclla explorator*.
 623. *Phoenicurus familiaris*, subsp. C and D.
 624. *Phoenicuroides tractrac*.
 625. *Emarginata sinuata* (complete clutch).
 626-627. *Karrucincla* spp.
 628. *Psammocinclla albicans*.
 630. *Campicolina pileata*.
 633. *Sciocinclla arnotti*.
 634. *Myrmecocichla formicivora*.
 636-637. *Pinarornis* spp.
 638. *Achaetops pychnopygius*.
 639-640. *Chaetops frenatus* and *aurantius*.
 641. *Saxicola torquata*, subsp. A.
 643. *Cichladusa arguata*.
 644. *Swynnertonia swynnertoni*.
 645. *Alethe aequatorialis gunningi*.
 646. *Pogonocichla stellata*, subsp. B and C.
 647. *Caffronis caffra*, subsp. B.
 649. *Hyloaedon heuglini*.
 652. *Tychaedon quadrivirgata*.
 655. *Erythropterygia leucophrys*, subsp. A (complete clutch) and subsp. B.
 656. *Erythropterygia munda*, subsp. A and B.
 657. *Erythropterygia zambesiana*.
 660. *Burnesia substriata*.
 665. *Zosterops annulosa*, subsp. A.
 666. *Zosterops pallida*.
 668-669. *Zosterops anderssoni* and *flavilateralis*.
 671. *Salpornis salvadorii*.
 673. *Promerops gurneyi*.
 675. *Sclaterornis arturi*.
 676. *Aidemonia cuprea*.
 679. *Shelleyia shelleyi*.
 680-681. *Microcinnnyris neergaardi* and *chalybeus*.
 684. *Notiocinnnyris ludovicensis*.
 685. *Cheimocinnnyris venustus niasae*.
 688. *Elaeocerthia verreauxi fischeri*.
 689. *Anthobaphes violacea*.
 690-691. *Haagneria olivacea* and *obscura olivacina*.
 692. *Gunningia reichenowi*.
 693. *Lamprothreptes longuemari nyassae*.
 697. *Chalcomitra kirki*.
 699-700. *Motacilla aguimp* and *vidua*.
 703-705. *Budytes* spp. (exotic).
 706. *Spipola trivialis* (exotic).
 711. *Meganthus vaalensis*.
 713. *Anomalanthus leucocraspedon*.
 715. *Petranthus crenatus*.
 718. *Macronyx ameliae*.
 719. *Tmetothylacus tenellus*.
 722. *Pinarocorys nigricans*.
 724-726. *Megalophonous damarensis*, *apiata*, *adendorffi*.
 728. *Megalophonous rufocinnamomeus*.
 729. *Sabota naevia*.
 731. *Anacorys africanoides*, subsp. A.
 732. *Africorys africanus*, subsp. A, C and D.
 733. *Heterocorys breviunguis*.
 735. *Calendula magnirostris harei*.
 737. *Chersomanes albofasciata*, subsp. B, C and D.
 738. *Ammomanopsis grayi*.
 739-740. *Pseudammomanes ferruginea* and *erythrochlamsys*.
 741. *Certhilauda africana subcoronata*.
 742. *Certhilauda semitorquata*, subsp. B, C and D.
 743. *Eremopteryx smithi*.
 746. *Otocorydopsis berlepschi*.
 748. *Spizocorys starki*.
 749. *Spizocorys conirostris damarensis*.
 750. *Spizocorys sclateri*.
 757. *Spinus symonsi*.
 759. *Serinus scotops*, subsp. A.
 764. *Crithagra shelleyi*.
 765. *Crithagra albigularis*.
 766. *Serinus flaviventris*, subsp. C.
 767. *Poliospiza gularis*, subsp. B.
 768-769. *Poliospiza leucoptera*, and *mennelli*.
 770. *Fringillaria impetuana*.

772. *Fringillaria capensis*, subspp. B and C.
 775. *Anomalospiza imberbis*.
 776-777. *Steganura paradisea* and *aucupum obtusa*.
 779. *Tetraenura regia*.
 780-782. *Hypochoera* spp.
 785. *Penthetriopsis macroura*.
 787. *Urobrachya bocagei*.
 790. *Xanthmelana capensis*, subspp. A and C.
 795-796. *Quelea erythropters* and *cardinalis*.
 797. *Pyrenestes granti*.
 800. *Amauresthes fringilloides*.
 804. *Coccopygia kilimensis*.
 805. *Mandingoa nitidula*.
 806. *Cryptospiza reichenowi*.
 807. *Pytilia afra*.
 808. *Zonogastris melba*.
 809-810. *Hypargos margaritatus* and *niveoguttatus*.
 812. *Lagonosticta rhodopareia*.
 814. *Lagonosticta nitidula*.
 819. *Brunhilda erythronota*.
 820. *Glaucostriilda incana*.
 821. *Estrilda astrild*, subspp. B and C.
 824. *Plocepasser rufoscapulatus*.
 826. *Plocepasser pectoralis*.
 832. *Hyphantornis xanthopterus*.
 835. *Hyphantornis capensis*, subspp. A.
 836. *Melanopteryx trochae*.
 838. *Sycobrotus stictifrons*.
 842. *Anaplectes gurneyi*.
 842 a. *Notiospiza angolensis*.
 844. *Notopholia corrusca*.
 846. *Lamprocolius sycobius*.
 847. *Lamprocolius chloropterus*.
 849-850. *Lamprotorornis mevesi* and *purpureus*.
 851. *Heteropsar acuticaudus*.
 852. *Pyrrhocheira caffra*.
 855. *Creatophora carunculata* (complete clutch).
 856-857. *Buphagus erythrorhynchus* and *africanus*.
 858-859. *Oriolus oriolus* and *notatus*.
 865. *Corvultur albicollis* (complete clutch).