

which Australasia is generally exposed. The muscular pouch may also be useful to the bird in running. The cloaca appears to serve only as a urinary reservoir, the rectum opening into it by a comparatively small orifice. The bones of the carpus are wanting in the Emu, and the metacarpus is immediately supported by the bones of the fore-arm.—(See *Dr Knox's Obs. on the New Holland Cassowary*, *Edin. Phil. Jour.* p. 132, Vol. X. 1824.)

Note.—The individuals (male and female) in the Collection of the Association were presented by John S. Lyon, Esq., of Kirkmichael.

(To be continued.)

FERÆ NATURÆ.—WILD ANIMALS WHICH INHABIT SOUTHERN AFRICA.

HAVING taken occasion to peruse Captain W. C. Harris' "Narrative of an Expedition into Southern Africa during the years 1836-7," we believe we cannot more appropriately gratify our readers than by supplying them with some extracts from this interesting source. Captain H. penetrated within the tropics, along with a companion, chiefly through the favour of the native king Moselekatsé, whom he propitiated with presents. His relish for the delights of the chase on a great scale has seldom or ever been exceeded, and the field he obtained for its gratification was all but unbounded; even his fellow-men in all their social interests and moral phases receiving a very secondary consideration. The book is very amusing, and throughout written in the style of a genuine *Nimrod*; its motto, from Mr Pringle's well known work, seems as if it had been written expressly for this adventure.

Afar in the Desert I love to ride
With the silent Bush-boy alone by my side;
Away—away from the dwellings of men
By the Antelope's haunt, and the Buffalo's glen;
By valleys remote where the Ourebi plays,
Where the Gnoo, the Sassayby, and Hartebeest graze;
And the Eland and Gemsbok unhunted recline,
By the skirts of grey forests o'erhung with wild vine;
Where the Elephant browses at peace in his wood,
And the River-Horse gambols unscared in the flood,
And the mighty Rhinoceros wallows at will
In the pool where the Wild-Ass is drinking his fill;
Where the Zebra wantonly tosses his mane,
As he scours with his troop o'er the desolate plain;
And the stately Koodoo exultingly bounds,
Undisturbed by the bay of the hunter's hounds;
Where the timorous Quagga's wild whistling neigh
Is heard by the fountain at fall of day;
And the fleet-footed Ostrich over the waste,
Speeds like a horseman who travels in haste,
Hying away to the home of her rest,
Where she and her mate have scooped their nest,
Far hid from the pitiless plunderer's view,
In the pathless wilds of the parched Karroo.

The following, according to Captain Harris, is a catalogue of the Feræ Naturæ which inhabit Southern Africa; it appears to embrace the *Game* or larger Quadrupeds only.

1. *Felis Leo*. The Lion. Inhabits variously; usually found amongst reeds in open plains. Gregarious, and very common.
2. *Felis Leopardus*. The Leopard. Inhabits thick coverts. Monogamous or solitary.
3. *Felis jubata*. The Hunting Leopard. Inhabits open places. Not common.
4. *Hyæna crocuta*. The Spotted Hyæna. Very common everywhere.
5. *Hyæna fusca*. The Fuscous Hyæna. Less abundant than the preceding, but common.
6. *Hyæna venatica*. The Wild Dog. Hunts in large organised packs.
7. *Elephas Africanus*. The African Elephant. Solitary or gregarious in large troops. Common in the extensive plains and forests of the interior.
8. *Hippopotamus amphibius*. The Hippopotamus. Amphibious. Inhabits the rivers and lakes of the interior.
9. *Sus larvatus*. The Wild Hog. Gregarious. Inhabits the plains and forests.
10. *Phacochoerus Africanus*. The African Boar. Gregarious. Inhabits the plains and forests.
11. *Rhinoceros Africanus*. The African Rhinoceros. Very common in the interior.
12. *Rhinoceros simus*. The White Rhinoceros. Very common in the interior after passing Kurrichane.
13. *Equus Zebra*. The Zebra. Gregarious, found within the Cape colony. Inhabits the mountainous regions only.
14. *Equus Burchellii*. Burchell's Zebra. Inhabits the plains of the interior beyond the Gareep in immense herds.

15. *Equus Quagga*. The Quagga. Still found within the Cape colony. Inhabits the open plains south of the Vaal River in immense herds.
16. *Camelopardalis Giraffa*. The Giraffe. Gregarious in small troops. Inhabits the great plains of the interior.
17. *Bubulus Caffer*. The Cape Buffalo. Still found within the colony. Inhabits the plains and forests of the interior in large herds.
18. *Catoblepas Gnoo*. The Gnoo. Very gregarious. Abundant on the plains south of the Vaal River.
19. *Catoblepas Gorgon*. The Brinded Gnoo. Gregarious. Inhabits the plains beyond the Orange River in vast herds.
20. *Boselaphus Oreas*. The Impofo. Gregarious. Inhabits the open plains of the interior in vast herds.
21. *Strepsiceros Koodoo*. The Koodoo. Gregarious. Still found within the colony. Inhabits thickets and wooded hills.
22. *Acronotus Caama*. The Caama. Inhabits the plains of the interior beyond the Orange River in immense herds.
23. *Acronotus lunatus*. The Sassayby. Gregarious. Inhabits the country of the Bechuana in considerable herds.
24. *Ægocerus Harrisii*. The Sable Antelope. Very rare. Gregarious in small families. Inhabits the great mountain range which threads the eastern portion of the Matabili country.
25. *Ægocerus equina*. The Roan Antelope. Gregarious in small families or herds, but rare. Inhabits the elevated ridges near the source of the Vaal River.
26. *Ægocerus ellipsiprymnus*. The Water Buck. Gregarious. Found only on the banks of rivers near the Tropic, the Limpopo and Mariqua especially.
27. *Oryx Capensis*. The South African Oryx. Gregarious. Principally found in the Karroo, or in the open plains of Mamequeland.
28. *Gazella Euchore*. The Spring Buck. Scattered over the plains in countless herds.
29. *Gazella albifrons*. The White-faced Antelope. Very gregarious. Inhabits the plains south of the Vaal River in immense herds.
30. *Gazella pygarga*. The Pied Antelope. Gregarious. Still found in Zoetendal's Vley near Cape l'Agulhar. Common in the interior.
31. *Antelope Melampus*. The Pallah. Gregarious in small families or herds. Inhabits the banks of rivers chiefly in the Bechuana country.
32. *Tragellaphus sylvatica*. The Bush Buck. Monogamous or solitary. Inhabits the forests on the sea coast.
33. *Redunca Eleotragus*. The Reit Buck. Gregarious in small families, or solitary. Resides variously, principally among reeds.
34. *Redunca Lalandii*. The Nagor. Found amongst rocks in small troops.
35. *Redunca Capreolus*. The Rheebeck. Found within the colony, in small troops amongst hills and rocks.
36. *Redunca scoparia*. The Ourebi. Found in grassy plains, usually in pairs.
37. *Oreotragus Saltatrix*. The Klipspringer. Common in the colony. Inhabits rocks and precipices in pairs.
38. *Tragulus rupestris*. The Steenbuck. Monogamous or solitary. Inhabits the bushes of high ground. Common in the colony. *Note.*—The Plackte Steenbok (*Tragulus rufescens*), and the Bleekbok (*T. Pedrotragus*), appear to be merely varieties of this Antelope, and not distinct species.
39. *Tragulus melanotis*. The Grysboek. Monogamous or solitary. Common in the colony, among the wooded tracts along the sea-coast.
40. *Cephalopus mergens*. The Duiker. Solitary or Monogamous. Common in the colony, especially along the coast, among bushes. *Note.*—*C. Burchellii* would appear to be a variety only of this species, of which no two specimens are exactly alike.
41. *Cephalopus cæruleus*. The Slate-coloured Antelope. Solitary. Inhabits the forests along the sea-coast.

On the present occasion, we have room only for one additional extract, which, however, will afford a very good specimen of the whole. On future occasions we hope to enliven our pages with a few brief quotations from this amusing author.

HUNTING THE GIRAFFE (*Camelopardalis Giraffa*).

"To the sportsman the most thrilling passage in my adventures is now to be recounted. In my own breast, it awakens a renewal of past impressions, more lively than any written description can render intelligible. Three hundred gigantic Elephants, browsing in majestic tranquillity amidst the wild magnificence of an African landscape, and a wide stretching plain,

THE EDINBURGH JOURNAL OF NATURAL HISTORY,

AND OF

THE PHYSICAL SCIENCES.

JUNE, 1839.

DESCRIPTION OF THE COLLECTION

FORMING FOR THE

EDINBURGH ZOOLOGICAL GARDENS ASSOCIATION.

(Contributed by a Member.)

(I. & II.) DROMÆUS NOVÆ HOLLANDIÆ.

NEW HOLLAND EMU.

Classification.—Order RASORES. Family STRUTHIONIDÆ. Genera STRUTHIO, RHEA, CASUARIUS, DROMÆUS, APTERYX.

Synonyms and Figures.—NEW HOLLAND CASSOWARY. White's Journal of a Voyage to New South Wales, pl. 1 (very indifferent), copied in Shaw's Naturalist's Miscellany, pl. 99. CASUARIUS NOVÆ HOLLANDIÆ, Latham, Ind. Orn. 665. CASOAR DE LA NOUVELLE HOLLANDE, Péron, Voy. aux Terres Australes, pl. 66 (indifferent). DROMAIUS ATER, L'EMU NOIR, Vieillot, Galerie des Ois, pl. 226 (tolerable). The EMEU DROMAIUS NOVÆ HOLLANDIÆ, Gardens and Menagerie of the Zoological Society delineated, Vol. II. p. 193 (wood-cut excellent).

Description.—The BILL straight, depressed on the sides, slightly keeled above, rounded at the point, dull black. The NOSTRILS large, opening upwards, placed in the middle of the bill. The HEAD feathered, without a bony crest. The THROAT blueish, naked, and without wattles. The FEATHERS brown mottled with grey above, dirty grey beneath, the barbs loose and separate, resembling hair at a distance; feathers arising in pairs from the same shaft. The WINGS very short. No QUILL FEATHERS either in the wings or tail. The LEGS powerful, fleshy, and feathered to the joint. The TARSUS or Shank blackish, naked, deeply indented. Three TOES nearly of equal length, directed forwards, and furnished with blunt nails.

The MALE is above five feet in height; the FEMALE resembles the male, but is somewhat less. The EGGS, from six to thirteen in number, are large, of a rich dark green. The YOUNG are greyish-white, with two broad black stripes along the back, and two on each side continuing to the neck; a narrow middle line of white between each; the head marked with irregular spots, dark bands along the fore-part of the neck and breast, a broad band on each side across the thighs.

History.—The Emu, peculiar to New Holland and the adjacent islands, was first described in the year 1789, in Governor Phillip's Voyage to Botany Bay. It was then very abundant in the neighbourhood of that colony, but has now been driven by the settlers into the remote plains of the interior. The skin is particularly valued for its oil, a full-grown bird yielding six or seven quarts of a beautiful bright colour. This oil produces no disagreeable smell, and is excellent for burning, and as a liniment for sprains or bruises in the Cattle. The flesh is eaten by Europeans; the rump part is said to be delicate like fowl, the legs coarse like beef, but still tender. The natives regard the flesh with its oily skin as a highly delicate treat, and the fibula bone of the leg is occasionally passed through the cartilage of the nostril as an ornament.

The remarkable peculiarity in the structure of its feathers deserves a more particular notice. Two slender shafts, extremely flaccid, arise from one small quill. The feather resembles a dried plant in texture, is soft, close, and flossy at the base, but widens gradually, and grows harder towards the tip. Its colour is brownish-grey, becoming gradually white

towards the quill. Incapable alike of resisting water or containing air, it seems to be adapted only for a bird which depends for safety on its swiftness of foot.

The young of quadrupeds are generally covered with a light or spotted livery, which gradually assumes the sombre tints of the adult, while the female most commonly resembles the male. In Birds, on the contrary, we find the females and young with plumage of sombre hue, while the young males gradually acquire the brilliant tints peculiar to the adult male. In these respects, the Emus bear resemblance to the mammiferous animals. They crop grass like an herbivorous quadruped, are swift of foot, and possess great keenness of vision. They are hunted most readily early in the morning: after a sharp run the Dogs overtake them, when they are easily thrown down and destroyed. The kick of the Emu, like that of the Ostrich, is very powerful, sufficient to break a Man's leg. The Dogs, trained to this kind of coursing, avoid these dangerous kicks by running abreast of the game, and springing at its neck.

The Emu, originally savage, soon becomes domesticated. When resting, it squats down like a Hen, its neck curved like an S, and the head reposing on the naked neck. Frequently it stands in a grotesque attitude upon the tarsi and feet jointly.

The nest of the wild birds is formed in the following manner:—A retired situation in a scrub among the hills is scraped, similar to those formed by the Common Hen; sticks and leaves are laid round the cleared place, and the eggs are deposited without regard to regularity. These eggs are usually from nine to thirteen in number, and the male assists the female in the duties of incubation. Immense quantities of the eggs are devoured by the natives during the breeding season. The Emu has often bred in captivity, but the eggs seldom exceed seven in number.—(See Bennett's Wanderings in New South Wales, &c.)

Anatomy.—The Emu, in respect to its internal organs, bears a great analogy to the Ostrich. A large membranous pouch, formed by the dilatation of the œsophagus, opens into a very small gizzard,—so small that White asserted that the Emu had no gizzard. The liver is likewise very small, the gall-bladder very large. The crop is usually filled with several pounds of grass, flowers, seeds, and berries. The intestinal canal is at least six yards long, very wide, and of a very cylindrical shape. The windpipe is very long, and opens into a large muscular pouch, the use of which is doubtful. We shall here, however, supply the words of its able discoverer. "It may here be stated, that in this bird the rings of the windpipe are complete, from their commencement at the upper larynx to about the fifty-second, when the next rings suddenly open by a wide aperture into a strong muscular bag, as large as the human head, closely attached to the sides of the trachea, and expanded rings. This bag is situated in the neck, immediately above the bone called the merry-thought; it was seen by me in the female, though it is probable that the male also possesses it. It is quite peculiar to the bird, no such appendage having been ever seen attached to the trachea of any of the feathered creation; nor do I know of any thing analogous to it in any other animal, excepting in the Cameleon, to the upper portion of whose trachea there is appended a comparatively large membranous bag." Dr Knox believes that this extraordinary bag performs the important function of enabling the bird to swim, and to preserve life amidst the extensive marshes composing central New Holland, and to escape also from those sudden inundations to