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Bartholomew's Physical Atlas—Volume V

ATLAS OF ZOOGEOGRAPHY

A Series of Maps illustrating the Distribution of over Seven
Hundred Families, Genera, and Species of Existing Animals

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UNDER THE PATRONAGE OF

The Royal Geographical Society

PUBLISHED AT THE EDINBURGH GEOGRAPHICAL INSTITUTE BY

JOHN BARTHOLOMEW & CO.

1911

confine their wanderings to the denser parts of the forest, generally near water and in the vicinity of bamboos. When the rains commence, however, they extend their range into the open to feed upon the young and tender grass which springs up at that season.

The African Elephant, distinguished by its enormous ears, is at the present day confined to the wooded districts in the Ethiopian continent south of the Sahara and north of the Cuene and Zambesi Rivers. In Cape Colony it exists and is protected in the Knysna and Addo Bush. Its remains have been found in a fossil state in Spain, Sicily and Algeria, so that it evidently ranged in former ages over a much wider area than it occupies at present. In many districts it is becoming extremely scarce, so persistently has it been hunted for the sake of its ivory, and it must soon become extinct, unless measures—as in the case of the Indian species—are adopted to prevent this lamentable result.

No less than 64 extinct species of *Elephantidae* have been described, of which 15 belonged to the same genus as the existing species. In the Miocene, Pliocene and Pleistocene periods Elephants roamed over the greater part of Europe (including the British Isles), North Africa, Asia and America from Alaska to the Argentine Republic. The best-known species is that to which the popular name of Mammoth (*E. primigenius*) has been applied. This animal, distinguished by its hairy coat and enormous tusks, had a very extensive range, remains having been obtained from a large number of localities in England, Scotland, Ireland, Central and Southern Europe, Northern Asia and the more northern parts of North America. In Malta and some of the adjacent islands there existed in Pleistocene times a species of Elephant not more than three feet in height, and strange indeed would such a dwarf look to us if restored to the existing fauna of Europe!

PROCAVIIDÆ (Procavia or Conies; 35 Species). Plate 7, Map ii.

The small animals constituting this family (formerly known as Hyracidae) were at first regarded as Rodents, to which they bear indeed a superficial resemblance. Anatomical investigations have shown, however, that they really belong to the Order Ungulata, though they form a separate Sub-Order to themselves. The various species (all belonging to one genus, *Procavia*) are found in mountainous and rocky districts in Arabia, Syria and Africa, in the latter continent ranging from 20° N. latitude to the Cape, but not occurring in the central portion. They live upon the leaves and shoots of trees and shrubs, and feed principally in the evening or early morning. Nine species possess arboreal habits, and were formerly placed in a distinct genus under the name of *Dendrohyrax*.

RHINOCEROTIDÆ (Rhinoceroses; 5 Species). Plate 7, Map ii.

The unwieldy animals belonging to this family are at the present day absolutely confined to the Oriental and Ethiopian Regions, though, as will be seen below, they had formerly a much more extensive range. Of the three species inhabiting the Oriental Region, that known as the One-horned Indian Rhinoceros (*Rhinoceros unicornis*) is the best known. This species is now practically confined to the great grass jungles of Assam, though it occurred a few years ago in Sikkim and Nepal, and in the sixteenth century also in the Punjab. In a fossil state it has been found far to the south and west, and it evidently at one time ranged over the whole of the Indian Peninsula. The Javan Rhinoceros (*R. sondaicus*) is a smaller animal occurring in Bengal, the Sikkim Terai, Burma, and Assam, ranging also through the Malay Peninsula to Sumatra, Java, and Borneo. The Sumatran Rhinoceros (*R. sumatrensis*) has a similar range to the last, but is absent from Java, and very rare in Assam.

Only two species are found in the Ethiopian Region, namely, the African or Black Rhinoceros (*R. bicornis*) and the Square-mouth, Burchell's, or White Rhinoceros (*R. simus*), as it is variously called. The first of these ranges from Abyssinia through Eastern and Central Africa to Ovampoland and Zululand. The White Rhinoceros is, it is to be feared, verging on extinction, though it is supposed to have formerly inhabited the whole of Cape Colony.

All the members of this family are supposed to feed exclusively upon grass, and consequently their distribution is largely determined by the nature of the vegetation.

When the extinct *Rhinocerotidae* are taken into consideration, over 100 species have to be dealt with, which have been grouped into five sub-families. These ancient forms roamed over the whole of Europe, Asia, North Africa, and North America, and one species even occurred in the Argentine Republic. Hence this family appears to be gradually disappearing from the face of the earth, and like many other large animals, Rhinoceroses must soon be only represented by museum specimens or fossilised remains.

EQUIDÆ (Horses, Asses, Zebras and Quagga; 15 Species). Plate 7, Map iii.

The few members of this interesting family are at the present day confined to the Old World, and are especially characteristic of Eastern Africa. The Horse (*Equus caballus*), now so universally domesticated and improved for various purposes by breeding, was originally found in both Europe and Asia, probably occurring in a wild state up to near the end of the sixteenth century. At the present day it appears to be confined to Central Asia, where it is known as the Tarpan. Przewalsky's Horse (*Equus przewalskyi*) is an interesting species, or perhaps only a variety, found in the Dzungarian Desert. In America horses in a semi-wild condition now exist in great numbers, but they have all originated from animals introduced since the time of the Spanish Conquest. The Asses, of which about half a dozen species are known, are found in the steppes and deserts

of Central Asia and in some parts of North-eastern Africa. The most important of these are the Kiang (*Equus hemionus*), occurring in the high table-lands of Tibet and Mongolia, the Onager (*E. onager*) of Persia and Syria, the Indian and Baluchi Wild Ass (*E. indicus*) of N.W. India and adjoining countries, and the African Wild Ass (*E. asinus*) found in Abyssinia, Somaliland, and adjacent parts of N.E. Africa. Four or five species of Zebra are usually distinguished, including the Mountain Zebra (*E. zebra*), confined to the mountainous districts of Cape Colony, Burchell's Zebra (*E. burchelli*), and its varieties, found in the plains north of the Orange River, and in Damaraland and Angola, and Grevy's Zebra (*E. grevyi*), the largest species, occurring in Shoa and Somaliland. Lastly, the Quagga (*E. quagga*) was formerly abundant in Cape Colony, the Orange River Colony, and Griqualand West, but, thanks to the zeal of the hunter, now exterminated.

The fossil members of this family appear to have had a very extensive range, especially in the New World. Nearly 100 species have been described, and the most interesting fact in connection with these fossil forms is that the series already discovered shows a complete transition from the existing species with a single toe to others long ago extinct with three distinct toes to each foot, while a similar gradation is presented by the structure of the teeth.

BOVIDÆ (Oxen, Musk-Ox, Sheep, Goats, Chamois, Antelopes, &c.; 293 Species). Plate 7, Map iv.

This important family is composed chiefly of Old World forms, only five species occurring in the New World, and these are confined to western and arctic North America. More than half the species are purely African, the other half being distributed over the Palearctic and Oriental Regions. The Australian and Neotropical Regions and the island of Madagascar are thus without representatives, with the exception of the Javan Ox (*Bibos sondaicus*), which occurs in the island of Timor, and the Anoa (*Anoa depressicornis*), which is confined to Celebes.

The Bovidæ are usually divided into ten sub-families, and the significance of their distribution will be best seen by treating of each sub-family separately, commencing with the Antelopes. The first (*Bubalinae*) contains the animals known as Wildebeests or Gnus (*Connochetes*) and Hartebeests (*Bubalis* and *Damaliscus*) and their allies, of which about 40 species are known. They are confined to Africa, with the exception of one species which ranges into Syria.

The second sub-family (*Cephalophinae*) contains two genera of Antelopes bearing the names of *Cephalophus* and *Tetraceros*. The first of these contains about 40 species confined to Africa, while the second is represented only by the Four-horned Antelope (*T. quadricornis*), an animal confined to India and differing from all other Ruminants in possessing two pairs of horns in the male.

The third sub-family (*Neotraginae*) is entirely African, and contains six genera and 33 species. Among the animals placed in this division may be mentioned the Klipspringer (*Oreotragus oreotragus*), the Steinboks (*Pediotragus*, &c.) and Salt's Antelope (*Madoqua saltiana*).

The fourth sub-family (*Cervicaprinae*) contains three genera and 28 species of Antelope, likewise confined to Africa. Here are placed, amongst others, the Rietbok or Reedbuck (*Cervicapra arundinum*), the Water Buck (*Cobus ellipsiprymnus*) and the Rehbok (*Pelea capreolus*).

The members of the fifth sub-family (*Antilopinae*) are of much wider range, occurring in the Palearctic, Oriental and Ethiopian Regions. Thirty-six species are known, of which 26 are known as Gazelles (*Gazella*) and are characteristic of the desert regions of Asia and North Africa. The genus *Apyceros* contains two species known as Palas, one of which is confined to Southern and South-eastern Africa, and the other to Angola. Most of the other genera are represented by a single species, the best known of which are the Black-buck (*Antilope cervicapra*) of India, the Saiga (*Saiga tatarica*) of South-eastern Europe and Western Asia, the Chiru (*Pantholops hodgsoni*) of Tibet and Sikkim, Clarke's Antelope (*Anmodoreas clarkei*) confined to Somaliland, and the long-necked Waller's Gazelle (*Lithocranius walleri*) occurring in East Africa.

The sixth sub-family (*Hippotraginae*) contains nine handsome species of Antelopes ranging throughout Africa, Arabia and Syria, and belonging to three different genera. The typical genus *Hippotragus* is represented by the well-known Sable and Roan Antelopes (*H. niger* and *equinus*) and confined to Africa. The five species of *Oryx* are found throughout Africa, and in Arabia and Syria, the best known being that bearing the name of Gemsbok (*Oryx gazella*). The third genus (*Addax*) contains a single species inhabiting North Africa and Arabia.

With the seventh sub-family (*Tragelaphinae*) we reach the Harnessed Antelopes (*Tragelaphus*), ten in number, the two species of Kudu (*Strepsiceros*), the Elands (*Oreos*), of which likewise two species are known, and the Nilghai (*Boselaphus tragocamelus*). The last-named animal is confined to India, while all the other Antelopes of this group are exclusively African, being found in most parts of that continent.

The eighth sub-family (*Rupicaprinae*) comprises four genera and 25 species of goat-like animals found in both the Old and New Worlds. The typical genus contains the well-known Chamois (*Rupicapra tragus*), which inhabits the high mountain ranges of Europe from the Pyrenees to the Caucasus, and an allied form occurring in Italy. These familiar animals are gregarious, and extremely agile and sure-footed, jumping from rock to rock with wonderful precision. They feed upon lichen or the scanty herbage clothing the mountain slopes. The Goralis of the Himalayas, Tibet, China and Amurland, and the Serows of South-eastern and Eastern Asia, 20 species in all, form the genus *Nemorhaedus*. Two of the five North American species of Bovidæ belongs to the present sub-family. These are (1) the animal inappropriately named from its appearance, the Rocky Mountain Goat (*Haplocerus montanus*), occurring in the mountains from which its popular name is derived, between the latitudes of 36° and 62°; and

