

ANIMAL ENCYCLOPÆDIA

MAMMALS

BY LEO WENDER

With Latin Index

ENGLISH EDITION

EDITED BY

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F.R.S.

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FOREWORD

When Mr. Wender first showed me his copy for *The Animal Encyclopædia* I was the Keeper of the Zoological Department of the British Museum (Natural History). The best years of my life had been devoted to the scientific study of living and fossil mammals, that is, to the study of the "animals" described in this book. But I was overloaded with administrative and editorial work and therefore reluctant to consider Mr. Wender's proposal that I should assist him in making the work as reliable and accurate as possible. Moreover, the author's alphabetical arrange-

ment cut across all my thoughts concerning animals.

But Mr. Wender is a very patient and persuasive man—only a patient man could have compiled such a book. I was at last persuaded, and, contrary to my first reactions, I soon began to realize that this was going to be a most useful and indeed much-needed book. Night after night, on finishing work, I found myself in my library with a mountain of books and papers to put away—the authorities which it had been necessary to consult during the evening in order to check the information contained in this little volume. No other volume is so comprehensive. From being a very reluctant editor I became an enthusiastic one and so re-wrote many sections and inserted supplementary information wherever it seemed necessary. Completeness is, of course, very difficult to attain in a book of this kind; but great pains have been taken to ensure the accuracy of the information given and it is hoped in later editions to remedy any omissions there may be.

As it stands The Animal Encyclopædia may be handed to the reader with confidence that it fills a large gap in the popular literature dealing with the subject. How often do we meet in newspapers, magazines, travel stories, novels and elsewhere, names of animals we do not know or about which we wish for further information? In zoos and even in museums we frequently stand before specimens whose labels leave us athirst for more detail concerning their native countries, characteristics and habits. There are, of course, many works in which we can find answers to most of our questions; but they are usually large, expensive and often inaccessible books, always more or less difficult to consult since the animals are described in systematic or geographical order and often with a wealth of detail not required by the general reader. This dictionary of animals seeks to give everybody—laymen and scientists—a short and concentrated

account of the most interesting facts concerning the mammals of the world. It is easy to consult, the animals being arranged under their popular names in alphabetical order in the text. At the end there is a list, in alphabetical order also, of the scientific or *Latin names* with references back to the general text where information concerning the creatures in question is given.

We hand over The Animal Encyclopædia to the reader and friend of Nature with the firm conviction that it will become a useful

handbook to everybody for everyday use.

MARTIN A. C. HINTON.

Streatham, November, 1946.

THE WORLD OF ANIMALS

Aardvarks or Ant-Bears, an order of mammals whose origin is obscure, but perhaps they have some remote connection with the ungulates. Heavily-built animals, about the size of a pig ("aardvark" is Afrikaans for "earth-pig"). The snout is elongated and movable and the ears are erect and shaped like those of a rabbit, only more pointed. Tongue thread-like and can be protruded a long way; its tip coated with a special sticky secretion. The head has a few bristles. The fore-feet have four and the hind-feet five toes, the former bearing large digging claws. Tail long. The only teeth are rootless, permanently growing, columnar molars with no enamel. Feed on termites and ants. Only one genus with one species, Orycteropus afer, which has several subspecies. Africa from the Cape to Abyssinia, Sudan and Senegal. Tubulidentata.

Aardwolf, an African Carnivore resembling the Striped Hyena, but smaller and more slender, with weak jaws and small simple teeth. Body 32 in., tail 12 in., shoulder-height 20 in. Found from South Africa to Angola and Somaliland. Feeds on termites and carrion. Nocturnal,



Aardwolf

spends the day in burrows (often gregariously). Proteles cristata.

Aberdeen or Scottish Terrier, a rough-coated breed of dog with

short legs and pricked ears; black.

Abyssinian Bush-pig, found from the highlands of Abyssinia to the Uaso Nyiro River in Kenya. Old boars black, head and mane mixed with white; sows and young reddish on the flanks. Potamochoerus hassama.

Abyssinian Hyrax. About 17½ in. long, buffy-grey sprinkled

with light and dark. Procavia habessinica.

Acouchy, rabbit-sized Agouti whose 2-in. tail is longer than any other Agouti's. Rufous above, yellow-red below; the thin tail has white hairs. Guiana and Northern Brazil. Myoprocta acouchy.

Acuchi, see Acouchy.

Addax, belongs to the Orygine Antelopes. Horns in both sexes, long, ringed and wound in an open spiral; record length 43 in. Shoulder-height $3\frac{1}{4}-3\frac{1}{2}$ ft. Yellowish-white, a patch of black hair on the forehead, in winter sometimes long brown hair on the neck and shoulders and colour greyer. Lives in desert regions of

North Africa from Senegal across the Sahara, Algeria, Southern Tunis, Tripoli and Sudan to Dongola. Addax nasomaculatus.

Addra Gazelle, see Dama Gazelle.

Aeneas Opossum, see Murine Opossum.

Afghan Hound, related to the greyhound, but ears pendulous; height about 27 in.

Afghan Urial, a race of Urial from Afghanistan and Baluchistan. Horns large, strongly divergent and forming a more open spiral than in other races. Ovis vignei cycloceros.

African Bush-pig, several sub-species in South and East Africa. Up to 30 in. at the shoulder. Skin black with black, grey or brown bristles; some of the eastern races reddish. Old boars with a dirty white face and black mane and ear tufts. Young ones brownish with four yellowish-brown longitudinal stripes. Nocturnal. Live in herds of 5–20, chiefly in damp thickets and forests. Come to cultivated fields for food when the opportunity arises. Gestation 130 days; 6–8 young at a birth. *Potamochoerus koiropotamus*.

African Civet (see also Civet-cats). Total length about 50 in., of which 18 in. are tail. Ashy-grey to yellowish, closely spotted with blackish-brown. There is an erectile mane of blackish-brown hair in the middle of the back. Found in Africa south of the Sahara as far as North-East Transvaal. Nocturnal. Feeds on all sorts of birds, poultry, lizards, frogs, eggs, small rodents, etc. Will not

despise fruit and roots. Civettictis civetta.

African Elephant, the largest living land animal, reaching a height of 11 ft. 6 in. (possibly up to 12 ft.). Tusks well developed in both sexes, record length (in British Museum) 11 ft. 5½ in. Forehead convex, ears large, trunk with two "fingers." In spite of being pursued for its ivory still widely distributed over tropical Africa, living on the savannas as well as in the forests. Live in herds up to 200–300 animals (at least formerly). Feed on leaves, bark, roots, fruit and rarely grass. Several ill-distinguished races have been named according to size and to shape of ear. Two forms are however recognized, the ordinary form, Elephas (Loxodonta) africanus, and the smaller Forest Elephant, Elephas (Loxodonta) africanus cyclotis, from the forests of West Africa. They were tamed in ancient times and since 1890 their use has been resuscitated by the French and Belgians in the Congo. They are not bred, but caught and tamed.

African Fruit-bat, Common (see Fruit-bat), body 10 in. long, wing-span 40 in. Lives amongst date-palms on the White and Blue Niles. Found all over tropical Africa. Eidolon helvum.

Agile Mangabey, a species of Mangabey with usually a crest of erect hairs which jut out over the eyes. Colour, dark brown above; pale grey, whitish or yellow below. Upper Congo. Cercocebus agilis.

Agile Wallaby, sandy-coloured Large Wallaby with short ears and long tail. Lives in the marshy lowlands on the north coast of Australia. Macropus agilis.

Agouara or Agouara-Gouazou (meaning "large fox"), a name used in South America for the Crab-eating Raccoon, see Raccoons.





Agouti

Agoutis, medium-sized, long-legged, slender Rodents from South and Central America. Nails flat, broad and hooflike; hind-foot with only three toes; tail rudimentary. In appearance somewhat reminiscent of the smallest ungulates, such as Musk Deer, in other respects hare-like. Live in pairs or small groups, chiefly in wooded regions. Herbivorous; chiefly nocturnal; 1-2 young at a birth. Include: Azara's Agouti; Golden Agouti; Mexican Agouti; Sooty Agouti; Hairy-rumped Agouti; Acouchy. Dasyprocta.

Agutis, see Agoutis.

Ahu, see Goitred Gazelle.

Ai or Three-toed Sloth, a Sloth with three toes with long, hooked claws on each foot. About 20 in. long. Many sub-species in tropical South America. Bradypus tridactylus. (There are other species of Bradvpus in Central America.)

Airedale, a rough-haired breed of dog, about 20 in. high at the shoulder. Probably originated from crosses between terriers and hounds. Tan-coloured with a dark saddle and dark markings on the sides of the head. Used as watchdogs.

Alactaga, see Jerboa, Five-toed. Alaska Bear, see Grizzly Bear.

Alaska Rabbit, brilliant black variety of Tame Rabbit, origi-

nating apparently in England. Weight 4½-5½ lb.

Alaskan Moose, largest and darkest form of moose. From the Kenai Peninsula in Alaska. Shoulder-height 6 ft. 9 in. to 7 ft. 9 in. Weight to 1,800 lb. Record antlers: spread 78 in. with a total of 26 + 21 snags. Alces gigas.

Alexandrine Rat, sub-species or "wild-coloured" phase of the Black Rat. Reddish brown-grey above, dusky to yellowish white below, tail brown. Described first by Geoffroy from dark-bellied specimens obtained in Egypt during Napoleon's expedition (Rattus rattus alexandrinus). Such specimens are rare. More usually the under parts are brightly coloured, white or pale yellow (Rattus rattus frugivorus), the rats more or less closely resembling wild races which are native to the forests of India, Burma and Malaya. "Alexandrine Rats" are widely distributed in the Mediterranean countries, ranging north in buildings or other shelters to Central Europe, including Switzerland, Southern Germany and Saxony; they are common on ships and now in British sea-ports, including London. With commerce they have spread to most parts of the world, including America and Madagascar. In cold temperate countries these rats are dependent, at least in winter, upon the shelter afforded them by man; but in warmer countries, especially those rather well-wooded they thrive and spread rapidly. As parasites their habits are identical with those of the Black Rat, which has been developed as a parasite from the same stock.

Alpaca, a domestic form of the Huanaco. Smaller than the Llama (sensu stricto), wool longer and softer. Usually entirely white or black; sometimes skewbald. Bred in Peru and Bolivia.

Gestation 11 months; one at a birth. Lama pacos.

Alpine Hare, sub-species of Blue Hare from the Alps. Mostly above 4,000 ft. amongst rocks or low-growing bushes. Lepus timidus varronis.

Alpine Marmot, lives in the Alps and the Carpathians near the snow line. Upper surface brown-black, flanks yellowish-grey, nape of neck and under-parts dark reddish-brown. Body about 20 in., tail about 5 in. long. Usually in colonies. Dig their own holes which they line with grass and in which they hibernate, a lot together, from September to the spring. Feed on roots and leaves. Gestation about 6 weeks, 2–4 young. Marmota marmota.

Alpine Pika, see Siberian Pika.

Alpine Pipistrelle, a southern Pipistrelle going above the treeline in the Alps. Usually sleeps in the cow-chalets. Body 2 in., tail

11 in. long; wing-span 9 in. Pipistrellus savii.

Alpine Shrew, a Shrew from the Alpine regions. Total length $5\frac{1}{2}$ in. of which about half is tail. Blackish-grey above, somewhat lighter below, no sharp demarcation between the two. Tips of the teeth red. A woodland form. Sorex alpinus.

Alsatian, a large wolf-like dog with a smooth coat, 22-26 in.

high.

Altai Deer, a central Asiatic race of the Wapiti, lives in the densest forests of the Altai, Tien Shan, and Western Mongolia. About 62 in. high at the shoulder. Distinguished from the American Wapiti by its smaller size and longer antlers. Yellowish-tawny colour with no reddish tinge. Cervus canadensis songaricus.

Altai Maral, see Altai Deer. Altai Wapiti, see Altai Deer.

Amazonian Dolphin, 6-10 ft. long, a freshwater Dolphin,

from the Upper Amazon and its tributaries. Narrow, straight snout with stiff bristles. Small dorsal fin. Eats fish. *Inia geof-frovensis*.

Ambergris, a pathological concretion formed in the gut of the Sperm Whale. Usually contains the impacted horny beaks of the cuttle fish or squid upon which this whale feeds. Formerly

used in medicine, now in perfumery.

American Black Bear, found over a large part of the forested area of North America; some workers recognize several species. The colour is glossy black, but most forms also have a brown phase, the "cinnamon bear." Length 5-6½ ft., shoulder-height about 40 in., weight 200-500 lb. Has a docile disposition and will only attack man if irritated. Hibernates in the northern part of its range. Breeds about once every three years; gestation period 7 months: 1-4 cubs born in the middle of January in the winter den. The fur-trade accounts for about 10,000 black pelts and 1,000-1,500 cinnamon pelts every year. Ursus (Euarctos) americanus.

American "Elk" or Wapiti, typical race of the Wapiti from the western mountainous regions of North America from Alberta to Northern New Mexico. Nowadays chiefly in Yellowstone Park (about 40,000), Montana, Idaho, Washington and Manitoba. Yellowish- to brownish-grey, head and neck-mane dark chestnut brown, large buttock-patch straw-coloured, belly blackish, legs dark brown. Calves yellowish, spotted white. Males up to 5 ft. high at the shoulders. Antlers with 5-7 points each side, rarely more; up to $5\frac{1}{2}$ ft. long. One young at a birth, sometimes 2, rarely 3. Cervus canadensis.

American Wolf, occurs over the whole of North America as far as Southern Mexico. Many forms have been described which are regarded by some workers as separate species and by others as merely races of the same species.

Amur Goral, see Korean Goral.

Anglo-Arabian Horse, a cross between an English blood horse and a horse of oriental origin. Now only bred in France.

Angora Rabbit, variety of Tame Rabbit. The silky hair reaches a length of 8-10 in. White; pink-eyed; good "doers," weight 6-8 lb. Bred in Germany, England and France since the middle of the eighteenth century. The hair is combed out and spun for wool.

Angwantibo, a Lemuroid closely related to the Potto. The eyes and ears are larger than in the latter, tail reduced to a negligible stump. Coat thick, long and woolly, rusty brownish-grey above and greyish below. Length about 10 in. Calabar and the Cameroons, Arctocebus calabarensis.

Ankole Buffalo, see Uganda Buffalo.

Anoa, wild dwarf Buffalo from the Celebes, about 40 in. high at the shoulder. Horns are straight spikes. Black or blackish, females sometimes brown; white marks are present, chiefly on the lower jaw, lower part of the neck and above the hooves. Buhalus (Anoa) depressicornis.

Ant-bears, see Aardvarks.

Ant-eaters (American), family of New World Edentates. Body hairy, head elongated and tapering, the mouth opening being very small; no teeth, but a thread-like extensible tongue with which they catch ants and termites. The fore-feet have digging claws. Terrestrial or arboreal; Central and South America. Three genera: Great Ant-eater; Tamandua; Little Ant-eater. Myrmecophagidae.

Ant-eaters, Scaly, see Pangolins. Ant-eaters, Spiny, see Echidnas. Antelope, American, see Pronghorn.

Antelope, Indian, see Blackbuck.

Antelope Jack Rabbit, see White-sided Jack Rabbit.

Antelope-rat, see Indian Gerbil.

Antelopes, include a number of sub-families of the Hollowhorned Ruminants. Form and size very variable. Chiefly plain and desert animals but also found in forests and occasionally in rocky regions. Very common in Africa where there are many species. Also occur in Western and Central Asia and in India. One species occurs in the South-Eastern corner of Europe. Include: Antelopes, True; Neotragines; Dik-diks; Klipspringer; Bubaline Antelopes; Orygine Antelopes; Reduncines; Saiga; Duikers; Tragelaphines. Many workers also include the Goat-Antelopes.

Antelopes (True), sub-family of attractive medium-sized Antelopes. Horns only in the males or in certain species also in the females. Most of them African but some in India, Western and Central Asia. Include: Blackbuck; Dibatag; Gazelles; Gerenuk;

Pala; Springbuck. Antilopinae.

Anthropoids, or Man-like Apes, include the Gorilla and the Chimpanzee in Africa and the Orang-Utan in Borneo and Sumatra. Largest of the monkeys, they are distinguished amongst other things by the lack of a tail, cheek-pouches and ischial callosities (bare patches on the buttocks). They form the family Simiidae (= Pongidae).

Antilopine Kangaroo, a large Kangaroo native to Northern Australia. Red with whitish ventral surface. Macropus antilopinus.

Aotinae, sub-family of the Cebidae including the Douroucoulis and the Titi Monkeys. Cat-like Monkeys with woolly or fluffy hair and non-prehensile tails. Hands and feet with five digits. South America. Aotinae.

Aoul, see Soemmerring's Gazelle.

Apar, see Three-banded Armadillo. Apello, see Capuchin, Weeping.

Aperea, wild relative of the Guinea-pig from Southern Brazil and Paraguay. Cf. Peruvian Cavy. Cavia aperea.

Apes, see Anthropoids.

Apes and Monkeys, a sub-order of the Primates, ranging in size from the Gorilla to the Pigmy Marmoset. Chiefly arboreal and inhabiting tropical forests, but some live amongst rocks. Distributed over Africa, Southern and Eastern Asia and Central and South America; the northernmost limits are Japan, Northern China and Tibet. There is none in Madagascar, Australia, North America or Europe (except Gibraltar). The majority are herbivorous or frugivorous, but many feed on small animals of various sorts. Gestation from 3 to 9 months according to size. Usually only a single young one at a birth save in the Marmosets, where there are two or three. Super families: Old World Monkeys and New World Monkeys. Simiae.

Arab Horse, the domestic horse of the Near East and North Africa (cf. Barb), the purest breed of the Tarpan-like horses. Introduced into Arabia in earliest times; in Europe only of importance for crosses; one of the strains which go to make up the English blood horse. There is a stud of pure Arabs in England.

Arabian Gazelle, smaller and darker than the Edmi (though it is known locally as "Idmi"), but related to the latter and also to the Palestine Gazelle and Chinkara. Arabia from Sinai to Aden. Gazella arabica.

Arabian Oryx, closely related to the Beisa, with a shoulder-height of 35 in., the smallest Oryx. Colour mostly dirty white, tail-tuft and a few marks on the head and legs blackish-brown. Southern Arabia to Mesopotamia. Oryx leucoryx.

Arctic Hares, group of North American Hares (q.v.). Large, powerful Hares, with a long thick coat—greyish to light brownish in summer and white in winter. Inhabits Arctic regions from Alaska to Newfoundland, mostly north of the forest regions. Three species, of which the most widely distributed is Lepus arcticus.

Argali, the largest of all Sheep; shoulder-height 46–48 in. Distribution: from Bukhara and the Altai through Tibet and the Gobi Desert to Western Kamchatka. Horns in both sexes, very large in the ram. Coat (in summer, short-haired) chiefly greybrown above, white below. Winter coat, close, thick and darker. Tail short. Ewes and young live in large flocks, rams in small troops of 8–10. Most important source of the Fat-rumped Sheep. Several races including: Pamir Argali; Tibetan Argali. Ovis ammon.

Argente Rabbits, see Silver Rabbits.

Ariel Gazelle, another name for Addra Gazelle (see Dama Gazelle). Ariel is a Sudani name for a Gazelle applied to various

species; Addra is the Dongolese equivalent.

Arizona Wapiti, a race of Wapiti, nowadays probably extinct; lived in the White Mountains of Arizona and the Mogollon Mountains of New Mexico. Cervus (canadensis) merriami. (Wapiti have been re-introduced in Northern Arizona and are protected by local land owners. Said to be increasing.)

Arizona White-tailed Deer, smaller and lighter than the Virginian Deer, lives in Southern Arizona and South-West New Mexico, Western Texas and some of the mountains of Mexico.

Odocoileus couesi.

Arkar Sheep, see Kopet-Dagh Urial.

Armadillos, a family of New World Edentates. Upper surface of the body, including the head, legs and tail, covered with armour plates arranged in transverse bands; in many species hairs or bristles project through apertures between the plates. Fore-feet with from 3 to 5 strong, curved fossorial claws; hind-feet plantigrade, with 5 toes, all provided with nails. Teeth peg-like and numerous-32-100. Nocturnal animals feeding on insects, worms, carrion, roots and fruit. South and Central America; one species as far as Texas. Dasypodidae. The family is divisible into three sub-families. (1) Dasypodinae, which have 7-10 hinged bands, a long cyclindrical snout and long ears set close together; up to 12 at a birth. Include: Nine-banded Armadillo; Shield-tailed Armadillo; Mulita Armadillo. (2) Euphractinae, in which each horny plate is surrounded by a ring of much smaller ones, and the ears are set far apart. Usually only one young at a birth. Include: Hairy Armadillo; Six-banded Armadillo; Dwarf Armadillo; Tatouay; Giant Armadillo; Three-banded Armadillo. (3) Chlamydophorinae, with the Fairy Armadillo.

Arna, the wild Buffalo of India, reaches a shoulder-height of 6 ft. 6 in. The horns are crescent-shaped and almost 6 ft. long and lie very nearly in one plane, the flat front surfaces have cross-wrinkles. The body is sparsely covered with short black hairs. Several sub-species from Ceylon through India, Burma, etc., to Borneo; in pre-Christian times west as far as Mesopotamia. Occur principally in high, thick grass and always in marshy parts or near water. Common in the plains of the Ganges and the Brahmaputra. Keep together in large herds grazing in the morning and in the evening. Mate in the autumn, 1-2 calves in the summer; 10 months' gestation. Origin of the Domestic Buffalo.

Bubalus bubalis.

Arni, see Arna. (Arna is the masculine, arni the feminine Hindustani name of the species.)

Aru Island Wallaby, small Wallaby on Aru and Kei Islands. The earliest known painting of a Kangaroo refers to this species

(by the Dutch painter de Bruyn, 1714). Macropus brunii.

Arui, the only Wild Sheep of Africa. A short upright mane from neck to middle of back and long hair on the neck and fore limbs. Colour principally reddish-brown. Shoulder-height to about 39 in. Horns usually not over 25 in. long, record 33½ in. Several sub-species from the mountains of North Africa from Morocco to Egypt and Eastern Sudan. Ammotragus lervia.

Asiatic Chipmunk (see also Chipmunk), small Ground Squirrels, upper parts yellowish brown-grey with black longitudinal stripes. Body 6 in., tail 4 in. long. Ground-living in coniferous and birch woods in Northern Asia as far as the Urals; dig their holes amongst the roots of trees. Feed on seeds and berries; lay in a store for the winter but have an unbroken hibernation. Eutamias asiaticus.

Ass, African Wild, lives in the plains and desert regions of North-East Africa (from the Sudan to Somaliland) wherever zebras do not occur. Grey with long ears; 4-4\frac{1}{4} ft. at the withers. Two races: Nubian Wild Ass and Somali Wild Ass. Origin of the Donkey. Equus (Asinus) asinus.

Ass, Tibetan Wild, see Kiang.

Ass, Wild (of the Bible), see Onager.

Assam Rhinoceros, see Chittagong Rhinoceros.

Assami, see Abyssinian Bush-pig.

Aswoil, see Sloth Bear. (Mahratta name for this animal.)

Ata, see Goa.

Atelinae, sub-family of the New World family of Monkeys Cebidae. Have a true prehensile tail with a naked patch on the tip ventrally. Limbs very long with the fore limbs longer than the hind and the hands longer than the feet. Thumbs either absent or working in conjunction with the index fingers. Entirely arboreal; South and Central America. Include: Spider Monkeys; Brown Woolly Spider Monkeys; Woolly Monkeys. Atelinae.

Atlantic Seal, see Grey Seal. Atlas Gazelle, see Edmi Gazelle.

Aurochs, an extinct wild bovine. The origin of domestic cattle. In former times common all over Europe, North Africa, Western and Central Asia. The last recorded specimen died in 1627 in Poland in the district north of Warsaw. A large, heavily built ox, dark blackish-brown with a small, whitish dorsal stripe. Horns long, bent forwards and a little upwards, probably light-coloured with black tips. Bos primigenius.

Australian Cat, Colonial and fur trade name for species of the

marsupial genus Dasyurus, the so-called "Native Cat."

Australian or Vulpine Opossums, genus of the Phalangerinae,

about the size of a cat. Distinguished from the nearly-related Cuscus by the large ears and bushy tail. Pupils round. Tasmania and Australia. Arboreal and leaf-eating. The female bears only two at a birth. Valuable fur animals ("Australian and Tasmanian Opossum"). Include: Long-eared Opossum; Brown Long-eared Opossum; Short-eared Opossum. *Trichosurus*.

Avahi, a long-tailed, woolly-haired Lemuroid from Madagascar. Ears buried in the greyish-brown coat. Nocturnal. Avahis laniger.

Axis Deer, see Chital.

Aye-Aye, a Lemuroid living in bamboo thickets in Madagascar. Forms a sub-family of the Lemurids. Two chisel-shaped, rodent-like incisors in each jaw. Colour principally blackish-brown; about the size of a cat. Feeds on insects and the contents of bamboo-and sugar-canes which it extracts with its long and remarkably attenuated third fingers. Daubentonia (= Chiromys) madagascariensis.

Azara's Agouti, dark, greenish-blackish species of Agouti. Lives in Southern Brazil. Dasyprocta azarae.



Babirusa

Babirusa, peculiar long-legged Wild Pig from Celebes and the neighbouring islands to the east. Upper tusks long and growing up through the skin of the snout and curving backwards to touch the forehead in old ones. Skin thick, wrinkled, nearly bare and ash-grey. Up to 3 ft. 6 in.

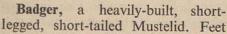
long and 31 in. high at the shoulder. Solitary or in small herds in marshy forests, etc. Nocturnal. Feeds on fruits and grubs. 1–2 at a birth. Babirussa babyrussa celebensis. There is a second race from the island of Boru (between Celebes and Ceram) with smoother skin than the above. It was described as long ago as in

1658. Babirussa babyrussa babyrussa.

Baboons, genus of medium-sized Monkeys with an elongated, square-ended, dog-like snout. Large cheek-pouches and strong canine teeth. Buttock patches large and coloured. Face often highly coloured. Tail medium length and curving downwards. Rock-dwelling in Arabia and Africa south of the Sahara. Live on plants and small animals. Gregarious. Gestation 7 months. Include: Olive Baboon; Yellow Baboon; Guinea Baboon; Sacred Baboon. *Papio*.

Bactrian Camel, central Asiatic representative of the Camel group and the only one now known to exist in the Old World in a wild or feral state. Has two humps, one behind the other. Dark brown, somewhat reddish in summer. Used as a domestic animal from the Crimea and Asia Minor to Manchuria and

China. The wild Bactrian Camel, very like the tame one, occurs in the Tarim Valley near Lob Nor and in other parts of Chinese Turkestan and the Gobi Desert. Possibly these are only the descendants of domestic camels run wild in ancient times. Gestation 13 months; one at a birth. Camelus bactrianus.





Bactrian Camel

with strong, fossorial claws, eyes and ears small. Walks on the soles of the feet. Grey above, belly and legs black, head and neck striped black and white. Body $27\frac{1}{2}-31\frac{1}{2}$ in long, tail 7 in., weight variable; boars about 25 lb., sows about 22 lb., record about 40 lb. Found nearly all over Europe (but there is a lighter coloured race in Spain and a smaller one in Crete), and in Northern Asia. There are nearly related forms in Japan, China, Central Asia and Persia. Prefers living in woods with clearings and fields near by. Chiefly nocturnal. Digs its own hole ("set") which has a living chamber and several entrances. Omnivorous. Has an intermittent hibernation during which 3-5, rarely 2 or 6, young are born. The hair is used for shaving-brushes. Meles meles.

Badger, American, silver-grey mixed with black above, yellowish-white below. Head dark with a white median stripe and white cheeks. Legs black. Body heavily-built, long-haired; head broad and flattened with short hair. Length up to 28 in., of which 5½ in. are tail. Found chiefly on plains and in open woods. More of a Carnivore than the European Badger, living chiefly on burrowing mammals such as ground-squirrels and prairie-dogs which it digs out of their holes. Most active at night, but not exclusively nocturnal; 1–5, usually 3, young are born underground in May or the beginning of June. In the northern part of its range has an uninterrupted hibernation. Occurs from Saskatchewan to southernmost North America. The pelts are used in the fur trade; in 1928 about 60,000 came on the market. Taxidea taxus.

Badger, Japanese, smaller than the Badger, hair shorter and softer. Dark brown above with yellow undercoat showing through, belly blackish-brown, no white cheek-stripes. Japan and North-East Asia. Known as "Mami" in the fur trade. Meles anakuma.

Baikal Seal, relic race of the Ringed Seal in the Siberian Lake Baikal; Pallas recorded it from Lake Oron as well in 1811 but this has not been confirmed. *Phoca hispida baikalensis*.

Baira, see Beira.

Baird's Tapir, a species of Tapir occurring from Southern Mexico

to Panama. Blackish-brown with lighter patches on the cheeks,

throat and breast; white rims to the ears. Tapirus bairdii.

Baird's Whale, belongs to the Beaked Whales, lives in the North Pacific from Bering Straits to California. Black; hinder part of the belly greyish or whitish. Up to 40 ft. long. Berardius bardii. (The modern view is that the genus Berardius contains but one species Berardius arnuxi, described from the seas around New Zealand; and that this rare species has a world-wide distribution.)

Bald Uakari Monkey, distinguished by its scarlet face, in sharp contrast with the long silky whitish hair of the body. Coat buffyor red-yellow, dirty white on the back, golden below. Head and body 12 in. long, tail $3\frac{1}{2}$ in. From North-West Brazil. Lives in small troops in forest trees; feeds mostly on fruits. Cacajao calvus.

Bali Cow, tame variety of the Bantin bred on the island of Bali in the Dutch East Indies. Shows many juvenile characters in comparison with the Bantin. Horns blackish-brown, tips not bent inwards. The meat is regularly exported to Java and Singapore; the Bali Cow has been introduced into Celebes.

Balisaur, see Hog-Badger. (= Bhála-our, Hindustani for "sand-

pig.")

Bamboo-rats, Rodents related to the Mole-rats; eyes very small and ears barely projecting beyond the fur. The ringed tail is one-third the body length. From tropical Asia. The largest species, *Rhizomys sumatrensis* from Sumatra and farther India, reaches a head and body length of 20 in. *Rhizomys*.

Bandar, see Rhesus Monkey. (Hindustani name of species.)



Banded Ant-eater (Myrmecobius fasciatus)

Banded Ant-eater, a Marsupial from the West and South of Australia. With the graceful form and size of a squirrel; total length about 17 in. of which the tail measures 7 in. Fur short, close, rough, almost spiny. Colour above red, darkening on rump and tail, with 6 or 7 white bands across the back and flanks behind. Under parts pale yellow. The teeth are very numerous (50–54) and exceeded in number only by some armadillos and whales. Female has no pouch. Catches ants and termites with the long, narrow, sticky tongue. Myrmecobius fasciatus.

Banded Wallaby, small Wallaby, reminiscent of the Ratkangaroos, grey-brown with remarkable black and white cross bands on the back. Western Australia. In thickets and low-lying ground and the borders of swamps. Lagostrophus fasciatus.

Bandicoots, Australian, family of Marsupials the size of a rabbit. Insectivorous and herbivorous. Hind-legs elongated with toes 2 and 3 fused and small and toes 4 and 5 large and free. Forelegs small, two- to three-toed, fossorial. Indigenous to Australia and New Guinea including the Kei Islands. Different species appear regularly in the fur market. The family includes: Rabbit-bandicoots (*Peragale*), True bandicoots (*Perameles*), and

the Pig-footed Bandicoot (Choeropus). Peramelidae.

Bank Vole. Occurs in many sub-species all over Europe north of the Pyrenees and Southern Italy; also as far as Siberia. Typical form brown-red above, sides somewhat lighter, mixed with grey, feet and belly white. Size very variable, body $3\frac{2}{3}-5\frac{1}{3}$ in., tail $1\frac{1}{2}-2\frac{1}{2}$ in. Usually in woods, deciduous or coniferous; vegetarian, but also eats animal food; 3-4 litters yearly, of 6-8 young. Evotomys (= Clethrionomys) glareolus. [Members of the genus Evotomys (= Clethrionomys) are all closely related. They are found throughout Europe, Asia (North of the Himalayas), Japan and North America (from the Arctic Circle southwards to Colorado). They are distinguished from true Voles (Microtus and allies) by the possession of rooted molars in adults instead of rootless or persistently growing ones.]

Bank Vole, Northern, related to the Bank Vole. From the

Arctic parts of Europe and Asia. Evotomys rutilus.

Bantin, a wild bovine represented by different races in Java, Borneo, Sumatra, northwards through the Malay Peninsula to Indo-China, Siam, Burma and Assam. Colour above reddishbrown (to blackish-brown in old males), belly lighter to whitish, lower parts of legs and rump patch white. Dorsal ridge and dewlap less strongly developed than in the Gaur. Shoulder-height 60–70 in. Horns olive-green with the tips turned inwards. Tamed on the island of Bali as the Bali Cow. Bos (Bibos) banteng.

Banting, see Bantin.

Barasingha, see Swamp Deer.

Barb Horse, descended from the wild horse of Western Europe, it is bred in North-West Africa. Probably introduced from

Spain.

Barbary Ape, a Macaque from the mountains of Morocco and Algiers. Was perhaps originally wild on Gibraltar but those now there have been introduced. Reddish olive-brown; face, hands and feet dirty brown; ischial callosities pale red. Tail vestigial. About 2 ft. 6 in. long. Macaca sylvana (= inuus).

Barbary Ground Squirrel, a small Ground Squirrel from Morocco, Tunis and Algeria. Reddish-grey above with four yellowish longitudinal stripes, white below, tail with grey bands.

Atlantoxerus getulus.

Barbary Sheep, see Arui.

Barbary Stag, a relatively small race of the Red Deer from Algeria and Tunis. Dark brown with a grey-brown spinal stripe and irregular whitish spots on the flanks. Antlers up to 39 in. long. Cervus elaphus barbarus.

Barbary Striped Mouse, see Striped Mice.

Barbastelle Bat, a species of Vespertilionid occurring in North Africa, Southern and Central Europe as far as Southern Sweden and in West-Central Asia, to the Himalayas. Ears broad, shorter than the head and joined at their bases; upper-parts and wings dark blackish-brown, belly greyish-brown. The heel-spur has a lobe of skin on its posterior border. Body and tail each 2 in., wing-span 10½ in. Appears early in the evening, flying fast and high. Round woods and in gardens, prefers hilly, wooded regions. Barbastella barbastellus.

Barking Deer, see Muntjac.

Barred Bobcat (see also Lynx). Chestnut to rufous, mixed with black on the back. Legs banded dark-brown and blackish. Belly whitish with large black spots. Tip of tail black. Found in Western North America from South-West British Columbia to Northern

California. Lynx fasciatus.

Barren Ground Caribou, a group of Reindeer inhabiting the tundra, or "barren-grounds," of the Old and New Worlds. Distinguished from the Woodland Group of Caribou by their longer, more slender, rounder and less palmated antlers; by their lighter colour and smaller size. Represented by several forms in the barren grounds of North America and by the Greenland Caribou. The typical form is Rangifer arcticus, described from North-East Canada, which reaches a shoulder-height of 31 ft. and a weight of 300 lb. But there is no rigid distinction between the Barren-Ground and Woodland groups of Caribou. Several races (e.g., the typical Reindeer from Scandinavia; and a large dark form, Rangifer stonei, with a shoulder height of 4 ft. 4 in., from the Kenai Peninsula of Alaska) cannot be allocated to either group with certainty and are best regarded as intermediate. Stone's Caribou finds a parallel in the Alaskan Moose from the same peninsula.

Bat, Common, see Common Pipistrelle.

Bats, order of flying mammals. The wing is a membrane spread between the arms (with elongated fingers) and the body and legs, and generally, more or less completely, enclosing the tail. Most of them are insect-eating but the largest are fruit-eating; a few are blood-sucking. Active at twilight or at night. Found the world over. Usually only one young at a birth, carried about during flight by the female. Two sub-orders: Fruit-bats and Insectivorous Bats. Chiroptera.

Beaked (Bottle-nosed) Whales, sub-family of the Sperm and Beaked Whales (*Physeteridae*). Snout beak-like, more or less sharply defined. Teeth hidden in the gums save 2-4 teeth in the lower jaw. Cosmopolitan. Include: Bottle-nosed Whale; Cuvier's Beaked Whale; Sowerby's Whale; Baird's Whale. *Ziphiinae*.

Bear, Australian, fur-trade name for Koala and Wombats.

Bear, Native, see Koala.

Bear-monkey, a Leaf Monkey from the hill forests of South Ceylon above an altitude of 4,000 ft. Much persecuted, for the sake of its rich fur, and brought almost to the verge of extinction. "Pithecus ursinus" of older writers—now called Kasi senex monticola.

Bearded Seal, an Arctic Seal forming a genus of its own. The thin coat is bluish to yellowish-grey above, usually self-coloured but sometimes with indistinct spots, yellowish-white below. Long whiskers. Male 7–10 ft. long, female smaller. Young ones woolly, dark grey-brown, born on the ice in spring. Feed chiefly on bottom-living sea creatures, but also on fish. *Erignathus barbatus*.

Bears, a family of Carnivores. Heavily built and robust, snout fairly elongated, ears short and round. Molars with low grinding cusps, carnassials not strongly developed. Tail very short and scarcely noticeable. Walk on the soles of the feet which are 5-toed. Omnivorous, feeding on a large variety of vegetable matter. Found in Europe, Asia, North America and parts of South America. Include: Sloth-bear; Malay Bear; Himalayan Black Bear; Japanese Bear; Spectacled Bear; Brown Bear; Isabelline Bear; Syrian Bear; American Black Bear; Grizzly Bear; Kodiak Bear; Polar Bear. Ursidae.

Beatrix, see Arabian Oryx.

Beaver, aquatic Rodents with a flattened scaly tail and webbed hind-feet. Live in communities and build "lodges" in ponds which they make by damming streams with dams of branches, stones and earth. Feed on roots and bark. The fur is valuable; some 80,000 skins (American) are used every year. There are two kinds of Beaver: (1) European Beaver (Castor fiber), formerly common in many parts of Europe and in Siberia but now almost exterminated. There are about 260 individuals on the Elbe between Torgau and Magdeburg; others on the Rhone in France; in Norway near Oslo; reintroduced in Sweden in a few places; a few still exist in Russia and in Siberia. Most of the European beaver colonies are protected. The largest Rodent of the Old World: body up to 32 in., tail up to 15 in. long. Gestation about 6 weeks, 1–2 young at a birth, rarely 3. (2) North American Beaver (Castor canadensis), formerly very common over most of the region from Alaska and Labrador to the Rio Grande but now sadly reduced through trapping; 2–6, rarely 8, at a birth; usual number 4.

Beaver Rats, sub-family of the Muridae spread over Australia, New Guinea and the Philippines; very interesting from the point of view of geographical distribution. Molars, in most, reduced to 2 pairs above and below. *Hydromyinae*. Best known: Australian Beaver Rat (or Australian Water Rat), adapted for an aquatic existence, swimming well with its large hind-feet. Eats insects, fish, etc. Australia, New Guinea, and the Kei Islands. (Genus *Hydromys*.)

Bechstein's Bat, upper-parts reddish-brown, under-parts white, ears and wings dark-brown. Body up to just over 2 in., tail $1\frac{1}{2}$ in., wing-span 11 in. Flies in woods and orchards and only in mild, calm weather. Central Europe and west to England; common in Central Germany. Myotis bechsteini.

Beden, another name for the Nubian Ibex, see Ibex.

Bedford's Wallaby, small Wallaby from Queensland or Northern Australia. Coat long-haired, pale isabelline-coloured. *Macropus bedfordi*.

Bedlamers, see Hooded Seal.

Bedlington Terrier, a peculiar woolly breed of dog, about 16 in, high at the shoulder. Bluish-grey or brownish.

Beech-marten, a near relative of the Pine-marten, from which it is distinguished by its greyish-brown fur and white throat mark which divides into two branches posteriorly. Continental Europe in the south and centre and north as far as Zealand; also occurs in Asia. Habits as in the Pine-marten but is less shy of man and is often found in stables, barns, wood-piles, etc. Some 200,000 pelts are used annually in the fur trade, the best coming from Bosnia, Bulgaria and Greece. Martes foina.

Beira, an Antelope from the mountains of Northern Somaliland and Abyssinia, now included in the Dik-dik sub-family. Larger than the true Dik-diks with a shoulder-height of 23 in. characterized by its remarkably large ears. Reddish-grey; horns only in the male, bent slightly forward, up to $5\frac{1}{2}$ in. long. *Dorcotragus megalotis*.

Beisa, a species of Oryx. Nearly related to the Gemsbok but distinguished from it by the fact that the black eye-band is not connected with the black nose-band. Colour chiefly a light isabelline-fawn, but varying according to race. Shoulder-height about 48–49 in.; horn record 40½ in. Weight about 450 lb. Found from Tanganyika to Abyssinia and Suakin on the Red Sea. Oryx beisa.

Belgian Hare, pure bred Tame Rabbit, having nothing to do with Hares. Bred since sixteenth century to resemble a Brown Hare as much as possible. Weight 8 lb.

Beluga, see White Whale.

Beni Israel, see Salt's Dik-dik.

Bennett's Wallaby, large Wallaby from Tasmania, pale redbrown speckled with blackish above, ears brown-black, grey-white below. Male—head and body 4 ft.; tail, 3\frac{1}{4} ft. Female two-thirds of this size. Known to the fur trade, together with the nearly related Red-necked Wallaby, as "Bush Wallaby." Macropus rufogriseus (or bennetti).

Beveren Rabbit, Tame Rabbit usually bred as the Blue Beveren. 5-13 lb. Valuable fur, and good meat animals.

Bharal, sheep-like but intermediate between the sheep and the goats. Males without beard or goaty smell but horns (small in the female), goat-like, resembling those of the Turs. Hair bluish-grey, browner in summer. Males reach a shoulder-height of 35½ in. Record horn 33 in. long. Live in the highest and wildest parts of Tibet and the neighbouring highlands as far as Western China. Psedoïs nahoor.



Bharal

Bharal, Caucasian, another name for the East Caucasian Tur, see Tur.

Bighorns, Wild Sheep, ranging in western North America from Alaska and Yukon to Mexico and occurring in North-East Siberia, Eastern Kamchatka. Horns relatively short but very thick at the base, present in both sexes. Many sub-species; colour dirty grey or brownish-grey with a white mark on the rump, belly and legs whitish. In some North American forms the animal is entirely white. See also North American Bighorn; North-East Siberian Bighorn; Kamchatka Bighorn. Ovis canadensis.

Bilby, see Rabbit-bandicoot.



Binturong, a Viverrid related to the Palm-civet. One of the few mammals outside Australia and South America which have a prehensile tail. The size of a fox; tail as long as body. Long black hair. Nocturnal and arboreal

and almost omnivorous. From Assam and Siam through the Malay Peninsula to Sumatra, Java and Borneo. Arctictis binturong.

Birch Mouse, a mouse-like, climbing Rodent, most nearly related to the Alactagas, Jerboas and Jumping Mice. Yellowish-grey above with a black stripe along the spine, yellowish-white below. Western Asia and Eastern Europe to Hungary, Poland and Norway, also in Denmark. Lives in birch woods; hibernates. Sicista subtilis.

Bison, large, powerful wild cattle, with a thick, woolly coat, especially well-developed on the fore-part of the body, and a beard. Horns round in cross-section. Hump-backed in the shoulder region. Include: North American Bison; European

Bison (nowadays only in reserves). Bison.

Bison, Indian, another name for the Gaur which has nothing

to do with the true Bison.

Blaauwbok, an extinct Antelope of the Orygine group. In the eighteenth century was rare and only found locally in the south of Cape Colony. The last was shot in 1800 in the mountains between Swellendam and Algoa Bay. Bluish-grey with a short mane; no dark face-markings. Horns $21\frac{1}{2}-24\frac{1}{2}$ in. long, shoulderheight about 45 in. in males, 40 in. in females. There are a few specimens in museums in Leiden, Paris, Stockholm, Upsala, Vienna. Hippotragus leucophaeus.

Black Ape, a monkey from Celebes. Black with red ischial, callosities. There is a tuft of hair on the crown of the head. Snout long, tail a mere button. 2 ft. 6 in. long. Most nearly related to the macaques but the long snout is reminiscent of the

baboons. Cynopithecus niger.

Black Buffaloes, wild African Buffaloes living in the bush and open grassy plains of South and East Africa from the Cape to Eastern Sudan and Abyssinia. In many regions, particularly in the Sudan, decimated or exterminated by man and rinderpest. Distinguished by their size (shoulder-height of 60–70 in.) and by their horns which are very much thickened at the base and have a strong backward curve



Black Buffalo

near the lower end; the horns do not lie all in one plane as do the horns of the Indian Buffaloes. Skin and sparse hair normally black. Usually live at low altitudes but have been observed up to 10,000 ft. on Mount Kilimanjaro. Always found near water and live in herds. Wild and vicious, they are never tamed. Meat good to eat. Three sub-species: Uganda Buffalo; Nile Buffalo; Cape Buffalo. Bubalus (Syncerus) caffer.

Black Colobus, from tropical West Africa and Fernando Po Island. It has longish black hair which on the forehead forms a forwardly projecting tuft. Tail short-haired without terminal tuft. Head and body about 40 in. in length, tail about 60 in. Colobus

satanas.

Black Jacket Monkey, see Black Saki Monkey.

Black Lemur, a species of Lemur showing sexual dichromatism, the males being black and the females rufous to dark brownish-grey. North-West Madagascar. Lemur macaco.

Black Mangabey, a glossy black Mangabey with a tuft of hairs on top of the head and long dull-brown whiskers. From the

Upper Congo. Cercocebus aterrimus.

Black Rat, see House Rat, also Alexandrine Rat.

Black Rhinoceros, the commoner of the two African Rhinoceroses, reaches a length of 11½ ft. plus a tail of 2 ft.; shoulder-height to 5 ft. 8 in. Upper lip pointed and prehensile. Two horns, the anterior one the longer, rarely over 31 in. long, record 53½ in., record for posterior horn 24¾ in. Skin naked, without deep folds, slate-grey. Formerly from the Cape to Somaliland, Abyssinia and Sudan, and west over the dry open plains of Central and West Africa, but now exterminated in many regions. Habitat is mostly open bush country but sometimes forests and foothills. Chiefly nocturnal, feeds on leaves, grasses and roots. Either solitary or in pairs, sometimes in threes and fours. Rhinoceros (Diceros) bicornis. (Figure at p. 172.)

Black Right Whale, Northern, see Right Whale, North Atlantic. Black Right Whale, North Pacific, see Right Whale, Pacific.

Black Saki Monkey, lives in small families in the forests of Venezuela, Guiana and Northern Brazil. Fur soft, black; young ones brownish-grey. Long whiskers and a cap-like mass of hair on the head. Head and body 22 in., tail almost as long, very bushy. *Chiropotes satanas*.

"Black Sheep," see Stone's Bighorn.

Black Tree-kangaroo, see Tree-kangaroos.

Black-backed Jackal, a relatively short-legged Jackal with a fox-like head. Rufous, with a black, white-spotted saddle-marking and a yellowish-white belly. Found from the Cape to the Blue Nile and Somaliland. Canis (Lupuella) mesomelas.

Black-crested Langur, general colour reddish-brown above,

limbs and tail orange. Head with a dusky crest. Found in Sumatra. Pithecus melanolophus.

Black-eared Marmoset, appears to be a melanistic variety of

the Common Marmoset. Hapale jacchus.

Black-faced Brocket, a small deer from Ecuador living up to

an altitude of 13,000 ft. Mazama rufina.

Black-gloved Wallaby, large Wallaby. Brownish-grey above, light yellow below. Hands and mask-like mark on the face black. Tail with a well-defined crest of stiff black hairs above and another below. Body about 31 in., tail 29 in. Western Australia. *Macropus erma*.

Black-headed Uakari Monkey, from Northern Brazil. Coat somewhat shaggy, mostly yellow-brown with the head, limbs and lower surface of tail black. Head and body 20 in. long, tail 15 in.

Cacajao melanocephalus.

Black-striped Wallaby, one of the medium-sized Wallabies from Queensland and New South Wales. Mottled grey and red with a black dorsal stripe. Whitish below. Length of head and body 32 in., of tail 24 in. *Macropus dorsalis*.

Black-tailed Deer, see Mule Deer.

Black-tailed Jack Rabbit, large, long-eared Hare with long hind legs and a black tail. Occurs in several races in the western and southern states of the U.S.A. west of the Mississippi. Winter coat not essentially different from summer coat, the latter paler in consequence of fading and bleaching. Lepus californicus.

Black-tailed Marmoset, a pretty Marmoset (sensu stricto), about 18 in. long, of which 10 in. are tail. The long silky hair is silver, the tail black and the face reddish. Brazil and Bolivia.

Hapale argentata.

Black-tailed Prairie-dog, a Ground Squirrel found in the Great Plains region of the U.S.A. from Montana and North Dakota to Texas. The size of a small marmot, total length $14\frac{1}{2}-16\frac{1}{2}$ in. Dark pinkish cinnamon with fine grizzling of black and buff; tail tipped with black. (A colony can be seen in the Zoological Gardens, Regent's Park.) Cynomys ludovicianus.

Black-tailed Wallaby, one of the Large Wallabies. Dark reddishgrey, redder towards hind end of back; pale red below. Hands, feet and tip of tail black. Body and head 32 in., tail about 26 in. Lives in damp thickets; New South Wales. Known in the fur

trade as "Swamp Wallaby." Macropus ualabatus.

Blackbuck, belongs to the sub-family Antilopinae, the typical group of Antelopes and reaches a body length of about 50 in., not quite as big as a Fallow Deer. Shoulder-height about 32 in. Dark brownish-grey to black above; a ring round the eye, the muzzle and underparts white. Horns (only in the male) long, ringed and wound like a corkscrew; 24–31³/₄ (record) in. long.

Comes from India where it inhabits open plains chiefly in tall grass by rivers. Go about in herds, usually up to 50 individuals, led by an old buck. Regarded as a worthy quarry by both Europeans and Indians. Hunted with cheetahs by princes. *Antilope cervicapra*.

Blackfish, see Pilot Whale.

Bladder-nose Seal, see Hooded Seal.

Blainville's Beaked Whale, occurs in the Indian Ocean and round Australia; occasionally found off Massachusetts and New Jersey. About 12 ft. long. Mesoplodon densirostris.

Blasius' Bat, a Horseshoe Bat resembling the Euryale Horseshoe Bat but having the nose-leaf more pointed at its upper end. Confined apparently to the Eastern Mediterranean region; doubtful whether it comes as far west as Italy. Rhinolophus blasii.

Blesbok, nearly related to the Bontebok but the face-blaze divided by a brown bar between the eyes and no white rump-patch. Tail entirely brown. Horns with a greenish tinge and yellow tips. Same size as the Bontebok; horn record 18\frac{1}{8} in. Formerly in countless numbers on the grassland of Northern Cape Province, Orange Free State, Transvaal and Bechuanaland as far as the Molopo River. Now only in a few reserves. Strictly protected. Damaliscus albifrons.



Blesbok

Blesmol, see Mole-rats.

Blind Mole (see also Mole), somewhat smaller than the Common Mole. Eyes covered over with skin. Greyish-black, lips, feet and tail whitish. Southern Europe as far as Southern Switzerland, also in the Caucasus. *Talpa caeca*.

Blood Horse, English, the ideal race-horse, descended from native material crossed with imported Arabs. Has played an important part in improving the breed of light draught and hacking horses.

Bloodhound, a large dog with long pendulous ears, large pendulous lips and a wrinkled forehead. Tan-coloured with a black face. Used to track men.

Blood-sucking Bats, family of bats found from tropical South America to Southern Mexico; resemble the Leaf-nosed Bats (*Phyllostomidae*) and have a rudimentary nose-leaf; tail short or lacking. They do not actually suck blood but puncture the skin of living animals with the very sharp canines and outer incisors of the upper jaw and lap the blood which flows out

with their long tongues. Desmodontidae. The Greater Blood-sucking Eat (Desmodus rotundus) is about $2\frac{3}{4}$ in. long and occurs from Mexico to Bolivia and Paraguay; the Lesser Blood-sucking Bat (Diphylla ecaudata) has a similar range. Diphylla is best distinguished from Desmodus by the complexity of its outer lower incisor, this tooth possessing in it 7 lobes instead of 2. In a third genus Diaemus, from Brazil and Dutch Guiana, this tooth shows 3 lobes.

Blue Bear, or Snow Bear (see also Bears), occurs in Western China and Tibet and is a race of the Brown Bear. Colour blackish with the head and muzzle palish brown and a white collar. The tips of some of the body hairs vary from reddish-buff to greyish-white. Ursus arctos pruinosus.

Blue Bull, see Nilgai.

Blue Hare, tail entirely white; winter coat white or pale grey (except in the Irish Hare). Chiefly a moorland animal. Gestation about 30 days. Often 3 broods a year; number of young at a birth varies, in summer usually 5. Northern Europe, Scandinavia, Finland, Russia, Alpine Region, Scotland and Ireland. (Lepus timidus = Lepus variabilis of most older writers.)

Blue Sheep, see Bharal.

Bobac, a steppe-dwelling Marmot ranging from Poland and Eastern Hungary through Southern Russia eastward into Asia. The pelts are used in the fur trade. This animal's flea is said to be

a vector of pneumonic plague. Marmota bobak.

Bobcat or Bay Lynx (see also Lynx). Somewhat like the Canada Lynx, but only two-thirds the size, shorter in the leg, ear-tufts very small or lacking, coat not so long, colour browner and strongly spotted. Occurs in the U.S.A. further south than the Canada Lynx. Also known as the "Wildcat." Lynx rufus. In the desert regions from California to Arizona there is a special form (Lynx rufus eremicus). The upper-parts are yellowish-brown mixed with grey and black, lightly spotted with brownish-black. Other sub-species have been described from Wyoming, Mexico and Florida.

Boehm's Zebra, a sub-species of the Bontequagga from the Kilimanjaro region. The only Zebra north of the Zambesi which retains more or less distinct traces of the "shadow" stripes alternating with the distinct ones. Equus (Hippotigris) quagga boehmi.

Bongo, a rare and very beautiful Antelope belonging to the subfamily Tragelaphines. Like the Eland it has horns in the female as well as in the male—record 39½ in.; average good head 33 in. Height at the shoulder about 48 in. Only been exhibited a few times in Zoos (London, New York, Rome). Boöcercus euryceros.



Bongo (Boöcercus euryceros)

Bonin Island Bat, a Flying Fox from the Bonin Islands southeast of Japan. Has long, almost black ("seal-brown") fur, with greyish shadow markings, in which the ears are half hidden. Pteropus pselaphon.

Bonnet Monkey, species of Macaque from Southern India. Hairs on the crown of the head radiating from a central bare point. Greenish-grey, whitish below, face pink. Macaca radiata.

Bontebok, one of the Hartebeests. Purplish-brown with a reddish tinge, blaze on the front of face, rump patch and base of tail white. Horns lyrate, black, 15–16\(^8\) in. long. Shoulder-height to 42 in. Weight about 200 lb. Formerly common on the plains from the Cape to the Orange River, now only in a few reserves in Bredasdorp Division, Cape Province. Damaliscus pygargus.

Bontequagga, a species of Zebra, distributed in many races over the



Bontebok

plains of South and East Africa; stripes not so numerous but broader than in Grevy's Zebra and the Mountain Zebra, and arranged longitudinally over the crupper. Hooves narrow, ears narrow and thinly haired. Colour variable; the southern races have dark brown stripes with intervening brown "shadow stripes" or an orange or cream background and white legs; the

northern ones have black stripes, without shadow stripes, on a white ground and are striped down to the hooves. Besides the extinct Quagga, see also Boehm's Zebra; Burchell's Zebra; Chapman's Zebra; Grant's Zebra; Wahlberg's Zebra. Equus (Hippotigris) quagga.

Bornean Wild Boar, a large species, with the lower canines shaped as in Sus verrucosus (the Warted Pig), but lacking the facial warts. It occurs in Borneo, Sumatra and the Philippines. Head very long, low and narrow with a naked tip to the snout and bunches of long, bent, reddish bristles on the cheeks. Brownish-yellow to black, large black tuft on the tail. Several races. Wander about in large herds. Sus barbatus.

Borzoi, or Russian Wolfhound, as high as the Irish Wolfhound

but not so powerful. Coat long and silky, head flat.

Boston Terrier, a breed of dog closely related to the bulldog, 14–20 in. high.

Bottle-nosed Whale, belongs to the Beaked Whales. Anterior end of the head, especially in old males, swollen out and containing fat and fibrous tissue, snout beak-like. Two ventral grooves, medium-sized dorsal fin. Toothless save for 2 teeth in each side of lower jaw. Up to 30 ft. long. Young, grey-black mottled with lead colour, adults lighter; head and belly mottled whitish. Old males have white foreheads. North Polar Seas and North Atlantic. Hunted for the oil; the flesh is palatable. Hyperoodon rostratus.

Bouter, see Amazonian Dolphin.

Bovinae, sub-family of the Hollow-horned Ruminants. Large, heavily built animals with the muzzle bare and the upper lip uncleft. Tail long and tufted. Males usually with a dewlap. Four nipples. Nowadays wild in Southern and Central Asia, Africa south of the Sahara, North America. Include: Buffaloes; Wild Cattle. Bovinae.

Bowhead, see Greenland Right Whale.

Branded Wallaby, small Wallaby, deep red with white belly and light stripe on the hind-quarters. Northern Queensland.

Macropus stigmaticus.

Brazza's Monkey, body grey and greenish, extremities and tail blackish, forehead and upper parts of cheeks and nose bright chestnut, a black band from ear to ear above the forehead, eyebrows and upper half of bridge of nose black; lower half of nose, cheeks and chin white. Whiskers white. Upper Congo. Cercopithecus brazzae.

Bridled Nail-tailed Wallaby, see Nail-tailed Wallabies.

Brindled Gnu, a species somewhat larger than the nearly related White-tailed Gnu. Pale grizzled roan to blackish slaty brown, dark vertical stripes. Mane and tail black. Tuft of hairs

on the face. Shoulder-height up to $52\frac{1}{2}$ in., record horn $33\frac{1}{4}$ in. Several races from Bechuanaland to Kenya. See White-bearded Gnu and Nyasa Gnu. Connochaetes (Gorgon) taurinus.

Broad-banded Armadillo, see Tatouay.

Brockets, genus of small Deer from Central and South America. Antlers unbranched, a pair of short spikes. Fawns spotted white. Include: Central American Brocket; Black-faced Brocket; Brown Wood-Brocket; Red Brocket. Mazama.

Brow-antlered Deer, a group of three forms related to the Swamp Deer. The long, curved brow tine of the antlers forms together with the beam the arc of a semicircle. The beam is unbranched for most of its length with small points towards the tip. Good antlers 40 in. long; rarely more than 10 points each side. In summer reddish-brown above, white below, in winter dark brown with lighter under parts. Fawns spotted white. Shoulder-height about 4 ft. Inhabit marshy regions from Manipur south through Burma and Malay Peninsula and east through Southern Siam to Hainan and Formosa. Include: Eld's Deer; Thamin; Thamin, Siamese. Cervus eldi.

Brown Bat, related to the Northern Serotine and widely

distributed over North America. Eptesicus fuscus.

Brown Bear (see also Bears), found in Europe, North and Central Asia as far as Amur, Kamchatka and Northern Japan, Western Himalayas, Persia and Asia Minor. Lives in little-visited forest regions. Was formerly common in Europe, but now surviving only in a few places: extinct in England in the eleventh and in Germany in the eighteenth century, still to be found in Russia, the Pyrenees, the Carpathians, Transylvania, the Balkan Peninsula, Northern Scandinavia, Finland and the eastern Italian Alps. Colour brown or greyish-brown, sometimes almost black. European specimens usually about 6 ft. 3 in. long, but large males can reach 7 ft. 3 in. Weight 465–560 lb. but up to 750 lb. Shy animals and solitary, except in the breeding season. The 2–3 cubs sometimes follow their mother until they are three years old. Hibernate. See also Isabelline Bear and Syrian Bear. Ursus arctos.

Brown Hare, tail black above; ears longer than head; thighs, and usually also the flanks, with a rust-red wash. Winter and summer coats very similar. (Cf. Medium Hare.) Lives in fields and open plains of Central, Western and Southern Europe; England and lowlands of Scotland (not Ireland). Gestation 30–35 days; 3–4 young up to 4 times a year. Its fur is an important raw material for the manufacture of felt hats. Lepus europaeus (= Lepus timidus of most older writers).

Brown Hare, English, sub-species of Brown Hare confined to England and Wales; more ochre-yellow than the Continental form. Introduced into Switzerland. Lepus europaeus occidentalis.

Brown Hare-wallaby, see Hare-wallabies.

Brown Himalayan Goral, about as large as the Grey Himalayan Goral; colour much browner, with a more strongly marked dark dorsal stripe; tail with a black medium line above. Horns straighter and not heavily ringed. From the Himalayas of Sikkim and Nepal. Nemorhaedus hodgsoni.

Brown Hyena (see also Hyena), occurs in South Africa, where it takes the place of the Striped Hyena. Uniform dark brown with a mantle of long, coarse hair on each side of the body. Yellow on throat and sides of neck. Shoulder-height about 28 in. Formerly common from the Cape to Angola and Kilimanjaro; now rare or exterminated in many places such as the Cape, but still found in South-West Africa, Kalahari and Rhodesia. Hyana brunnea.

Brown Rat, tail shorter than the head and body. Upper surfaces reddish grey-brown, whitish below; black varieties occur from time to time. Body 81-10 in., tail 7-81 in. Weight of adults about 17 oz. Came to Europe in ships from Asia at the beginning of the eighteenth century and increased rapidly. Spread further with shipping and is now practically cosmopolitan and has driven out the Black Rat in many places. In temperate countries, where its success as a colonist is most marked, water courses, sewers and drains are its chief highways and it enters houses chiefly through their basements. Omnivorous and a great nuisance: the damage done by rats (this species and its ally the House Rat together) is colossal. In Britain before 1914 it was estimated at from £10,000,000 to £15,000,000 yearly, and it has certainly increased in extent and value since; in the United States the direct annual loss in towns and cities has been estimated officially at 20,000,000 dollars, and for the country at large ten times as much; similar huge estimates have been made in Denmark, France and Germany. To be reckoned with as a spreader of disease (plague, trichinosis, etc.). Gestation period 35 days; 8-10 young are born 2-3 times a year. Rattus norvegicus.

Brown Wood-brocket, a Brocket from Guiana, Colombia, Bolivia, Brazil and Trinidad. Colour light grey-brown or grey to

whitish. Shoulder-height 19 in. Mazama simplicicornis.

Brown Woolly Spider Monkey, resembles the true Spider Monkeys in shape but has woolly hair and rudimentary thumbs. Yellowish-grey to grey-brown; head, limbs and tail sometimes with a reddish or blackish tinge. The naked face is red and surrounded with black. Total length about 4 ft., tail about 26 in. Forests of South-East Brazil. Brachyteles arachnoides.

Brown's Wallaby, see Sombre Wallaby.

Bruang, see Malay Bear.

Brush Rabbit, small Rabbit from the west of North America,

chiefly California. Lives in thickets for choice. Sylvilagus bachmani.

Brush-tailed Phascogale, squirrel-sized Phascogale with pointed snout, and tail as long as body with conspicuous terminal brush



Brown Woolly Spider Monkey (Brachyteles arachnoides)

of black hairs. Grey above, whitish below. Length of head and body 10 in., tail $9\frac{1}{2}$ in. Australia. Very troublesome to poultry-

keepers. Phascogale penicillata.

Brush-tailed Porcupines, genus of Old World Porcupines. Tail from \(\frac{1}{3}\) to \(\frac{1}{2}\) of the body length, clothed with scales except for the brush at the end which is formed from modified bristles; body with short quills. \(Atherurus.\)—African Brush-tailed Porcupine (\(Atherurus africanus\)), Western and Central Africa; Asiatic Brushtailed Porcupine (\(Atherurus macrourus\)), Southern China, Assam, Burma, Malay Peninsula, Sumatra.

Brush-tailed Rat-kangaroo, from Australia, about the size of a rabbit. Grey-brown above, speckled with white and black; yellowish-white below; prehensile tail thickly haired, end third above with a prominent crest formed by long black hairs. Head and body 14 in., tail 12 in. Terrestrial, sleeps all day in holes in the earth. Eats grass and roots. Fur animal. Bettongia penicillata.

Brush-tailed Rock-wallaby, see Rock-wallabies.

Bryde's Whale, South Atlantic species of Rorqual (sensu stricto), up to 47 ft. long. Blue-black; white below. Whalebone very short. Balaenoptera brydei.

Bubal Hartebeest, the smallest of the Hartebeests, shoulder-

height up to 44 in. Light reddish-brown, tail-tuft black. Horns form a U as seen from in front, record length $15\frac{1}{2}$ in. From the interiors of Morocco, Algeria, Tunis and Senegal, also in isolated patches of mountain in the Sahara. Formerly also in Egypt. Extremely rare; probably now extinct. Bubalis (or Alcelaphus) buselaphus.

Bubaline Antelopes, sub-family of large African Antelopes with high withers and sloping backs (except Gnu). Horns in both sexes. Include: Gnus; Hartebeests (2 genera, Bubalis (or Alcelaphus)

and Damaliscus). Bubalinae (or Alcelaphinae).

Buffalo (American sense), see North American Bison.

Buffaloes, genus of the sub-family Bovinae, with the cross-section of the base of the horns triangular. Muzzle broad, ears large, hair sparse, partial baldness in adults. Tail medium length with a terminal tuft. Live in open country or in forests but very fond of water and always found near marshes or water-courses. Wild Buffaloes occur in Southern Asia and Africa south of the Sahara; see Buffaloes, Asiatic and Buffaloes, African.—See also Buffaloes, Domestic. Bubalus.

Buffaloes, African, differ from the Asiatic Buffaloes in the shorter, more pointed muzzle, the backwardly directed hair of the middle line of the back and the fact that the horns, especially in the males, are often swollen at the base. Plain and forest-living animals from Africa south of the Sahara. Two species: Forest Buffalo; Black Buffalo. Nowadays often considered to belong to a separate genus, *Syncerus*, from the Arna, *Bubalus*.

Buffaloes, Asiatic, differ from the African Buffaloes, amongst other things, in the forwardly directed hair of the middle line of the back and the smaller ears. Three species in India, Borneo, Celebes and the Philippines: Anoa; Arna; Tamaru. Bubalus, the

Anoa sometimes being put in a separate genus, Anoa.

Buffalo, Domestic, tame variety of the Arna, bred over a wide range from Japan through China and Southern Asia to North Africa, South-East Europe, Southern Italy and Sicily. Also introduced into Hawaii. Being a marsh-loving animal it is of great value in regions where rice is grown. The number of Buffaloes in India is estimated at 20,000,000 and in the Philippines at over 1,000,000. A very powerful draught and carrying animal; also produces milk. The flesh of very young ones is eaten. The thick hide is made into excellent leather. Wherever the range of the Domestic Buffalo coincides with the wild one the domestic races agree with the wild races. The Indian form appears to be the origin of the Domestic Buffaloes found further west; the latter show no racial differentiation. Hornless ones and albinos sometimes occur but never piebald ones.

Buffalo, Indian, see Arna.

Buffon's Kob, see Kob.

Bulldog, an excellent watchdog, about 18 in. high, heavily built, with strong, bandy legs and a "pushed-in" face.

Bulldog, French, like a Bulldog, but has erect ears and is more

lightly built.

Bull-terrier, a comparatively recent British breed of dog, originating from crosses between fox-terriers and bulldogs. Smooth, short, white coats.

Burchell's Rhinoceros, see White Rhinoceros.

Burchell's Zebra, a sub-species of the Bontequagga formerly very abundant in Bechuanaland and adjacent territories. Now extinct or on the verge of extinction. Broad, dark brown stripes on a cream ground, legs almost unstriped. Equus (Hippotigris)

quagga burchelli.

Burrowing Vole, belongs to a genus of Voles occurring in Central and Southern Europe and in North America. Resembles the Short-tailed Field Mouse. From Belgium and France to Hungary and from Northern Germany to Italy; eastwards into Asia. Lives in damp meadows, fields, vegetable gardens, etc. Nocturnal. 5–6 litters a year of 3–5 young. Pitymys subterraneus and many other species. (Cf. Pine Mouse.)

Burunduk, see Asiatic Chipmunk.

Bush Baby, see Galagos.

Bush Cow, name applied to the Buffalo, more particularly the

Forest Buffalo, in some parts of Africa.

Bush Rats, genus of Octodonts from Chile, Peru and Bolivia. Heavily built animals with proportionately large heads and medium-sized, broad, thinly haired ears. Tail usually with a terminal brush of hair. Best known species: Degu. Octodon.

Bush-dog, a South American Wild Dog, long-haired with short legs and tail. Brown. Body 25 in. long, tail $5\frac{1}{2}$ in. Forest-dwelling and nocturnal, hunts in packs. Brazil and Guiana to Panama.

Speothos venaticus.

Bush-pigs or River Hogs, Wild Pigs in Africa and Madagascar; the male has a bony ridge on the bridge of the nose. Head and body clothed in bristles which lie flat; ears narrow and pointed with a tuft of hairs at the end. Include: South African Riverhog (= Boschvark Bush-pig); Abyssinian Bush-pig; Malagasy Masked-hog; Red River-hog. Potamochoerus (or Choiropotamus).

Bush-wallaby, fur-trade name for the Red-necked Wallaby

and Bennett's Wallaby; see Wallaby.

Bushbucks, genus of African Antelopes about the size of a roe deer, belong to the Tragelaphines. White spots on the neck and cheeks, body often striped and spotted white. Usually a mane continued from the nape along the back. Horns (normally) only in the male, spirally twisted with a keel on the front edge, no

rings. Forest- or marsh-dwellers. Include: Nyala; Nyala, Moun-

tain; Bushbuck; Sitatunga. Tragelaphus.

Bushbuck (proper), one of the Bushbucks. Occurs in many races over the whole of Africa south of the Sahara except in the deserts and plains. Colour and size varies with the race but usually a brightly coloured animal, chiefly chestnut-coloured with white spots and stripes (hence its alternative name of "Harnessed Antelope") and a short white or black mane (nearly always black in females). Length about 5½ ft., of which 6 in. are tail, shoulderheight about 30 in., horns in male only, good ones 17–18 in. (record 21½ in.). Weight up to 170 lb. Tragelaphus scriptus.

Bushy-tailed Meerkat, a South African Mongoose. Reddish to yellowish-brown with a bushy, fox-like tail. Body 16 in., tail 12 in. long. Lives in colonies, making own burrows in loose earth or occupying those of Jumping-Hares. Feeds on small rodents, birds,

insects and eggs. Cynictis penicillata.

Buttikofer's White-nosed Monkey, see White-nosed Monkey, Gold Coast.

Caa'ing Whale, see Pilot Whale. Caama, see Cape Hartebeest. Cachelot, see Sperm Whale.

Cacomixtle ("Cunning Cat-squirrel") or Ring-tailed Cat, a marten-like species of Procyonid found from Panama, Costa Rica, Central America and Mexico to Southern Oregon, Colorado, Texas and Alabama. Brownish, yellowish white below, tail ringed brown and white. Length about 30 in., of which half is tail. A nocturnal, arboreal animal, living on small mammals, birds, insects and sometimes fruit. 3–4 young at a birth. The fur is known as "ringtail cat." Bassariscus astutus.

Caenolestes (Selvas), genus of peculiar rat-like Marsupials with two species in Ecuador and Colombia. Together with *Oreolestes* (of which genus a species occurs in Peru), forms one of the three sub-orders of marsupials. No pouch, Terrestrial and found in

thick undergrowth. Insectivorous. Nocturnal.

Caffer Cat, the source of domestic cats. Several races occur from the Cape to Egypt and Syria. Buffy-yellow to buffy-grey with indistinct dark marks on the neck and back, whitish below; legs with black cross-stripes; latter half of the tail ringed and with a black tip. Body 20 in. long, tail rather more than 10 in. Easily tamed. Felis ocreata (= lybica and constantina).

Cairn Terrier, like an Aberdeen but smaller and either grey

or sandy.

Californian Leaf-nosed Bat, one of the few American Leaf-nosed Bats ranging north to the Southern U.S.A. occurring in Lower California and Mexico. Medium-sized Bat with an erect nose-leaf

and very large ears. Coat very light in colour; hairs almost white, tipped with brown; wings brownish. Length $3\frac{3}{4}$ in., ears 1 in., wing-span 13 in. *Macrotus californicus*.

Californian Mastiff-bat (see also Mastiff-bat), largest Bat of the U.S.A. Total length $6\frac{1}{4}$ in., of which 2 in. are tail. Southern California, Arizona and Southern Texas. Eumops californicus.

Californian Wapiti, a small, relatively short-legged race of the Wapiti, known locally as "Dwarf Elk." Colour light, principally yellowish-grey above. Considered by American zoologists to be a separate species from other Wapitis. Comes from Kern County, California. Cervus (canadensis) nannodes.

Callimico, see Goeldi's Monkey.

Camel-like Animals, hornless Ruminants with only two toes to each foot. Neck long, upper lip deeply cleft and haired like the rest of the body. Include the camels of the Old World and the llamas of the New World. Camelidae.

Camels, Old World representatives of the camel-like animals distinguished by their one or two humps. Include the Dromedary and the Bactrian Camel; nobody seems quite clear as to whether they represent two different species or whether they are varieties of the same species. It is thought probable that neither now exists as a truly wild animal. Camelus.

Campbell's Monkey, nearly related to the Mona Monkey, but back not reddish. Sierra Leone and Liberia. Cercopithecus

campbelli.

Canadian Lynx (see also Lynx). Resembles the European Lynx,



Canadian Lynx (Lynx canadensis)

but usually longer-haired, greyer and less strongly spotted. Found in the coniferous forests of Canada and the U.S.A. as far as Pennsylvania, Oregon and Colorado. The young, 1–4, are born between May and June, according to the climate. Lynx canadensis.



Canadian Skunk

Canadian or Common Skunk and its allies are members of the American genus Mephitis, of which there are 10 species (with 8 additional subspecies) in Canada, the U.S.A. and Mexico. Cat-sized animals with a long, bushy tail. Coat long-haired and glossy black with a white stripe along each flank, the stripes joining on top of the head. Total length $22\frac{1}{2}$ -32 in., of which $6\frac{3}{4}$ -16 in. are tail (not counting the hairs): the females are somewhat smaller than the males. Found in clearings and in meadows near woods, but also on

plains where they find cover in thickets along water-courses. Sluggish animals, spending most of the day in holes in the ground. Live on small mammals, eggs, snakes, frogs, insects, etc. 4-6 and sometimes as many as 10 young at a birth at the end of April or the beginning of May. The anal glands secrete a very evil-smelling liquid which the Skunk can squirt at an enemy at a distance of 9-12 ft.; the stink will cling for months. An important fur animal; some 5,000,000 skins are used annually. Mephitis.—Mephitis mephitis, the best known form, comes from Eastern Canada.

Cane-rats, family of Rodents whose relationships are uncertain. (Now treated as a sub-family of the Echimyidae, belonging to the tribe of Porcupines.) Large rat-like animals, covered with spiny bristles; tail about one-third the length of the body. Gregarious and live in the neighbourhood of water; sleep during the day in their holes. Feed on grasses and roots. Two genera, from the Sahara to Natal; Thryonomys and Choeromys are commonly recognized, but recently they have been judged to be indistinguishable and Thryonomys is regarded as the genus to which all known species must be referred. Best known species Thryonomys swinderianus, from tropical Africa. Body 20 in., tail 7 in. Dark brown above, light grey-brown below. Hunted by the Africans, who like the meat.

Canids (or dog-like animals), a family of the Carnivores. Built for running, with long, powerful legs and a narrow body. Walk on the toes; claws non-retractile. Many of them take a vegetable diet (berries, etc.) as well as a meat one. Found nearly everywhere but not in Madagascar, New Guinea, New Zealand and on small islands. In Australia the Dingo is the only representative. Include: Foxes; Jackals; Wolves; Domestic Dogs, etc. Canidae.

Cape Buffalo, southernmost sub-species of the Black Buffalo; record horn span 50 in. In the eighteenth century very common all over the Cape right up to Cape Town itself, nowadays only in protected herds in the Addo Bush, the Knysna and Zitzikama forests and the bush along the Fish and Sunday Rivers. Bubalus (Syncerus) caffer caffer.

Cape Ground Squirrel, from the dry central plains of South Africa. Fur harsh and adpressed; general colour pale reddishbrown above, white below; with a narrow white stripe on each

side from shoulder to haunch. External ear reduced to narrow slit, without a trace of the pinna or conch. Geosciurus capensis.

Cape Hartebeest (see also Hartebeests). Horns form a V with a long basal part; record horn 26 in. Glossy reddish-brown with light under-parts. Face, back of the neck, throat and tail-tuft blackish-brown. Shoulder-height to 50 in. Formerly from the Cape to Angola



Cape Hartebeest

and Bechuanaland; now exterminated in the south. Bubalis (Alcelaphus) caama.

Cape Hunting-dog

Cape Hunting-dog, a peculiar African Wild Dog with a hyena-like head and only 4 toes on each foot. Colour black, white and yellow in irregular patches. Length up to 5 ft., of which 16 in. are tail, shoulderheight to 2 ft. Found in savanna country from Somaliland to the Cape and west to Angola and Lake Chad. Hunt in packs, attacking even large antelopes; shy of man. Up to 10 pups at a birth. The nearest

relatives are the Dhole, the Malay Wild Dog, the Siberian Wild

Dog and the Bush-dog. Lycaon pictus.

Cape Hyrax or Dassie, a gregarious Hyrax from South Africa. Apart from the short ears, rabbit-like in general appearance. Inhabits crannies and cracks in rocks. Feeds morning and evening, basks in sun by day and sleeps by night. *Procavia capensis*.

Cape Pouched Rat, see Pouched Rats.

Cape York Wallaby, small member of the Large Wallabies,

sandy-coloured with white stripe on hips. Head and body 27 in., tail 16 in. Inhabits the low-lying coastal regions of Northern Queensland. Macropus coxeni.

Capped Langur, a relative of the Hanuman Langur. Lives in Assam, Burma, Malaya and Java. Pithecus pileatus (now Trachy

pithecus).

Capromyidae, family of Rodents occurring in Central and South America and the West Indies. Include the Hutias. Capromyidae.

Capuchin, Azara's, a Capuchin Monkey from Paraguay, Peru

and Brazil. Very variable in colour. Cebus azarae.

Capuchin, Brown, a Capuchin Monkey. Brownish, limbs and tail darker. The hairs of the crown of the head stick out over the eyes and ears. Guiana, Colombia, and Brazil. Cebus fatuellus.



Capuchin Monkey

Capuchin Monkeys, from Central and South America with variable coats, the fur being woolly, silky or harsh, according to species; a long, haired tail, which is not truly prehensile although it can be wound spirally round branches. The name is derived from the cowl-like form of the thick hair of the crown of the head. Gregarious, arboreal and chiefly fruit-feeding. Voice soft and whining. Various species found from Nicaragua to Northern Argentine

which are often hard to distinguish from each other. Cebus.

Capuchin, Tufted, a Capuchin Monkey from Lower Amazon region, Brazil. Brownish-black, face lighter with whitish hairs. "Cowl" produced over the ears to form a pair of horn-like tufts. Cebus cirrifer.

Capuchin, Weeping, a Capuchin Monkey from Guiana and

Brazil. Brown with a black "cowl." Cebus apella.

Capuchin, White-throated, a Capuchin Monkey found from Nicaragua to Colombia. Head, breast and shoulders white; blackish brown "cowl" and a light flesh-coloured face; colour

elsewhere blackish-brown. Cebus capucina (= hypoleucus).

Capybara, the largest Rodent in the world, forms a subfamily of the Caviidae. Reaches about the size of a year-old pig: length over 40 in., height at shoulder 20 in., weight 110 lb. Strongly built animal with no tail and a short swimming membrane between the toes, and strong hoof-like nails; somewhat like a giant guinea-pig in shape. Coat thin and coarse; brownish. Lives in herds of 50-100 head by rivers and lakes in the forest regions of South America from Guiana to the River Plate. Good swimmers and always seek refuge in water when pursued. In inhabited regions they appear at dusk, but elsewhere they are on the move in the day-time as well. Herbivorous, eating water plants, grass, fruit, bark, etc.; can be a considerable nuisance in plantations. Gestation $5\frac{1}{4}$ to $5\frac{1}{2}$ months; 1-4 young at a birth. Hydrochoerus capybara.

Caracal (see also Lynx). A link between the Jungle Cat and the true Lynxes. Buffy rufous above, light red to whitish below;



Caracal (Caracal)

no spots. Ears with black tufts. Newly born young have dark spots. Body up to 2½ ft., tail 10 in. Africa, and Western Asia to India. Not in Ceylon. Lives in open country, especially deserts and savannas. Fast and active, nocturnal. Preys on small

antelopes, hares, birds, etc. Caracal caracal.

Caribou (= Reindeer), a genus of Deer from the northern, chiefly the arctic, parts of the Old and New World. The only Deer in which the females have antlers as well as the males. Tamed by the nomadic peoples of Northern Europe and Northern Asia from early times. Several forms which can be divided into three groups. Polar Island Caribou; Barren Ground Caribou; Woodland Caribou. Rangifer.

Carnivores, an order of flesh-eating mammals divided into two

sharply defined sub-orders:-

1. Fissipedia, or Land Carnivores, including the following families: Catlike animals; Viverrids; Hyenas; Canids; Bears; Mustelids; Procyonids. Found all over the world (except in New Zealand), but the only Australian representative is the Dingo.

Most live on warm-blooded prey, but some feed on reptiles, amphibia or fish, and a few on invertebrates or carrion, while others are omnivorous. The young are born helpless and often blind.

2. Pinnipedia, comprising the Eared-Seals, Walruses and Seals. These are highly modified for an aquatic life but come on shore to breed. They have a world-wide distribution in coastal waters; some inhabit inland seas and lakes such as the Caspian and Lake Baikal. Carnivora.

Caspian Seal, relic race of the Ringed Seal in the Caspian Sea.

Phoca hispida caspica.

Caspian Souslik (see also Souslik), coat is yellowish sandy brown but is dyed in the fur trade to resemble mink and then goes by the name of "Peschaniki." Occurs in Southern Russia round the Caspian. Sometimes wrongly called an Old World prairie-dog. Citellus fulvus.

Cat-like animals, a family of Carnivores. Bodies lithe, walk on their toes, claws retractable. Many of them are nocturnal. Include: Jaguar; Leopard; Lion; Lynx; Puma; Tiger; Ocelot; Tiger-cat; Wild Cat; Domestic Cat; Cheetah, etc. Felidae.

Cat-squirrel, see Cacomixtle.

Cattle, Domestic, derived from the Aurochs which was domesticated in prehistoric times. The present-day varieties can be arranged in two groups: one group has the skull more or less like the Aurochs with the forehead square and ending in a straight line between the horns and a long face. This group are mostly draught and meat animals. The other group has the forehead produced backwards between the horns and a short face. These are usually small and good milkers.

Cattle, Wild, genus of the sub-family Bovinae with the crosssection of the horn round or oval. In India, South-East and Central Asia, North America; until recently also in Europe. Include: Yak; Aurochs; Oriental Wild Cattle; Bison. Bos.

Cavies, a sub-family of the Caviidae. Live in South America. Include: Guinea-Pig; Peruvian Cavy; Aperea; Kerodons; Pata-

gonian Cavy; Dwarf Patagonian Cavy. Caviinae.

Caviidae, family of Rodents from South and Central America. Includes the world's largest Rodent (Capybara). Two sub-families: Cavies; Capybara (*Hydrochoerinae*). Caviidae.

Cavy, Pig-like, see Aperea.

Cavy, Restless, see Peruvian Cavy.

Cebidae, a family of the New World Monkeys, to which belong most of these forms. Never larger than medium-sized Old World Monkeys. Entirely arboreal, most of them thickly haired, often with prehensile tails. The thumb, when it is present, is not opposable to the other digits. No cheek-pouches or bare buttockpatches. Two nipples on the breast save in the Howling Monkeys which have them in the armpits. Live in the forest regions of Central and South America from Southern Mexico to about latitude 30 degrees South. A single young one at a birth. Include: Howling Monkeys; Atelinae; Cebinae; Saki Monkeys; Aotinae. Cebidae.

Cebinae, sub-family of the New World family of Monkeys known as the Cebidae. Medium-sized or small with a round, haired, rolled-up tail. Limbs of medium length, the fore limbs not longer than the hind limbs. Feet longer than the hands. Thumbs well developed. Include: Capuchin Monkeys; Squirrel

Monkeys. Cebinae.

Celebes Wild Pig, belongs to the Warty Pigs. It lacks the facial warts found in Sus verrucosus, but agrees in having lower canines ("tusks") in which the hinder surface is narrower than the outer surface. (Cf. Wild Boar.) Several races distributed over the Celebes and adjacent islands and the Philippines. Young ones striped. Sus celebensis.

Central American Brocket, a Brocket from Southern Mexico and Central America. Chiefly bright reddish-brown, belly white.

Shoulder-height up to 25 in. Mazama tema.

Cercopithecidae, a family of Old World Monkeys. Live in Africa, Southern and Eastern Asia and Gibraltar. Two subfamilies: Cercopithecinae and Colobinae. Cercopithecidae.

Cercopithecinae, a sub-family of the Cercopithecidae. Mediumsized, of various shapes. Large cheek-pouches; ischial callosities present. Omnivorous. Include: in Africa—Guenons; Patas Monkeys; Mangabeys; Gelada Baboons; Baboons; Mandrills: in Asia—Macaques (also in North-West Africa and Gibraltar).

Cercopithecinae.

Chacma Baboon, a species of Baboon from South Africa. Blackish-grey with a greenish wash on the back; face black. No mantle, only a few long hairs on the shoulders. Gregarious and rock-dwelling. Feeds on reptiles, scorpions, millipedes, etc., and when all else fails roots and bulbs. Kills new-born lambs to get the milk in their stomachs. *Papio porcarius*.

Chameck Spider Monkey, see Red-faced Spider Monkey.

Chamois, the only Goat-antelope occurring in Europe. Horns in both sexes, about the length of the head, bent backwards, hook-shaped. In summer dirty reddish-brown with a black dorsal stripe, reddish-yellow below; in winter hair longer, dark brown to blackish-brown above, white below. Head and body 43 in., tail 1½ in. long. Lives in the Alps, Apennines and Carpathians and also occurs in local races in the Pyrenees and a few other high ranges in Spain, in the Caucasus and in Asia Minor. Go about in troops, chiefly in the upper limits of the tree-belt, in

summer ascend as far as the terminal moraines of glaciers. Rutting season from the end of October till December, 1 (occasionally 2) young in May. Rupicapra rupicapra.

Chapman's Zebra, sub-species of Bontequagga from the region between Damaraland and Matabeleland. Equus (Hippotigris)

quagga chapmani.

Cheetah, is in all essential respects a true cat; the claws are commonly said to be not completely retractile but this is due to a misapprehension; the claws are fully retractile but the lobes of skin which hide them when retracted in other cats are lacking in the Cheetah. Slender build, long legs; over a short distance one of the fastest animals. Colour varying according to race from light yellowish-grey to isabelline with black or brownish, round spots; a black stripe extending from the eye to the mouth on each side is usually conspicuous. Newly born ones are unspotted and greyish. Only one species, Acinonyx jubatus, is now recognized; this ranges from the Cape of Good Hope northwards over the greater part of Africa (except the central forested area) to Egypt and thence through South-West Asia to Northern India. A peculiarly handsome form from Rhodesia, described originally as a distinct species (Acinonyx rex), is now regarded as a "mutation" of the ordinary African Cheetah. This has the beginnings of a mane on the back of the neck. Length about 7 ft. of which 2½ ft. are tail, shoulder-height 2½ ft. Lives in savanna country from the Cape to Egypt. The Indian form (Acinonyx jubatus venaticus) has no mane and is smaller and more sparsely spotted. Found from Syria to Northern India. Cheetahs hunt by day as well as by night; prey on antelopes (up to the size of a kudu), deer, etc.; also attack domestic animals such as calves, sheep and goats (especially in Africa). Cannot climb. Trained for hunting (in Asia) since ancient times; nowadays used in India. Very easily tamed.

Chevrotains, a family of the Ruminants, amongst the smallest Ungulates. Slender and elegant animals, hornless. Upper canines of the males elongated, tusk-like. In India and Malaysia are found the reddish-brown Malayan Chevrotain and the white-spotted and striped Indian Chevrotain, and in West Africa the brown Water Chevrotain with white spots and stripes. Chevrotains have 1 or 2 at a birth. *Tragulidae*.

Chichica, Opossum from tropical South America. Metachirus opossum.

Chickaree, see Red Squirrel, North American.

Chigetai, see Kulan.

Chile Chinchilla, a small relative of the Peruvian Chinchilla, reaches a length of 14–16 in., of which one-third is tail. Lives in the sandy coastal region of Northern Chile. Nowadays is also bred

there in captivity. Known as "Bastard-Chinchilla" to the fur trade. Chinchilla velligera (= laniger).

Chilean Guemal, a Guemal from the Andes of Southern Chile and Patagonia. Colour bright greyish-yellow mixed with black.

About 3 ft. high at the shoulder. Hippocamelus bisulcus.

Chimpanzee, the smallest of the Anthropoids, old males reaching a height of $5\frac{1}{2}$ ft. and females $4\frac{1}{2}$ ft. Hair black to brownishblack. Several forms found throughout the tropical forests of Africa from Gambia, the Cameroons and the Congo to Uganda and the western borders of East Africa. Wander about in small bands in the trees and on the ground; climb more than gorillas. Feed on fruit, green shoots, etc., but also on insects, birds and eggs. The earliest described form bears the scientific name Anthropopithecus troglodytes (= Pan satyrus).

Chimpanzee, Bald-headed, has a thinly haired head with a bald pate in old age. Lives in Gabun (French Equatorial Africa).

Anthropopithecus (= Pan) calvus.

China Macaque, see Tcheli Monkey.

Chinchilla, Bastard, see Chile Chinchilla.

Chinchilla, Coast, see Chile Chinchilla.

Chinchilla, Cuvier's, see Mountain Chinchilla (2).

Chinchilla, King, see Peruvian Chinchilla. Chinchilla, Little, see Chile Chinchilla.

Chinchilla Rabbit, variety of Tame Rabbit, product of British breeding in 1919. Valuable fur animal, being a very good substitute for the true Chinchilla, a South American Rodent. Weight 5½-6½ lb. Cf. Giant Chinchilla Rabbit.

Chinchilla Rat, fur-trade name for the Magellan Tucotuco.

A substitute for real Chinchilla fur.

Chinchilla, True, see Peruvian Chinchilla.

Chinchillas, family of Rodents with three genera. Rabbit-like, but with long bushy tails. Coat very soft and fine, light grey with white and dark brown or yellow. Gregarious, living in western South America, chiefly in the mountainous parts; one species lives in the pampas. Twilight or nocturnal animals, spending the day in their holes. Include: Peruvian Chinchilla; Mountain Chinchilla; Viscacha; Chile Chinchilla. There has been much confusion about their names, but Prell (Zool. Anzeiger, 1934, 108, 97–104) has done much to clear it up. Chinchillidae.

Chinese Pangolin (see also Pangolin), occurs in Formosa, Hainan and China, and from there to Assam and Nepal. Manis aurita.

Chinese River Dolphin, discovered in the Tung-ting Lake, Yangtse-kiang River in 1918. A plaster cast of a specimen of this rare animal, received in London for dissection frozen in ice, may be seen in the British Museum (Natural History). Lipotes vexillifer.

Chinese Water-deer, small Deer with no antlers but with tusk-like upper canines. About 20 in. high at the shoulder. In summer light reddish-brown, in winter dark brown speckled with black; belly white. Fawns with white spots. From the Yangtse-kiang to Korea. Solitary or in pairs in the long grass of the valleys. Seem to have 4-6 fawns. Hydropotes inermis.

Chinkara or Indian Gazelle, has the typical Gazelle shape and is related to the Gazelles of Arabia and Palestine as well as to the Edmi Gazelle. Upper-parts and flanks chestnut, under-parts and



Chipmunk

rump-patch white, face with light and brownish longitudinal stripes. Shoulder-height 25-26 in., horns in both sexes, in males 10-15\frac{5}{8} in. (the latter a record). Lives on the plains of India and feeds on grass and leaves. Gazella bennetti.

Chipmunks, squirrel-like animals from Northern Asia and North America. Ears small and roundish; tail thinly haired down each side.

Frequently longitudinal stripes down the back. Live in holes in the ground. One genus, *Tamias*, now recognized; this is divided into three sub-genera, namely, *Tamias*, comprising a few North American forms; *Neotamias*, comprising a very large number of North American forms; and *Eutamias*, containing the Old World form from Siberia, China and Japan. *See* North American Chipmunks and Asiatic Chipmunks.

Chiru or Tibetan Antelope, an Antelope from the highlands of Tibet, its nearest relative being the Saiga. It is somewhat larger than the latter, horns (only in the male) slender, up to $27\frac{1}{2}$ in long. Colour light reddish-brown, whitish below, face black in the male. Live at between 12,000–18,000 ft. Pantholops hodgsoni.

Chita, see Cheetah.

Chital, a common deer in India and Ceylon with long 3-tined antlers. Coat short-haired, reddish-brown, spotted white the whole year round, belly white. No mane on the neck. Body up to 5 ft. long, shoulder-height up to $37\frac{1}{2}$ in. Record antlers 39 in. long along the outside curve. Axis axis.

Chitra, see Chital.

Chittagong Rhinoceros (= Assam or Hairy-eared Rhinoceros), a sub-species of the Sumatran Rhinoceros from Assam, has lighter, browner hair and a well-developed hairy fringe to the ears. Rhinoceros (Dicerorhinus) sumatrensis lasiotis.

Chousingha, see Four-horned Antelope.

Chow, a Chinese breed of dog resembling an Eskimo dog. Has a blue tongue. Is eaten in China.

Cinnamon Bear, see American Black Bear.

Circassian Goat, western Asiatic race of the Goat. Domestic, with screw-like horns. Probably derived from the Markhors.

Civet-cats, found in India and Africa and South-East Asia to Central China. Slender animals with coarse, wavy hair and a long tail. There are glands by the anus which secrete civet, a substance which forms the basis of many scents. See African Civet; Large Indian Civet; Tangalunga.



Clarke's Gazelle, see Dibatag. Climbing Mice, see Tree-mice.

Clouded Leopard, the size of a small Leopard, found in further India and the Dutch East Indies. Light yellowish-grey with large, greyish spots, partly rimmed with black. Barely $6\frac{1}{2}$ ft. long, of which 3 ft. are tail. Tree-living, preying on small mammals and birds. Felis (Neofelis) nebulosa.

Clydesdale Horse, a Scottish breed similar to the Shire Horse

but smaller; used for farm work and draught.

Coaita, see Red-faced Spider Monkey.

Coast Deer, see Columbian Black-tailed Deer.

Coati-mundi, see Coatis.

Coatis or Coatimundis, Procyonids with a very elongated snout from South and Central America. Diurnal animals, going about in small troops in the forests: they are good climbers and spend



Coati (Nasua nasua)

much of their time in trees. Omnivorous. About 40 in. long. The Ring-tailed Coatis (*Nasua nasua*), a reddish-brown animal, comes from South America; the White-nosed Coatis (*Nasua narica*) has a white mark round the eyes and on the snout and occurs in Mexico, Central America and South America as far as Peru.

Coke's Hartebeest, belongs to the Hartebeest genus. Bright sandy-coloured with a black tail-tuft. Shoulder-height to about 4 ft.; horns as in the Tora, record length 24 in. Several subspecies from the centre of Tanganyika Territory to the Tana River and Lake Baringo; also near Lakes Stefani and Rudolf. Bubalis (or Alcelaphus) cokei.

Collared Fruit-bat, an isabelline-coloured Fruit-bat from South Africa. Males with a yellow collar. Has often bred in the London Zoo. Gestation about 107 days: 1 young. Fruit-eating. Rousettus

leachi.

Collared Mangabey, a species of Mangabey found from Nigeria to the French Congo. Dark brown with the back of the head

reddish-brown and a white collar. Cercocebus torquatus.

Collared Peccaries, two closely related species of Peccary. One (Pecari tajacu) lives in South America south as far as Southern Brazil and Paraguay. The other (Pecari angulatus) occurs from Panama to South-West Texas, South-East New Mexico and Southern Arizona. Blackish-brown, white collar. Head and body 3 ft. long, tail just under an inch, shoulder-height up to 16 in. In North America lives in valleys and plains where cactus grows, goes up the slopes of wooded mountains. Lives in small herds, omnivorous, feeds principally in the morning. Two at a birth.

Collie, a Scottish sheep-dog about 22-24 in. high with a wolf-

like bearing and pricked ears. Coat long and fairly silky.

Colobinae, sub-family of the Cercopithecidae. Medium-sized and relatively slender, long-tailed. Vegetarian. Live in tropical Africa and Southern Asia, north to Tibet and North-West China. Include: in Africa, Colobus Monkeys; in Asia, Langurs or Leaf-Monkeys, the Douc Langur, the Proboscis Monkey and the Snubnosed Monkey. Colobinae.

Colobus Monkeys, genus of long-haired, arboreal Monkeys from tropical Africa. Two types of colour pattern, one black often with long white hair on the sides and tail, and the other red and brown. Include: Ursine Guereza; Guereza (sensu stricto); Kirk's Colobus; Mantled Colobus; Black Colobus. Colobus.

Colugo (= Cobego or Flying Lemur), a small order most nearly related to the Insectivores. Arboreal animals the size of a cat. There is a flying membrane each side of the body stretched between the neck, limbs and tail which acts as a parachute when the animals jump from tree to tree. Solitary and nocturnal, feeding on leaves and fruit. One young at a birth. Southern China, further

India, Borneo, Java, Sumatra and adjacent islands, and Philippines. Two genera (Galeopithecus or Cynocephalus and Galeop-

terus). Dermoptera.

Columbian Black-tailed Deer, reddish-brown to reddish-yellow in summer, brownish-grey mixed with black in winter; tail black above, white below. Somewhat smaller and shorter-eared than the related Mule Deer. Antlers branching. From the coast of Central California to near the Muir Glacier in Alaska, Odocoileus columbianus.

Common Dolphin, belongs to the genus Delphinus, the true Dolphins. Up to 6 ft. 8 in. long, colour variable, usually black above and white below, flanks greyish with yellowish and darker bands. Widely distributed in open waters, hunts in schools. Feeds on fish and cuttlefish. Occasionally met with off the European and both North American coasts. Frequently visits the south

coast of Britain. Delphinus delphis.

Common Hamster, stoutly-built, large head, short legs, stumpy tail. Brightly coloured, darker below. Body 10 in., tail 21/2 in. South-West Siberia, Central and Southern Russia, Austria, Hungary, Central Germany. Plain-dwelling animal, inhabits cultivated regions, especially corn fields. Eats corn, roots, etc.; also animal food. Lays in large stores of corn in its burrows. Hibernates. Gestation 20 days; 6-18 young. Coat used for fur linings in Germany. Cricetus cricetus.—A smaller race (body 81 in.), dark grey above, the Grey-backed Hamster (Cricetus cricetus canescens), is found on the left bank of the River

Maas in Belgium.

Common Indian Mongoose, related to the Ichneumon but smaller. Light grey, sprinkled with silver; tail without terminal tuft; legs blackish. Body up to 20 in. long, tail somewhat shorter. Widely distributed in India and famed as a destroyer of poisonous snakes; it is tamed for this purpose and also to deal with rats. Herpestes edwardsii (often incorrectly referred to as Herpestes mungo or Herpestes griseus); this species divided into several subspecies ranges from Northern India to Ceylon and from Assam to Persia.

Common Marmoset, a Marmoset (sensu stricto) with a head and body 8½-10½ in. and a tail 12-14 in. long. Black, white and reddishvellow mixed, tail black with about 20 white rings. Long, fan-



Common Marmoset

shaped white tufts covering the ears. Feeds on fruit and insects. Native of the Island of Marajo, in the mouth of the Amazon, Brazil; common in captivity. *Hapale jacchus*.—The Black-eared Marmoset which is chiefly brownish-black and reddish-grey is apparently only an individual variation of the Common Marmoset.

Common or Virginian Opossum, ranges all over temperate North America and is also found in Central and tropical South America, south to Argentina and Patagonia. In South America it is often called the "Crab-eating Opossum." It is an arboreal species; but lives in many towns as a scavenger, retiring for shelter by day to roofs and sewers. The female produces from 6–16 young which are transferred to the pouch immediately after birth. Didelphys marsupialis.

Common Pipistrelle, the smallest European Bat, body to $1\frac{3}{4}$ in., tail to $1\frac{1}{3}$ in., wing-span to 8 in. Upper-parts yellowish rufous-brown to dark brown, under-parts lighter, ears and wings blackish. Almost the whole of Europe and Northern Asia. Round the edges of woods, in clearings and round houses. Flies low and slowly from sundown to dawn. *Pipistrellus pipistrellus*.

Common Porcupine, best known species and only representative of the Short-tailed Porcupines in Europe. Slightly larger than



Common Porcupine (Hystrix cristata)

a badger in size, body 26 in., tail $4\frac{1}{2}$ in. On the neck a mane of very long bristles, erectile at will. The long pointed quills are ringed black and white. Occurs in the Mediterranean region of Africa, Southern Italy and Sicily. A very nearly related form (Hystrix africae-australis) lives in tropical and South Africa. Nocturnal and solitary, vegetarian. Gestation

period 60-70 days, 2-4 young at a birth. Hystrix cristata.

Common Rorqual or Finner, one of the Rorquals. Can reach a length of 80 ft. Black above, white below; whalebone (or "baleen") grey-black striped white, a yard long. Left lower jaw and baleen dusky like back; right lower jaw and anterior plates of baleen on right side white. Occurs in the North and South Atlantic and in the Pacific. Feeds on plankton and fish, often pursues cod and herring. Balaenoptera physalus.

Common Seal, belongs to the true or Earless Seals, and lives round the coasts of the North Atlantic and the neighbouring parts of the Arctic Ocean. It is the commonest seal in the North Sea and up the Baltic as far as Gottland. Colour variable. Closely allied forms occur in the North Pacific. Grey-white or yellow-grey above with numerous, often confluent, dark spots; lighter

below with no or few spots. Up to $6\frac{1}{2}$ ft. long, females smaller. Usually in herds of anything up to 30, on sandbanks and round low-lying coasts. Often passing up estuaries into fresh water in pursuit of fish. Feed on fish, crustacea and molluscs. The single young one, born usually in June, moults its white, woolly baby-coat after a few days. *Phoca vitulina*.

Common Shrew (see also Shrew), occurs in most of Europe and Asia north of the Himalayas. Not found in the most northern and most southern parts of Europe nor in Ireland. Body 2½-3 in. long, tail 1½-2 in. Dark brown above, flanks lighter, belly whitishgrey. Tips of teeth red. Nocturnal. 5-7 (rarely up to 10) young at a birth. Lives about 18 months; heavy mortality in autumn. Sorex araneus.

Common Souslik, the most western of the Sousliks, ranging from the Altai through Southern Russia to Silesia and the eastern Erz Mountains. Speckled dark brown and buff above, rusty yellow below; lips, chin and throat white, ring round the eyes yellow. Body 8½ in., tail 3 in. long. Used in the fur trade. Citellus citellus.

Coney (North American meaning), see North American Pika. "Coney," see Syrian Hyrax.

Continental Field Vole, relative of the Short-tailed Field Mouse. The former has a uniformly coloured tail (with a few scattered white hairs) and the ears are quite visible, while the latter has the tail dark above and light below, and the ears are almost buried in fur. Central Europe including Denmark to Western Siberia; absent from Scandinavia and England. Lives in fields, meadows, and along edges of woods, etc. 5–7 litters a year of 4–8 young. Sometimes a nuisance to farmers. *Microtus arvalis*.

Coon, see Raccoons.

Coquerel's Dwarf Lemur, a large species of the Malagasy Dwarf Lemur, over 20 in. long, of which more than half is tail. *Microcebus coquereli*.

Corsac, closely related to the Arctic Fox, colour reddish with yellowish-white below. Body 22–24 in., tail 14 in. From the steppes round the Caspian Sea and as far as Mongolia. *Alopex corsac*.

Cotton Rats, genus of Cricetines. Medium-sized rat-like Rodents with long, coarse hair, the ears almost buried in the coat, and the tail almost as long as the body. Brown above, whitish or yellowish below. Most numerous from Peru to Mexico; 3 species in the southern U.S.A. Sigmodon; commonest species in North America is Sigmodon hispidus, divided into many sub-species.

Cottontails, North American rabbits of the genus Sylvilagus with a pure white under side to the tail. Very generally shot. Several litters a year of 3-7 young. Widely distributed genus

with six species; representing in North America the Common Rabbit of Europe.

Coyote or Prairie Wolf, the North American representative of the Old World Jackals, about the size of a small sheep-dog. General colour dirty yellowish-grey, neck and legs rufous, belly whitish. Plains of western North America and as far south as Costa Rica. Several species, best-known is Canis (Lyciscus) latrans.

Coypu, valuable fur animal, belonging to the family Capromyidae. On account of a superficial resemblance to the Beaver is sometimes called Swamp Beaver. Barely attains half the size of a Beaver and has a naked rat-like tail the same length as its body. Body 16–23 in. Red-brown above, black-brown below. Inhabits temperate South America from Southern Brazil onwards, lives in pairs near fresh water, especially stagnant water, and digs its holes in the banks. Expert swimmer but a bad diver. Vegetarian. The fur is known as "Nutria" to the trade; it is only used in the plucked condition. Undercoat of fine soft hairs growing thickly, bluish-grey. Nowadays reared on fur farms, from which it frequently escapes. Myocastor coypus.

Crab-eating Macaque, from Burma to Siam, the Malay States and the East Indies; several races. Introduced into Mauritius. Brownish olive-green with a black admixture; whitish-grey below; hands, feet and tail blackish. Face leaden-coloured with white eyelids. Usually about 3 ft. long of which half is tail. (Sometimes

much larger, up to 47 in. in total length.) Macaca irus.

Crab-eating Mongoose, a large species, with relatively short tail and a whitish neck-stripe; head and body to 23 in., tail 16 in. Found in the marshy mountainous valleys of the south-eastern Himalayas and in Assam, and as far as China and Tenasserim. Lives chiefly on frogs, crabs, and fish. Herpestes urva.

Crab-eating Seal, belongs to the Monachinae and occurs in the Antarctic seas. Very variable in colour; from brown to yellowish-white; the young are usually mottled. Up to 8½ ft. long.

Feeds chiefly on crustacea. Lobodon carcinophagus.

Crescent Nail-tailed Wallaby, see Nail-tailed Wallabies.

Crested Mangabey, a species of Mangabey from the Tana River, East Africa, with a crest of radiating hairs on the head

which fall down over the ears. Cercocebus galeritus.

Crested Rats, genus of large Muridae with a badger-like brownish-black coat. The hairs along each side of the spine can be erected to form a dorsal crest, when the parting on each side of the body shows white due to the middle part of each hair being exposed. Nocturnal and vegetarian, up to 10 in. long. Form a sub-family of their own. Several forms in Abyssinia, Somaliland and Kenya. *Lophiomys*.

Crestless Porcupines, see Short-maned Porcupines.

Cricetines, Rodents belonging to the sub-family Muridae. Scientifically distinguished chiefly by the structure of the cheekteeth. Very variable in external appearance. Europe, temperate Asia, America and South Africa. See Cricetines, American; Hamsters; Rats, White-tailed. Cricetinae.

Cricetines, American, include the "rats" and "mice" of the New World; representatives of the true mice (see Muridae) are entirely lacking in the New World save those species introduced by man. Great variety of forms; include amongst others: Harvest Mouse; Grasshopper Mouse; Rabbit-eared Mouse; Cotton Rats; Fish-eating Rats; Rice Rats; Wood Rats.

Crowned Lemur, a species of Lemur from North-East Madagascar. Yellowish above, silvery-grey to whitish below, forehead with a reddish-golden cross-band. Tail dark. Lemur

coronatus.

Crowned Sifaka, the most highly coloured Sifaka. Madagascar. Propithecus diadema.

Culpeo, see Fox, Cordillera.

Cuscus, genus of the Phalangerinae. Very sluggish arboreal

animals, about the size of a cat, with a thick woolly coat and prehensile tail, naked at the end. Ears rather short, pupils round. 4 mammae. Distribution from Northern Queensland through New Guinea to Timor and Celebes. *Phalanger*.—Spotted Cuscus (*Phalanger maculatus*), upper surfaces white, yellow or greyish with large, rust-red to black spots, lower surface white;



Cuscus

one of the most beautiful species; occurs in Northern Australia

and Southern New Guinea, but not in Celebes.

Cuvier's Beaked Whale. Length 20-26½ ft. Head short, beak not very distinct. Two teeth at the tip of the lower jaw. Black to grey above, with head and fore part of back sometimes white, lighter below. Cosmopolitan. Ziphius cavirostris.

Cuvier's Gazelle, see Edmi Gazelle.

Cystophorinae, sub-family of the Phocidae. Include the Hooded Seal and the Sea-elephants. The nostrils in the male can be inflated. Cystophorinae.

Dachshund, a short-legged, long-bodied dog, originally used for badger hunting.

Dalgety, fur-trade name for the Rabbit-bandicoot.

Dall's Sheep, see "White Sheep."

Dalmatian, a smooth-coated breed of dog, white with irregular black spots, 19–23 in. high. Formerly used as a carriage dog.

Dama Gazelle, the largest of all the gazelles with a shoulder-height of 36-37 in. Most nearly related to Grant's Gazelle and Soemmerring's Gazelle. Several races found from Senegal to Northern Sudan. The white rump-patch is extensive and the outer sides of the limbs are often more or less white. Horns relatively short and stout, record length 16\frac{1}{4} in. Gazella dama.—The Mhorr Gazelle (Gazella dama mhorr) from Southern Morocco is the darkest race (reddish-brown) and the upper parts are sharply demarcated from the white lower parts. In the Nangar (Gazella dama permista) from Senegal and in the typical form from the Lake Chad region the reddish-brown is lighter and less clearly demarcated and in the Addra or Red-necked Gazelle (Gazella dama ruficollis) from the Sudan only the neck and saddle are rufous.

Dama Wallaby, small, slender Wallaby. Colour very variable, speckled grey, the shoulders usually reddish. Western and South-West Australia. *Macropus eugenii*.

Damara Dik-dik, the South-West African representative of the Dik-diks which are found all over East Africa. Rhynchotragus damarensis.

aumarensis.

Dandie Dinmont, a small terrier, 8–12 in. high, with soft, silky, wavy hair. Grey or brownish.

Dassies, see Hyraxes.

Dasyproctidae, a family of large hystricomorphous Rodents from South and Central America. Include: Agoutis; Paca. Dasyproctidae.

Dasyurids, family of polyprotodont Marsupials distributed over Australia, Tasmania, New Guinea and adjacent islands. Apparently closely related to the American Opossums, which they resemble in dentition. Arms and legs about the same length, fore-feet 5-toed, hind-feet 4-5 toed. Tail haired, non-prehensile. Pouch usually present, 4-10 nipples. Some arboreal, most terrestrial, insectivorous or omnivorous, isolated cases carnivorous or herbivorous. Include amongst others: Phascogales; Native Cats; Tasmanian Devil; Thylacine; Marsupial Mole. Dasyuridae.

Daubenton's Bat, flies low over water soon after sundown. Reddish, greyish-brown above, dirty white below, ears and wings greyish-brown. Body $1\frac{3}{4}$ in., tail $1\frac{1}{2}$ in., wing-span $9\frac{1}{2}$ in. Europe north as far as Central Scandinavia; Northern Asia. *Myotis daubentoni*.

Deer, family of Ruminants. Slender, long-legged, usually large animals. Tail short. Coat close. With the exception of the Musk-deer and the Chinese Water-deer the males all have antlers; in Reindeer the females have antlers as well. These are shed and

replaced annually. Numerous species, found everywhere except in Australia, Africa south of the Sahara, and Madagascar. Cervidae.

Deerhound, Scottish, like a greyhound but larger and with a

rough, harsh coat.

Degu, species of Bush Rat, occurring in Peru and Chile, especially common in the central parts of the latter. Rat-like, brownish-grey above, mixed with black; grey-brown below. 10 in. long, of which a little over one-third is tail. Octodon degus.

Delphinapteridae, family of Whales, Toothed. Arctic seas.

Include: White Whale and Narwhal. Delphinapteridae.

Desert Cat, Indian, about the size of a domestic cat, found in open, sandy places in North-West India. Yellowish with round black spots, ears with brown tufts, end half of the tail with black rings. Felis ornata (now regarded as a sub-species of the African Wild Cat, Felis constantina or Felis lybica.)

Desmans, a genus of Insectivores. Lead an aquatic existence to which they are specially adapted, the toes being webbed and the tail being laterally compressed. The snout is long and movable and the ears are buried in the fur. Smell strongly of musk. There are two species: (1) Pyrenean Desman (Desmana pyrenaica) which occurs in the Sierra de Gredos and Southern France as far as Tarbes; also in Northern Portugal. Upper-parts chestnut, flanks brownish-grey, belly silvery-grey. The last quarter of the tail laterally compressed. Total length 10–10½ in., of which half is tail. (2) Russian Desman (Desmana moschata) which occurs in South-East Europe, especially in the Volga and Don basins and also in Western Asia. Upper-parts reddish-brown with a white mark by the ear, belly dirty white with a silvery sheen. Tail laterally compressed for nearly its whole length. Total length 16½ in., of which 6¾ in. are tail. Fur used in the fur trade.



Deville's Tamarin, a species of Tamarin from Eastern Peru and Bolivia. Head, neck, breast, hands and feet black; the rest grizzled black. Leontocebus weddelli.

Dhero, name applied to Speke's Gazelle and Pelzeln's Gazelle.

Dhole, a forest-dwelling Wild Dog from India. Rufous in colour and long-haired. Head and body up to 38 in. long, tail 18 in.

Hunts in packs of 6-12 individuals. Attacks all sorts of large mammals, even tigers and bears. Almost untamable. Cuon dukhunensis.

Diadem Monkey, see Pluto Monkey.

Diana Monkey, from Liberia. Head, legs and tail black; body grizzled, loins reddish-brown. Forehead-band, neck, breast and upper arms white. Short, pointed beard black tipped white. Inner sides of the thighs rust-red. Cercopithecus diana. (Cf. Roloway Monkey.)

Dibatag or Clarke's Gazelle, an Antelope, most nearly related to the Gazelles. Lives in Somaliland, on plains where low thorns grow. Medium-sized, shoulder-height up to 33 in. Resembles the Gerenuk in the long neck and legs. Gazelle-markings on the face; reddish-brown back and white under-parts; no dark flank stripe. Horns (in male only) curving forwards rather like a reedbuck; record 13 in. Weight up to 70 lb. Ammodorcas clarkei.

Dik-diks, a sub-family of the Antelopes, distinguished from the nearly related Neotragines by the haired and more or less elongated muzzle and a tuft of hair on the top of the head. Horns only in the males, short and spike-like. East Africa, from Abyssinia to Tanganyika Territory. One species in Damara and Angola. Include: Beira; Damara Dik-dik; Salt's Dik-dik.

Madoquinae.

Dingo, a medium-sized dog living wild in Australia. Yellowishred to grey, sometimes blackish. Formerly common, now less numerous owing to being shot down by sheep farmers. Origin uncertain, some say that it is a wild dog, and others that it is a tame dog introduced many centuries ago and run wild. Canis familiaris dingo.

Dinomys, see Pacarana.

Doberman Pintscher, the original police dog of Germany. Medium-sized, with a smooth coat and black and tan markings.

Dobrudscha Hamster, lives in the steppes and sometimes the cultivated areas of Dobrudscha. Distinguished from Common Hamster (*Cricetus cricetus*) by its smaller size (hind-foot 20 mm. instead of 30–35 mm.), shorter tail (hidden in the fur) and more numerous mammae (8 pairs instead of 4 pairs). *Mesocricetus newtoni*.

Dog, see Domestic Dogs.

Dolphin, Bottle-nosed, a Toothed Whale of the family Delphinidae. Up to 11 ft. or 12 ft. long. The snout is in the shape of a beak above which the domed forehead juts out; 20–27 pairs of stout smooth teeth in the upper and lower jaws. Black above; white below. North Atlantic, South-West North Sea and Mediterranean. Lives in large schools, which sometimes come up the Thames (e.g. to Battersea in 1918). Tursiops tursio (= truncatus). Is represented by

two nearly related species (Tursiops gillii and Tursiops nuuanu) in the North Pacific.

Dolphin, Long-beaked, see Dolphin, Rough-toothed.

Dolphin, Right Whale, a North Pacific Dolphin, easily recognised by its lack of a dorsal fin. Black save the tip of the lower jaw and the centre of the breast which are white. About 8 ft. long. Found off California. Lissodelphis borealis.

Dolphin, Risso's, is perhaps most nearly related to the Pilot Whales (Globiocephalus). Dorsal fin large and tall, flippers long and sickle-shaped. Upper jaw toothless, lower jaw with 7 teeth in the fore-part on each side. Black above, white below. Length

up to 13 ft. Cosmopolitan. Grampus griseus.

Dolphin, Rough-toothed, beak longer than in the Common Dolphin but only 20 to 30 teeth in each half of each jaw. Black above and on flanks with irregular light spots; reddish-white below with dark spots. Length 6 ft. 8 in. to 9 ft. In the Indian Ocean and in the Atlantic. Specimens have been found stranded on the coasts of Holland, Belgium, Northern France, and Florida. Steno rostratus.

Dolphin, Spotted, black or grey above, lighter below, with spots or longitudinal bands. About $6\frac{2}{3}$ ft. long. Off the Atlantic coast of the U.S.A. as far south as the Gulf of Mexico. *Prodelphinus plagiodon.*—Nearly related is the "North Atlantic Dolphin" of the Americans (*Prodelphinus euphrosyne*), known from Southern Greenland to Jamaica. Resembles the Common Dolphin.

Dolphins, Freshwater, small Whales, Toothed, up to 10 ft. long, live in fresh water. Head defined by a slightly marked neck, snout long and narrow. Teeth numerous. East Indies and South America. Include: La Plata Dolphin; Chinese River Dolphin;

Amazonian Dolphin; Gangetic Dolphin. Platanistidae.

Dolphins, Long-beaked River, live in the estuaries of South America, China, India and Africa. Chiefly vegetarian. Form a genus—Sotalia.

Dolphins, Short-beaked, genus of the Delphinidae with a rounded forehead and short "beak." Numerous fish-eating forms in all seas. Include: White-sided Dolphin; White-beaked Dolphin.

Lagenorhynchus.

Dolphins, True, genus of the *Delphinidae*, a family of Whales, Toothed. The snout forms a "beak" from which the "forehead" rises abruptly. Numerous fine teeth, about 45 to 65 in each half of each jaw. Lively, fast, fairly small animals occurring in all temperate and warm seas. Fish-eating. Include: Common Dolphin. *Delphinus*.

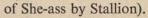
Dolphins and Porpoises, family composed chiefly of small Whales, Toothed, with both jaws toothed. Dorsal fin nearly always present, flippers usually medium length or long. Numerous

species, predominantly fish-eating, in all seas. Include amongst others: Dolphins, True; Pilot Whale; Risso's Dolphin; Killer; False-Killer; White-sided Dolphin; Porpoise. *Delphinidae*.

Domestic Cat, arose in Ancient Egypt through the domestication of the Caffer Cat; sacred to the goddess Bast. Confined to the Nile Valley until the first century B.C. The variations in domestic cats only affect the colour and the fur. Felis catus. (1) Persian Cat has long, silky hair. White, yellowish or bluegrey. The white ones with blue eyes are usually deaf from birth. First introduced into Europe from Asia Minor in the sixteenth century. (2) Siamese Cat has a short, smooth coat. Body dirty, yellowish-white with the tail, ears, legs and face blackish-brown. Originally bred in Siam. (3) Manx Cat, a tailless race originating in the Isle of Man.

Domestic Dogs, known from prehistoric finds dating from about 7000 B.C. Apparently derived from one or more forms of wolf and differentiated into several breeds at an early date. Gestation period averages 63 days; 4–9 young at a birth, rarely more. Have been crossed with both wolves and jackals. For the various breeds see under their respective names.

Donkey, a domestic variety of the Nubian Wild Ass, domesticated in ancient times in the country between Abyssinia and Egypt and distributed from this area. White, dark brown or brindled grey and white. Rarely dappled or piebald. Numerous varieties distinguished by size and colour. The largest forms such as those of Poitou and Kentucky reach a height of $5\frac{1}{3}$ ft. at the withers, the dwarf forms $2\frac{2}{3}$ —3 ft. Crossed with horses produces the Mule (offspring of mare by male ass) and the Hinny (offspring



Dorcas Gazelle, one of the smallest Gazelles, rather smaller than a roe deer, shoulder-height 21-24 in. Record horn-length 15 in. Upperparts and flanks sandy reddish-brown. white below, the two colours separated by an indistinct dark stripe; tail black above. Plains and deserts of North Africa from Morocco to Egypt and south to Nigeria, Eastern Sudan and Abyssinia. Gazella dorcas. In Abyssinia there is a race known as the Isabella Gazelle (Gazella dorcas isabella) which is more brownish and somewhat larger; shoulder-height about 25 in.



Dorcas Gazelle

Dormice, family of small, somewhat squirrel-like Rodents with

a long, hairy tail. Europe, temperate Asia and Africa. Come out at twilight; found in trees and bushes; feed on nuts, buds, etc., also on the eggs and young of birds. In temperate regions hibernate in a well-lined nest. Include: Russian Dormouse; Large Cape Dormouse; Garden Dormouse; Lesser Cape Dormouse; Fat Dormouse; Dwarf Dormouse; Dormouse. Gliridae (= "Myoxidae.")

Dormouse, a mouse-sized animal (see Dormice) with a tail slightly shorter than the head and body and inclined to be bushy towards the end. Yellowish-red colour. Southern Italy to England and Central Sweden. Found chiefly in hazel copses. Builds nests in hedgerows (winter, spring and breeding nests). Feeds on nuts, acorns, berries and buds. 2-4 young (7 recorded) in June. Hibernates. Muscardinus avellanarius.

Dormouse, Edible, see Fat Dormouse.

Dormouse, Spiny, a family of Indian and Chinese Rodents, nearly related to the Dormice; there are flat spiny bristles intermingled with the hairs on their coat. Tail short and bushy towards the end. *Platacanthomyidae*.—The Southern Indian Spiny Dormouse (*Platacanthomys lasiurus*) lives in high trees in the hill forests on the Malabar coast; said to do damage to pepper plantations.

Dormouse-phalangers, small dormouse-like *Phalangeridae* from Australia, Tasmania and New Guinea. Ears large with no tufts of hair; mouse-like, prehensile tail. Nocturnal and arboreal. Eats leaves and insects. *Dromicia*.—Include: Common Dormouse-phalanger (*Dromicia nana*), 8 in. long. South and Western

Australia, Tasmania and North-West New Guinea.

Douc Langur, a brightly-coloured black, brown and white relative of the Langurs. Cochin China. Semnopithecus nemaeus.

Douroucouli, Red-footed, the only Douroucouli of Central

America, occurring in Nicaragua. Aotus rufipes.

Douroucoulis, a genus of the Cebidae. The only nocturnal monkeys. Head small, rounded and short-snouted; ears small; eyes large and owl-like and surrounded by long radiating hairs. Body with long, soft, curly hair. Tail bushy, longer than the body, non-prehensile. Feed on fruit and small animals. Several species in Central and South America. Aotus.

Dow's Tapir, closely related to Baird's Tapir, comes from

Guatemala and Nicaragua. Tapirus dowi.

Drill, distinguished from the nearly related Mandrill by its black face. Like the latter inhabits Guinea. Mandrillus leucophaeus.

Dromedary (Arabian Camel), only has one hump. $6\frac{1}{2}-7\frac{3}{4}$ ft. high. Only known as a domestic animal. Bred in North Africa, Arabia, Western Asia and India and introduced with varying results into Italy, Spain, North America, and Australia. An

indispensable animal for riding and carrying burdens in desert



Dromedary

regions. Gestation 11-13 months; one at a birth. Camelus dromedarius.

Duck-billed Platypus, Monotreme from South-East Australia and Tasmania, distinguished by the flat, bony duck-bill which in life is covered with soft skin. The body and the flat tail covered with soft fur. Feet short, with webbed toes in males provided on the inner-side of the heel with a large sharp perforated spur conveying "venom" from a special thigh gland. Lays eggs. Head

and body 18 in., tail $5\frac{1}{2}$ in. Lives by rivers, lakes, ponds, etc. Makes burrows in steep banks with an entrance under water, in the terminal chamber of which the female hatches her (usually) 2 eggs. Good diver and swimmer. Lives on small aquatic animals, especially molluscs. *Ornithorhynchus anatinus*.

Duck-mole, see Duck-billed Platypus.

Dugongs, a family of the Sea Cows. Tail fin crescentic. Two upper incisors present, which in the male form tusks up to 10 in. long. Halicoridae.—The Indian Dugong (Halicore dugong), about 8 ft. long, lives off the shores of the Indian Ocean; the Red Sea Dugong (Halicore hemprichi = Halicore tabernaculi) lives in the Red Sea; the Australian Dugong (Halicore australe) lives round Australia and New Guinea. Probably all should be regarded as races or sub-species of Halicore dugong.

Duikers, a sub-family of small or medium-sized Antelopes with a tuft of hair on top of the head and short simple horns (often in the females as well). Africa south of the Sahara; most numerous in West Africa. Forest- and bush-dwellers. One genus (Cephalo-

phus) with many species. Cephalophinae.

Duplicidentata, usually regarded as a sub-order of Rodents, with two families, the Pikas, and the Hares and Rabbits; now often treated as a separate order. Behind the upper incisors are a second, smaller pair. Entire surface of the incisors covered with enamel. Cheek-teeth rootless. Inhabit most of the world but are lacking in the Australian region, Madagascar and the southernmost parts of South America. Duplicidentata.

Dusky Langur, a Langur from Tenasserim, Siam and Malaya. Face dark, the naked skin round the eyes and mouth white. Trachypithecus (= "Semnopithecus" or "Pithecus")

obscurus.

Dutch Rabbit, variety of Tame Rabbit, bred for centuries as a food animal by Dutch peasants. The breed improved in England.

White and either grey, blue, black or buff, arranged in a symmetrical pattern.

Dwarf Antelopes, small, graceful Antelopes of the Neotragine group, nearly related to the Royal Antelope, but half as large again and darker in colour. Bate's Dwarf Antelope (Hylarnus batesi) in the Cameroons and Harrison's Dwarf Antelope (Hylarnus harrisoni) in the Semliki Forest.

Dwarf Armadillo, body 10 in. long, the smallest of the Euphractinae (see Armadillos). Western Argentine, Bolivia, South-

ern Chile and Patagonia. Zaëdyus pichyi.

Dwarf Dormouse, small South African Dormouse. Body about 3 in. long; tail with a terminal tuft. *Graphiurus nanus*.

Dwarf Elk, see Californian Wapiti.

Dwarf Lemurs, the smallest Lemuroids of Madagascar with very large, round eyes. Have a nest like a dormouse. Nocturnal and chiefly insectivorous but also eat fruits. Include: Small Dwarf Lemur; Coquerel's Dwarf Lemur; Fork-marked Dwarf Lemur. *Microcebus*.

Dwarf Patagonian Cavy, a small relative of the Patagonian Cavy. Lives in the salt regions in the interior of the Argentine. Dolichotis salinicola.

Dwarf Pika, sole European representative of the Pikas. Greybrown, white below, ears bordered with white. $15\frac{3}{4}$ in. long. Eastern Russia and Western Siberia. Ochotona pusilla.

Dybowski's Deer, see Pekin Deer.

East Indian Wild Boar, distinguished by a broad reddish-brown band along the middle of the muzzle, the band being continued back each side over the cheeks. "Tusks" (lower canines) as in European Wild Boar. Races in Malay Peninsula, Java, Sumatra and Borneo. The races described from the Andaman and Nicobar Islands, New Guinea and some of the smaller East Indian islands are probably due to imported domestic pigs. Sus vittatus.

Eastern or Prairie Mole (see also Mole), brownish-black, feet and tail white. Has webbed feet although it is not an aquatic animal and is in fact seldom seen out of its burrows. Eastern

North America. Scalopus aquaticus.

Eastern Red Deer, see Maral.

Echidnas or Spiny Anteaters, clumsy, short-legged spiny Monotremes, up to 20 in. long. Snout drawn out to a long hairless tube with the small mouth right at the end. Tongue long, vermiform and strongly extensible. Feeds on ants and termites. Oviparous. The Echidnas (family Echidnidae) inhabit Australia, New Guinea and Tasmania. Two genera. In one, Echidna, including the Australian Echidna (Australia, South-East New Guinea and Tasmania) the snout is about as long as the

rest of the head, straight or slightly curved. In the other, Zaglossus, which contains the sparsely and short-spined Long Beaked Echidna of New Guinea, the snout is curved downwards and is twice as long as the rest of the head. Both species have several races. Echidna aculeata and Zaglossus bruijni respectively.

Edentates, include the Aardvarks, Pangolins, Armadillos,

Sloths and Ant-eaters. Edentata.

Edmi or Atlas Gazelle, larger than the Dorcas Gazelle—shoulder-height 26–27-in.—and distinguished from it by the less markedly lyrate horns, the coarser, more yellowish coat and the black spot on the end of the muzzle. Record horn 14% in. Morocco, Algeria, Western Tunis. A mountain animal, common in the juniper woods of the Atlas Mountains. Gazella cuvieri. (N.B.—"Edmi" or "Idmi" is applied indiscriminately by Arabs in all parts of Africa and Arabia to dark-coloured gazelles—cf. Rhim.)

Egyptian Fruit-bat, from Egypt and Nubia; often found in the neighbourhood of sycamore plantations. Light greyish-brown above, lighter below, wings greyish-brown. Body $6\frac{1}{4}$ in. long, wing-span up to 37 in. Fruit-eating. Ranges from Loanda and Gaboon to Egypt, Eritrea, Syria, Palestine and Cyprus.

Rousettus aegyptiacus.



Eland (Taurotragus oryx)

Eland, belongs to the Tragelaphines, is the second largest Antelope (see Eland, Giant). Rather bovine in build with a dewlap and a tufted tail; horns large, straight and spirally twisted, occurring in both sexes, those of females being longer but more

slender than those of males. General colour light brown or yellowish-grey, rufous tinge, no spots or stripes. About 11 ft. in length of which about 2 ft. are tail; about $5\frac{1}{2}$ ft. high at the shoulder (adult bulls may reach 6 ft.): record horns 37 in. (male) and $43\frac{1}{2}$ in. (female). Distribution: from the Southern Kalahari Desert to Angola and Kenya. Formerly to the Cape. Five or six sub-species or geographical races are recognized. Live in open country, chiefly in grassy plains with sparsely growing acacias; also invades native corn fields by night. Taurotragus oryx.

Eland, Derby's, see Eland, Giant.

Eland, Giant, the largest of the Antelopes and very closely related to the Eland. Distinguished from the latter by the larger, more massive and more twisted horns and by the fact that the greater part of the sides of the neck is black, bordered posteriorly with a white band. Body bright reddish-brown with white vertical stripes. Largest known horn (from the Congo) 44½ in. Found from Senegal (Taurotragus derbianus derbianus) and the Sudan (Taurotragus derbianus gigas) to the Congo (Taurotragus derbianus congolanus).

Eld's Deer, a Brow-antlered Deer from Manipur. Fetlocks have thick, naked skin behind, which is correlated with the animal's marshy habitat. Antlers up to 42 in. long. *Rucervus eldii*.

Elephants, the only living representatives of the Proboscidea, the largest living land mammals. Large, awkward beasts with thick, sparsely haired skins and a very elongated nose ("trunk"). The incisors of the upper jaw have no enamel or cement (except on the entirely unworn tips) and form permanently growing tusks. The molar teeth are composed of tall plates of dentine, invested with enamel coats, and separated from each other by layers of cement; they are cut in horizontal succession from behind forwards, and there are never more than two molars to be seen at any one time on either side of the jaws. See African Elephant and Indian Elephant. Elephas.

Elephant, White, a light buff-coloured variety of the Indian

Elephant. Turns up occasionally in further India.

Elephant Seal, see Sea-elephants.

Elephant-shrews, a family of rat-sized African Insectivores, with a trunk-like snout, and long, thin, almost hairless back legs. Eyes and ears large. Tail long and scaly; thinly haired. Diurnal animals, fond of sunshine; move in hops. *Macroscelidae*. There are five well-known genera: (1) *Macroscelides*, which has 5 digits on the fore- and hind-feet, thick soft fur and lives in arid stony hill-country. This genus includes the South African *Macroscelides proboscideus*, reddish-brown to greyish above, whitish below, total length 10 in., of which $4\frac{1}{2}$ in. are tail. Closely related to *Macroscelides* are (2) *Elephantulus*, including the North African

Elephantulus rozeti from the Atlas Mountains, and many other forms; and (3) Nasilio, including the South African Nasilio brachyrhynchus and other species. (4) Petrodromus, from East Africa, which has soft fur and 4-toed feet; and (5) Rhynchocyon, also from East Africa, which has 4-toed feet and rough hair. This genus has the shortest hind-legs and the longest snout amongst the elephant-shrews. Lives in holes in the ground in thick bush. Somewhat like a rabbit in general shape.



Elk

Elk (European sense), largest European Deer, usually up to 6 ft. 3 in., sometimes 6 ft. 6 in., at the withers. Legs long, body comparatively short. Muzzle long, broad, hairy, and overhanging, ears large. On the throat is a dewlap covered with long hair (the "bell"). Antlers broadly palmate, 3–12 snags on each side. Greyish-brown, legs whitish-grey. Calves reddish-brown

without spots. Old males up to 1,150 lb. in weight. Found chiefly in Scandinavia, but also in Eastern Prussia, Finland and Northern Russia, and in Northern Asia as far as Lake Baikal. Another somewhat larger race extends further eastward in Siberia. Closely related, specifically identical, with the American Moose; this is distinguished from the European race by larger size (to 6 ft. 9 in. at withers), darker colour, somewhat more complex and constantly palmated antlers. Like marshy woods. Feed on bark, buds and leaves. Gestation 35–36 weeks. Usually 2 calves (only 1 in young cows) between the end of May and the middle of June. Alces alces.

Elk (in Ceylon), see Sambar.

Elk (American sense), another name for Wapiti.

Encoubert, see Six-banded Armadillo.

Endrina, see Indri.

English Rabbit, variety of Tame Rabbit. White with dark "chain" markings; black on the ears, round the eyes, and along the spine.

Epauletted Bats, African Fruit-bats with large heads and stumpy snouts. Males with bunches of peculiar glandular hairs on the shoulders. Fruit-eating. Africa south of the Sahara. Epomophorus.

Equidae, family of Odd-toed Ungulates (Perissodactyla) with representatives in Asia and Africa. Long-legged, swift animals modified for life on steppes and deserts. The only mammals with but one digit on each limb, the whole weight of the body resting on the very tip. A single young at a birth; gestation in horses

12 months. Include: Mongolian Wild Horse; Tarpan; Horse,

Domestic; Wild Ass; Donkey; Zebra. Equidae.

Eritrean Gazelle, closely related to the Dorcas Gazelle but smaller, and with shorter horns—up to $12\frac{3}{4}$ in. long. African coast of the Red Sea from Suakin northwards. Gazella littoralis. (N.B.-Does not appear to occur in Eritrea.)

Ermine, see Stoat.

Eskimo Dog, a medium-sized dog used by Arctic dwellers as a sledge-dog. The coat is long-haired and the tail is bushy and carried curled over the back; stated by Crantz (History of Greenland, 1767) to be mostly white, some with long black hair, not to bark but to growl and howl so much the more. The Samoyede

is an Asiatic variety of the Eskimo and is quite white.

European Bison, closely related to the North American Bison. In former times widely distributed in European forests. Lately restricted to a few herds in the forests of Bialowiza, in Lithuania and in the Caucasus and preserved at Mezerzitz, Upper Silesia, but after the war (1914-18) killed off everywhere so that only about 60 specimens were left in zoos and parks; some of them not pure bred but crossed with cattle. Present status, after another war, unknown. Bos (Bison) bonasus.

European Flying Squirrel (see also Flying Squirrel); smaller than the Red Squirrel of Europe, upper surface, fawny-grey (lighter in winter) with a dark grey-brown parachute, whitish below. Body 63 in., tail 41 in. long. Inhabits birch and mixed woods in Northern Siberia, Northern Russia and Finland, more rarely in Poland and Northern Scandinavia. Nocturnal, live in holes in trees. One brood a year of 2-3 young. Pteromys volans (= "Sciuropterus russicus.")

European Genet, one of the Genets. Found in North-West

Africa, Spain, Portugal, Balearic Islands and Southern France. In Northern France it is often kept as a household pet to keep



European Genet

down rats. Long and thin and short-legged with a small, sharpsnouted head and a long tail. Head and body up to 23 in., tail 18 in., shoulder-height 64 in. Light yellowish-grey with longitudinal rows of black spots; tail ringed with black. Feeds on small rodents, birds and eggs. Genetta genetta.

European Hares occur in many different races whose relationships are as yet by no means clearly worked out, but they appear to be divisible into 3 or 4 species. There are two groups; the Blue Hares (= Variable or Mountain Hare) with a white or pale grey winter coat, of quite a different colour from the summer coat, and the Brown Hares which are brownish all the year round. Some authorities distinguish a Medium Hare. The Mediterranean Hare has a limited distribution. Lepus.



European Lynx

European Lynx (see also Lynx), ear-tufts black and tail short. In summer yellowish-brown to greyish or rufous, more or less spotted with black (unspotted individuals also occur), in winter whitish-grey with indistinct spots. Belly whitish, tip of tail black. About 37 in. long, of which 5 in. are tail. Formerly in all wooded districts of Northern Europe as far as the Alps and the Pyrenees,

now exterminated in many regions but occurs in Scandinavia, Finland, Russia and here and there in forested mountainous regions of South-East Europe; not in Siberia. Climbs well. Preys on hares, grouse, blackcock and on domestic animals such as sheep and goats. The young are born in May or the beginning of June—2–3, rarely 4. Lynx lynx. In Spain and Portugal there is another species, the Spanish Lynx, less robust and with back and sides more densely spotted. Lynx pardellus.

European Mole (see also Mole), head and body up to $6\frac{1}{2}$ in. long, tail to 1 in. The eyes are buried in the fur but are capable of being used; it is doubtful how much they are used. Lives in complicated underground burrows in meadows and gardens. Seldom seen above ground. Feeds on worms and insects. Gestation 4 weeks; 3–5 young from middle of April to end of June. Talpa europaea.

European Rabbit, smaller than the Brown Hare, hind legs and ears shorter, the latter brown-grey, not



European Mole

black-tipped. Buff sprinkled with black, nape of neck rust-red; whitish below; tail black above, white below. Length up to 11 in., weight 3 to 5 (average 3½) lb. Originally native to Spain and North Africa, now spread over Southern and Central Europe.

Imported into other parts of the world for sporting purposes; has become a serious nuisance in Australia and New Zealand. Much shot, not only as vermin but also for the fur and meat. Digs burrows for itself in the earth. Gestation 30 days; several births a year of 4-12 young. Origin of Tame Rabbits. Oryctolagus cuniculus.

European Roe, in summer reddish-yellow, belly and legs more yellowish-brown, head with a grey admixture, rump yellowish-white; in winter yellowish grey-brown, rump white. Fawns reddish yellow-brown with lighter spots. Length somewhat over 3 ft., shoulder-height 2 ft. to 2 ft. 6 in. Antlers 3-pointed, up to 13 in. long. Likes thickets near meadows and fields; in the eastern part of its range also found in woodless parts. Gestation about 41 weeks; 2, sometimes 3, fawns between middle of May and end of June. Distribution: Great Britain, Central Sweden, South-East Norway, Central and Southern Europe, eastwards to the

Caucasus and Western Asia. Capreolus capreolus.

European Wolf, upper-parts yellowish-brownish-grey mixed with black, belly greyish-white, ears with a black border. Body 55 in. long, tail up to 16 in., weight up to 110 lb. Formerly distributed over nearly the whole of Europe, but has been extinct in many parts for some time, especially in cultivated lands: extinct in England about 1500, Scotland 1743, Ireland 1710, Denmark 1772. In Germany the wolf still exists in the Rhineland and in Eastern Prussia, in France apparently in fairly large numbers in various forested regions, e.g. the Vosges; occurs in Italy, and numerous in Eastern Europe whence it occurs as far as China and Japan. Lives in forests and steppes and goes about in packs. Hunts mammals and birds and in hard winters even raids villages. Gestation 9 weeks, usually 5–9 at a birth but up to 12 recorded. Canis lupus.

Euryale Bat, a Horseshoe Bat from North Africa, Asia Minor and Southern Europe, especially Dalmatia and Italy. Wing attached slightly higher up the tibia than in the Lesser Horseshoe Bat. Smoky brown above, whitish below. Total length 3-3½ in.,

wing-span up to 12 in. Rhinolophus euryale.

Even-toed Ungulates, an order of mammals belonging to the Ungulates. Walk on one or rarely on two pairs of toes, the others vestigial or on the way to becoming vestigial. Two sub-orders: Non-ruminants and Ruminants. Artiodactyla.

Eyra, see Jaguarondi.

Fairy Armadillo or "Pichiciago" (see also Armadillo), is the smallest Armadillo (head and body 5 in., tail 1½ in., long). Live like moles, entirely underground. Eyes and ears very small, concealed by the hair; legs short, feet large with strong digging claws. Shell

composed of plates arranged in about 20 transverse bands, terminated behind by a vertical bony plate which gives the rump a truncated appearance. Tail passing out through a notch in the rump plate. Hair at margins of plates very soft and silky. Only one genus, *Chlamydophorus*, with two species, *Chlamydophorus truncatus* in Western Argentine and *Chlamydophorus retusus* in Bolivia.

Fallow Deer, in summer reddish-brown with white spots, in winter more grey and almost unspotted. Antlers palmate at the ends with snags on the hinder edge and with brow tines. Shoulderheight about 3 ft. Distribution: Mediterranean countries and as a park animal in the British Isles and elsewhere in Northern Europe. In prehistoric times throughout Northern and Central Europe. Gestation about 8 months; one fawn, sometimes two, rarely three. The gigantic fossil deer known as Irish Elk is of the Fallow Deer type. Dama dama.

Fallow Deer, Persian, larger and brighter in colour than the Fallow Deer. Antlers incompletely palmate. Also called Mesopotamian Fallow Deer. Inhabits the Luristan Mountains of Persia. Dama mesopotamica.

Fat Dormouse, the largest of the European Dormice, head and body about 7 in., tail about $5\frac{1}{2}$ in. long; about two-thirds the size of a red squirrel. Smoky grey above, whitish below. Central and Southern Europe, found in deciduous woods and in parks; nocturnal. Feed on acorns, beech-nuts, fruit, etc.; also eggs and young of birds. Hibernate in holes in trees and in the ground. Where numerous can be a pest in orchards. Were regarded as a delicacy by the Romans who fattened them in cages. 3–7 young at a birth. Introduced in recent years to Buckinghamshire, where they are reported to be spreading; known to local residents as "Spanish Rats." Glis glis.

Fat Mice, genus of small African Mice with short tail and legs but a very large body, which has a heavy layer of fat. Regarded as delicacies by natives who eat them raw. Steatomys.—Best known species: Steatomys pratensis from South-East Africa.

Fat Sand Rat, species of Gerbil from Egypt and Nubia. Reddish sand-coloured above, intermingled with black, flanks and belly light yellow. Total length $12\frac{1}{2}$ in., of which 5 in. are tail. Psammomys obesus.

Fat-rumped Sheep, a Sheep, Domestic, bred from Central Asia to China. Distinguished by the great cushions of fat, one on each buttock.

Fat-tailed Gerbils, two species of the Gerbil sub-family. Distinguished by their fat, almost bald, reddish flesh-coloured, glistening sausage-shaped tail. *Pachyuromys duprasi* from North Africa, and *Desmodillus auricularis* from South Africa.

Fat-tailed Lemurs, small nocturnal Lemuroids from Madagascar. Distinguished by the fact that during times of plenty they store up fat in their tails which is used up again when food is not so plentiful, or when the animal becomes less active. (A similar explanation can be given for several of the other fat or fat-tailed species mentioned on this and the previous page.) Opolemur.

Fat-tailed Sheep, a variety of Sheep, Domestic, bred in Africa, South-West Asia and South-East Russia. Has a heavy deposit

of fat in the long tail.

Feather-tailed Phalanger, small, dormouse-like, long-tailed Phalanger from New Guinea. Head and body about 4 in. long, tail about 6 in. Coat woolly, dark reddish-yellow above, white below; head strikingly marked with dark longitudinal stripes. Tail with long hairs bilaterally arranged like the vanes of a feather. Distachurus pennatus.

Fennec, a small Fox, with extremely large ears, from the deserts of North Africa and the Sinai Peninsula and Northern Arabia.



Fennec Fox (Fennecus zerda)

Length 25 in., of which 8 in. are tail, shoulder-height 8 in. Nocturnal, feeding on all sorts of small animals from rodents and small birds to locusts, also on fruit. Fennecus zerda.

Ferret, an albino (yellowish-white) domestic form of the Polecat (see also Polecat, Russian). Has been used for a long time for rabbit shooting and for rats. Mustela (Putorius) furo.

Ferret, Black-footed, see Polecat, Black-footed.

Ferret-badger, a Badger from Southern China and further India.

Partly arboreal, but little is known of its habits. Three or four species. *Helictis.*—The Chinese species, *Helictis moschata*, provides the fur known as "Pahmi." The skin is about 15 in. long and dark slate-grey with light yellow under-fur and is used for trimmings and fur collars.

Finback Whale, see Common Rorqual. Finner Whale, see Common Rorqual.

Finnish Reindeer, European representative of the Woodland Caribou. Larger than the Scandinavian Reindeer (about 4 ft. at the shoulder). Beams of the antlers strongly bowed and with a large number of points. Rare: found in the Karelia Republic of Russia and on the Kola Peninsula, formerly also in the forests of Northern Sweden. The tame Reindeer of Swedish Lapland are derived mostly from this form but also in part from domesticated Scandinavian Reindeer. Rangifer tarandus fennicus.

Fish-eating Bats, see Harelipped Bats.

Fish-eating Rats, rat-like, South American Rodents of the Cricetine sub-family. Good swimmers. Live on fish. Five genera: Ichthyomys, Anotomys, Rheomys, Daptomys and Neusticomys.

Fisher, a large, dark-coloured Marfen, resembling a fox. Body up to 38 in., tail to 20 in. Colour dark brown with extra long, darker hairs mixed in, head and neck yellowish-brown, tail almost black. A forest animal. Nocturnal, hunts in trees as well as on the ground. Very predacious, feeds on small mammals, birds, frogs, fish, and also on fruit and nuts. 1–5, usually 3, young born early in May. Found in Canada, Maine and the western U.S.A. as far as Northern California. Nowadays rare, only 15,000 skins in the trade annually. *Martes pennanti*.

Fishing Cat, somewhat larger than a domestic cat and with a strong preference for fish. Yellowish-grey with longitudinal rows of dark spots. India, Ceylon, Lower Burma, Tenasserim, Southern China and Formosa. Frequents marshy regions, river banks, etc. Besides fish eats large Ampullaria snails, birds and small mammals. Felis (Prionailurus) viverrinus.

Flemish Giant, variety of Tame Rabbit, reaches a weight of 20-22 lb. Bred for meat and fur.

Flitter-mouse, see Common Pipistrelle.

Flower-nosed Bat, a Horseshoe Bat with complex flowerlike folds of skin on the nose. Solomon Islands. Anthops ornatus.

Flying Foxes, tailless Fruit-bats with a fox-like face; the largest of all the bats. Include: Kalong; Indian Flying Fox; Bonin Island Bat. *Pteropus*.

Flying Phalangers, Australian Marsupials with a gliding membrane stretched between the arms and legs along the flanks. Belong to the sub-family *Phalangerinae*. There are three genera: The Greater Flying Phalangers (*Petauroides*), the Lesser Flying

Phalangers (Petaurus), and the Pigmy Flying Phalangers (Acro-

bates).

Flying Squirrels, a family of Rodents nearly related to the Squirrels. Nocturnal and arboreal, the fore and hind limbs united by a haired membrane along each flank which acts as a parachute. About 170 named forms from the northern hemisphere. Include: European Flying Squirrel; North American Flying Squirrel; Woolly Flying Squirrel; White-cheeked Flying Squirrel; Indian Flying Squirrel; Pigmy Flying Squirrel. *Pteromyidae*. In the most recent works the group is treated as a sub-family (*Petauristinae*) of the Squirrels (*Sciuridae*).

Forest Buffalo, species of African Buffalo with many races. Occurs in West and Central Africa from Senegal and Northern Nigeria to Eastern Congo. Small—or medium-sized; horns usually small, not curved downwards, but strongly curved backwards. Colour reddish-brown, old bulls black. Height at the shoulder



Forest Buffalo

of smallest race only 3 ft. 7 in. Bubalus nanus.

Forest-hog, a very large Wild Pig, intermediate between the Bush-pigs and the Wart-hog. Long, coarse, black hair, thin in old ones; skin greyish-black. Tropical African forests from Mount Kenya through the Congo to the Cameroons and in Southern Abyssinia. Ferocious and difficult to approach. Hylochoerus meinertzhageni.

Fork-marked Dwarf Lemur, a large species of Dwarf Lemur from Madagascar, distinguished by a dark fork-shaped mark on the top of the head. Over 20 in. long of which half are tail.

Microcebus furcifer.

Formosan Deer, a species of Sika from Formosa, nearly related to the Japanese Deer but spotted white all the year round. Cervus (Sika) taiouanus.

Formosan Serow, a species of Serow from the mountains of Formosa. Closely related to the Japanese Serow. Capricornis

swinhoei.

Fossa, the largest Carnivore of Madagascar, represents a primitive type of Viverrid. About twice the size of a cat but very short-legged. Total length about 5 ft., of which about 27 in. are tail. Coat thick, very short and reddish-yellow. Nocturnal, powerful and rapacious. Though chiefly ground-living, it is said to go up trees after lemurs. Steals poultry. Cryptoprocta ferox.

Four-horned Antelope or Chousingha, one of the Tragelaphines. Differs from all other antelopes in having 2 pairs of horns in

males (females hornless); in specimens from the Deccan and round Madras the fore pair of horns are usually lacking. Body length about 40 in., tail $4\frac{3}{4}$ in., shoulder-height 25 in. Horns are simple spikes, and the hind pair up to 5 in. and the fore pair up to $2\frac{1}{2}$ in. Coat short and thick, dull rufous-brown, whitish below. A shy animal, solitary or in pairs or threes in Peninsular India in hilly, wooded country, not in jungle. Gestation $6-7\frac{1}{2}$ months; 1-2 young in January or February. Tetraceros quadricornis.

Fox, Arctic, a small Fox from the Arctic regions of both hemispheres. Dark brown to slate-coloured in summer; white in winter. There is a colour-phase known as "blue fox" where the coat is smoky-grey or bluish-drab all the year round. Closely

related to the Corsac. Alopex lagopus.

Fox, Azara's, a fox-like Wild Dog from the Argentine and Paraguay. Finds its way into the fur trade as Provincia Fox, Rio Fox, and Patagonian Fox. *Pseudalopex azarica* (or *Cerdocyon azarae*).

Fox, Blue, see Fox, Arctic.

Fox, Cordillera, closely related to Fox, Azara's, and after the Wolf, Maned, the largest of the South American wild dogs. Body 35 in., tail 16 in. Back black and grey mixed, flanks brownishgrey, belly yellowish-white. Tail bushy. Found from Ecuador to Tierra del Fuego. Pseudalopex culpaeus (or Cerdocyon magellanicus).

Fox, Crab-eating, a jackal-like Wild Dog found from Venezuela and Guiana to Southern Brazil. Head and body $27\frac{1}{2}$ in., tail 12 in. General colour buffy-grey, darker on the back; belly whitish. Cerdocyon thous.

Fox, Delalande's, a small, fox-like Canid, about 40 in. long, of which half is tail; shoulder-height 14 in. Body slender, legs long, head with a pointed snout and very large ears. General colour greyish-buffy-yellow with a greenish tinge, root and upperparts of tail dark reddish-brown. Feeds chiefly on insects. Nocturnal. Found on the savannas of South and parts of East Africa. Otocyon megalotis.

Fox, Fennec, see Fennec.

Fox, Grey, found in several forms from the Great Lakes in North America to northern South America. Resembles the Red Fox but is sprinkled with grey. Length about 40 in., of which 16 in. are tail. Chiefly a forest animal but in the south-west also occurs in the desert-like plains where it finds cover among cacti. Nocturnal; feeds on small mammals, birds, reptiles, fish, fruit, berries and fungi. *Urocyon cinereoargenteus*.

Fox, Japanese, see Raccoon-like Dog.

Fox, North American Red, takes the place of the Old World Red Fox in North America, and resembles it, but is larger and has longer hair. There are several local forms in Canada and the U.S.A. About one quarter of a million pelts are used annually in the fur trade, the best coming from Hudson Bay, Labrador and Alaska. *Vulpes fulva*. There are two colour varieties: (1) Cross Fox (see under Fox, Old World Red), and (2) Silver Fox, which is a black form with more or less silver-tipped hairs. Silver foxes occur also in Northern Asia but rarely. Nowadays

extensively farmed. Fox, Old World Red, found nearly all over Europe and in many parts of Northern Asia. Slender build, tail bushy and about half the length of the body (which is 24-32 in. long). Rufous above, white below. Backs of the ears black, tail (brush) usually with a white tip. Weight 15-29 lb. Nocturnal, going to ground during the day in its earth, which it either digs for itself or takes over from a badger, and which is usually in a wood. Gestation 60-63 days, 3-9 cubs born in April or May. Feeds chiefly on mice, but also on hares, rabbits, and poultry, especially when the vixen (female) has cubs to feed. Insects, snails, fruit and berries are eaten as well. Used in the fur trade (about a million pelts a year of European foxes). Vulpes vulpes. The Cross Fox is a variety of the Old World Red Fox and the North American one which has a black cross on the neck and shoulders. In 1928 North America produced 25,000 and Asia 3,000 skins.

Fox, Pale Sand-, related to the Fennec. Found in the Sudan;

allied forms in Nigeria and Senegal.

Vulpes pallida.

Fox, African Silver, a smallish Fox, head and body 23 in., tail $12\frac{1}{2}$ in., ear $3\frac{1}{2}$ in. Silvery-grey in colour. Prefers open sand plains. Vulpes chama.

Fox Squirrel, largest of the North American Squirrels, total length 19\frac{1}{2}-27 in. Colour reddish to



Fox, African Silver

blackish. Southern U.S.A. to Mexico. Three species; best known Sciurus niger.

Fox, White, see Fox, Arctic.

Fox-terrier, a small breed of dog occurring in two forms, roughand smooth-haired. Colour white, usually with large markings of black or brown.

Free-tailed Bats, a family of Insectivorous Bats with the end half of the tail jutting out free from the inter-femoral membrane. Snout abbreviated and without processes. In the tropics of both hemispheres. Include: Tomb-bats; Pouch-winged Bats; White Bats. Emballonuridae.

Fruit-bats, sub-order of Bats containing the largest members

of the order. The largest species has a wing span of 5 ft., the smallest is smaller than some Insectivorous Bats. Snout usually fairly long and pointed (rounded or snub in some), ears usually small and simple. Thumb and usually index finger with claws. Molars with low cusps. Found in the warmer parts of the Old World, especially in Southern Asia, South and Central Africa, Australia and Oceania. Fruit-eating. Often spend the day hanging in trees; some in caves. Only one family (*Pteropodidae*). Include: Flying Foxes; Epauletted Bats; Long-tongued Fruit-bats; etc. *Megachiroptera*.

Gaillard Jack Rabbit, see White-sided Jack Rabbit.

Galagos (= Bush Babies), Lemuroids from the tropical forests of the mainland of Africa, a sub-family of the Lorisidae. Large, naked ears; hind limbs much longer than fore limbs; tail longer than head and body. Nocturnal predators. Midway between a mouse and a rabbit in size. Galago.

Galago, Allen's, a species of Galago from Gaboon, Cameroon, and Fernando Po. Chiefly blackish-brown above, grey below, tail

black. Total length up to 171 in. Galago alleni.

Galago, Bush-tailed or Great, a species of Galago ranging from Kenya, Tanganyika, through Portuguese East Africa, Southern Nyasaland and Rhodesia to Angola, Transvaal, Zululand and Natal. Total length 27½ in., of which 14½ in. are tail. Yellowish- to brownish-grey, lighter grey below. Galago (Otolemur) crassicaudatus.

Galago, Demidoff's, a small brown species of Galago from tropical Africa (Senegal to Eastern Congo). About 12½ in. long, of which 7 in. are tail. Galago (Hemigalago) demidoffi.

Galago, Garnett's, a Galago from East Africa. Galago garnetti (now treated as a sub-species of the Great Galago. Galago crassi-

caudatus).

Galago, Grand or Great, see Galago, Bush-tailed.

Galago, Moholi, a South African sub-species of the Senegal

Galago. Galago senegalensis moholi.

Galago, Senegal, a species of Galago ranging from Senegal and Gambia in the savanna country of the Sudan east to Abyssinia, thence south through East Africa to Mozambique and Zanzibar and westwards to Angola. Represented by many subspecies, of which the Moholi and Zanzibar Dwarf Galagos may be named. Galago senegalensis.

Galago, Zanzibar Dwarf, a sub-species of the Senegal Galago from the coastal regions of southern East Africa. Total length

14½ in. Galago senegalensis zanzibaricus.

Gambia Buffalo, sub-species of the Forest Buffalo from Gambia and Sierra Leone. Bubalus (Syncerus) nanus planiceros.

Gambian Pouched Rat, giant Rat from tropical Africa with a body length of 14-16 in. Cheek-pouches present. Cricetomys

gambianus.

Gangetic Dolphin, Indian Dolphin, Freshwater, adults usually 7-8 ft. long. Long, thin snout, somewhat upcurved, 30 teeth in each side of each jaw. Dorsal fin poorly developed. Quite blind; eyes reduced to vestiges. Found in the Bramaputra, Ganges and Indus. Feeds on fishes and crayfish. Gestation 8-9 months, usually 1 young, April to June. *Platanista gangetica*.

Garden Dormouse, distinguished from other European Dormice by the tail being bushy only towards the end and by the large ears. Brightly coloured, reddish grey-brown above, white below, black ring round the eyes. Body $4\frac{3}{4}$ in., tail 4 in. long. Western and Central Europe, east to the Baltic. Mostly in deciduous woods. Builds a round nest in trees or uses an old bird's or squirrel's

nest. Habits as in the Fat Dormouse. Eliomys quercinus.

Gaur or Indian Bison, a powerfully built bovine, with a strongly developed dorsal ridge. Hair short, very sparse on the back in old males, olive-brown to blackish, lighter below, face grey to whitish. Cows and calves lighter, sometimes with a reddish tinge. Lower parts of the legs white or yellowish. The horns are light greenish or yellowish; the tips, which are bent inwards, are black. Shoulder-height usually not over 67 in., sometimes up to 75 in. Live in the hill-forests of India, Burma and the Malay Peninsula, probably also in Siam and Cochin China. Go about in families or small herds and sometimes graze in open grassland. Gestation probably the same as in domestic cattle; one calf at a birth. The gaur is the wild form or progenitor of the Gayal. Bos (Bibos) gaurus:

Gayal, domestic form of the Gaur from which it differs in its smaller size (maximum shoulder-height 55 in.), and in its horns which are almost straight and not bent inwards at the tips. Colour blackish-brown with face brownish and lower parts of the legs whitish, horns blackish, more or less mixed with yellowish. Piebalds and albinos not uncommon. Tame and half wild in Burma, Chittagong and neighbouring territories. Gestation 8-9

months; one calf. Bos (Bibos) frontalis.

Gazelles, most widely distributed of the genera of the sub-family Antilopinae and possessing the most species. Beautiful, delicately built animals with ringed horns, these being S-curved and sub-lyrate and present as a rule in both sexes of the African forms though lacking as a rule in the female of the Asiatic forms. Mostly sandy-coloured to yellowish-red above, white below; all the African forms and some of the Asiatic have light and dark longitudinal stripes on the face. Live together in herds on the plains and deserts of Africa, Western and Central Asia and India.

Feed on grass and leaves. Include: Dama Gazelle; Dorcas Gazelle; Edmi Gazelle; Grant's Gazelle; Chinkara; Goitred Gazelle; Thomson's Gazelle; Soemmerring's Gazelle. Gazella.

Geladas, a genus of Monkey with two species from Abyssinia. Most nearly related to the Baboons, but distinguished from them by having the nostrils on the sides of the snout instead of at the end of the snout (as in a dog). Include: Gelada Baboon and Gelada Baboon, Dusky. Theropithecus.

Gelada Baboon, a species of Gelada from the Tigre and Simen Mountains of Northern Abyssinia. The mantle-like mane of the male is brown, hinder parts of the body and the tail grey.

Theropithecus gelada.

Gelada Baboon, Dusky, a Gelada from the mountainous regions of Southern Abyssinia. The mantle-like mane of the male is black, the hinder part of the body and tail brown. Theropithecus obscurus.

Gemsbok, a species of Oryx from the deserts of South-West Africa from Bechuanaland to Mossamedes. Neck, back and flanks pale reddish-grey; head white, marked with black; a stripe along the back, a flank-band, the thighs and tufted tail black; belly white. Horns in both sexes, long, straight, ringed. Record length 48 in. Shoulder-height 4 ft. Oryx gazella.

Gemsbok, Bastard, see Roan Antelope.

Gemsbuck, see Gemsbok.

Genets, Viverrids with unusually long bodies and a long tail. Brownish-black spotting on a greyish (sometimes rather yellowish) ground. South-West Europe and Africa; nearly related forms in

Southern Asia. Include: European Genet. Genetta.

Gentle Lemurs, members of the Malagasy sub-family Lemurinae, distinguished from the related genera by their globose heads, short muzzles, and short hairy ears, by their comparatively short limbs, the hind being longer than the front, and by the tail being not quite so long as the head and body. Arboreal and nocturnal; feed on vegetable matter, chiefly on bamboo leaves. Hapalemur. — Broad-nosed Gentle Lemur (Hapalemur simus), from the north-east coast.—Olivaceous Gentle Lemurs (Hapalemur olivaceus), from the east coast.—Grey Gentle Lemur (Hapalemur griseus), from the interior of Madagascar.

Geoffroy's Marmoset, related to the Pinché Marmoset. From

Panama and Costa Rica. Oedipomidas geoffroyi.

Geoffroy's Spider Monkey, found from Nicaragua to Colombia. Yellowish-grey with a naked face and the hands and feet black. Ateles geoffroyi.

Gerbils, sub-family of the Muridae. Adapted to life in deserts and steppes, with large eyes and ears and often elongated hind legs. In the latter case progress by hopping. Tail usually long and

haired. The largest reach rat-size. Africa, South Asia, sporadically in South-East Europe. Include: Indian Gerbil; Fat Sand Rat; Jirds; Fat-tailed Gerbils. Gerbillinge.

Gerenuk, most nearly related to the Gazelles. Extremely slender with a very elongated neck and long, thin legs. Horns (in male only) sub-lyrate, record 17½ in. Chestnut above, flanks sandy-brown, belly white. Shoulder-height to 41 in. Appears in Egyptian paintings as far back as 5600 B.C.; first described (in the scientific sense) in 1878. Distribution: from Southern Abyssinia and Somaliland to the Rift Valley in Tanganyika Territory. Found in small



Gerenuk (Lithocranius walleri)

troops of 3-10 on arid plains with sparse grass and bushes and also in stony regions with ravines and aloes. Feed on leaves. Lithocranius walleri.

Gervais' Beaked Whale, occurs in North Atlantic. Related to Sowerby's Whale; up to 22 ft. long. Mesoplodon europaeus.

Giant Armadillo, the largest of the Armadillos. Body up to 40 in., tail up to 20 in. long; 90–100 teeth. Lives in forests from Guiana to Argentina. *Priodontes giganteus*.

Giant Chinchilla Rabbit, a variety of Tame Rabbit, weighing up to 12 lb. Valuable fur, a substitute for that of the true Chinchilla. Cf. Chinchilla Rabbit.

Giant Pangolin (see also Pangolin), occurs in Central Africa further west than Temminck's Pangolin, which it resembles. Reaches an overall length of 5 ft. 4 in. Manis gigantea.

Giant Rat, see Gambian Pouched Rat.



Giant Armadillo (Priodontes giganteus)

Giant Squirrel, total length about 30 in. Greater India and the larger East Indian islands. Ratufa. Best known species is Ratufa



Giant Squirrel

indica, bright reddish-brown dorsally, yellowish-white ventrally and on head and lower parts of arms.

Gibbons, family of Monkeys related to the Anthropoids, from Burma, Siam, Indo-China, Malay, Sumatra, Java and Borneo. Slender, nimble, very long-armed and tailless. Live almost entirely in trees but walk upright on the ground balancing themselves with their long arms. Feed chiefly on fruit and leaves. Two genera, one including the Siamang and the other several forms, including

the Hoolock Gibbon and the Lar Gibbon. Hylobatidae.

Giraffes, with their very long necks the tallest of all animals; total height up to 18 ft. Body relatively short with the back sloping away steeply to the hindquarters, legs long, tail with a terminal tuft. Hooves broad, no accessory hooves. Ambling gait. Females smaller than males. Both sexes horned: besides the pair of forehead-horns there is sometimes a median front horn and also two small occipital horns. Colour: white or yellowish background with large, brown blotches, closely spaced. From the bush and grass country of Africa from Kordofan, Nubia, Lake Chad and

Southern Nigeria to North-East Transvaal and Angola. Live in troops feeding chiefly on the leaves and twigs of acacia trees. Gestation 14–14½ months; one young. Two species: Giraffe and Reticulated Giraffe.

Giraffe, one of the two species of Giraffes. Many races in the grass country of Africa. The brown blotches are smaller and less red than in the Reticulated Giraffe and the ground colour is yellower and not confined to a network pattern. The median horn is more or less developed according to the race, some races have all five horns. Giraffa camelopardalis.

Giraffidae, one of the families of the Ruminants. Large, long-necked, long-legged animals with at least two short, skin-covered horns. Coat thick and close; spotted or in part striped. Two genera, confined to Africa. Giraffes and Okapi. Giraffidae.

Gleaner Mouse, related to the House Mouse. Tail shorter than the head and body, the whitish colour of the under surface sharply contrasted with the yellowish grey-brown of the flanks. Distributed through Eastern and Southern Europe from the Balkans to the Baltic and west to Portugal. Indigenous to the Mediterranean region; related forms occur in North Africa, Asia Minor and Central Asia. Lives chiefly in cultivated fields, thickets and woods; never inhabits towns. *Mus spicilegus*.

Glutton, see Wolverine.

Gmelin's Sheep, see Red Sheep.

Gnus, form a genus of the Bubaline Antelopes. Odd-looking animals with a buffalo-like head, a horse-like body and a tufted tail. Horns (in both sexes) thickened at the base and curving downwards and outwards and then inwards and upwards. Live in grass country in South and East Africa; now exterminated in the southernmost parts. Two species: White-tailed Gnu; Brindled Gnu. Connochaetes.

Goa, a Gazelle living on the undulating plains and gently sloping valleys of the high plateau of Tibet between 13,000–18,000 ft. Coat short in summer, upper-parts and flanks grey, long and soft in winter and light sandy-brown, under-parts and rump-patch white. Tip of tail dark brown to black. Face without "gazelle markings." Shoulder-height 24–25 in.; horns only in the male, record length 14½ in. Gazella picticaudata.

Goat, Domestic, one of the oldest domestic animals. Seems to have originated from three different wild Goats in three different parts of the world. Somewhere in South-East Europe the extinct Capra prisca was tamed, the origin of most of the European Goats with spirally wound horns. In Western Asia the Pasang gave rise to the Goats with scimitar-like horns. Finally the Markhors gave rise to oriental Goats and modern Circassian Goats.

Goats, Wild, genus of the sub-family Caprinae (Sheep and

Goats). Horns close together at their bases, more or less laterally compressed, forming a scimitar-like curve or a spiral; present in both sexes, but smaller and smooth in females. Males with beard and scent glands. Females with 2 teats; 1–2 young. Mountain animals from Spain, the Alps, the islands of the Greek Archipelago, North-East Africa and over Asia Minor, the Caucasus, Iran and Sind to Central Asia. Include: Wild Goat; Markhor; Ibex. Capra.

Goat-Antelopes, form a sub-family of the Hollow-horned Ruminants, are very nearly related to the Antelopes (and are often included in the latter). Distribution: in the high mountains of Southern and South-East Europe, Asia Minor, the Himalayas, China, Formosa, Japan and Amurland to western North America. Horns in both sexes with little or no sexual difference. Usually 4 teats. Include: Chamois; Takin; Rocky Mountain Goat; Serows; Gorals. Rupicaprinae.

Goat-Antelope, Formosan, see Formosan Serow. Goat-Antelope, Japanese, see Japanese Serow.

Goeldi's Monkey, living in the northern half of Bolivia, forms a link between the Marmosets and the Cebidae; it is usually

included amongst the former. Callimico goeldii.

Goitred Gazelle, from the desert region between Damascus and the Euphrates through Persia, Afghanistan and Turkestan to the Altai. Males have a goitre-like swelling in the neck during the breeding season. Females hornless. Coat long-haired in winter. Face markings indistinct, no white patch on buttocks. Shoulder-height 24–27 in. Gazella subgutturosa.

Golden Agouti, the smooth, short coat is a reddish lemon-yellow mixed with black. Body 16 in., tail $\frac{1}{2}$ in. Lives in damp as well as dry forests in Brazil, Venezuela, Guiana. Introduced into

the West Indian island of St. Thomas. Dasyprocta aguti.

Golden Cat, self-coloured rufous to dark-brown or grey; cheeks and forehead striped brown and white. Pattern of dorsal stripes, flank rosettes and ventral solid spots sometimes conspicuous, sometimes obsolete (save face markings and some spots on under surface). From the Eastern Himalayas to Western China, Sumatra and Borneo. Has been wrongly considered to be the source of the Siamese Cat. Felis (Profelis) temminckii.

Golden Hamster, species of Hamster living in Syria. Now of considerable importance as a laboratory animal used for medical

research. Mesocricetus auratus.

Golden Moles, a South and Central African family of Insectivores. Mole-like in shape and habits. The hands have 4 claws of which the innermost is minute and the next one is enormous; the two outer ones are small and fit into the hollow of the larger one. The coat has a coppery sheen. This is a rather large group

containing nearly forty named forms, currently arranged in seven genera. They are all closely related and for the purposes of this book they can all be placed in the old comprehensive genus Chrysochloris. Four well-known forms are: (1) Cape Golden Mole (Chrysochloris aurea). Burrows in gardens and goes along just under the surface in search of worms and larvae. Has no complicated fortress like a Common Mole but only a round nest of grass where the young are born; (2) Red Golden Mole (Chrysochloris hottentottus). Head relatively long and narrow. From eastern South Africa; (3) Peter's Golden Mole (Chrysochloris obtusirostris). Has a short stumpy head and more coppery sheen than (1). From Portuguese East Africa; (4) Giant Golden Mole (Chrysochloris trevelyani). Much the largest, over $8\frac{1}{2}$ in. long. South Africa.

Golden Takin, general colour golden buff. Found in the mountains of Shen-si and the neighbouring parts of Kansu (Western

China). See Takins. Budorcas bedfordi.

Golden-headed Marmoset, a species of Lion Marmoset from South-East Brazil. Leontocebus chrysomelas.

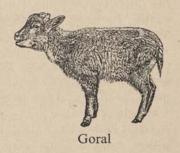
Gond, see Swamp Deer.

Gophers, see Pocket Gophers.

Gorals, goat-like Goat-Antelopes, closely related to the Serows but smaller. Horns in both sexes, short, conical, slightly bent

backwards, black. Hair long and smooth. Five species in the Himalayas, Western China, Korea and Amurland. Mountain animals. Include: Grey Himalayan Goral; Brown Himalayan Goral; Longtailed Goral; Korean Goral; Szechwan Goral. Nemorhaedus.

Gorilla, an Anthropoid living in the tropical forests of the Cameroons and the Congo, males



larger than females and up to 6 ft. tall and broader in the shoulders than a grown man. Hair black, greyish in old animals; face pitch black and hairless. Live in families in the thickest parts of the forest, partly in the trees but mostly on the ground. Live on fruits and plants. Cf. also the Mountain Gorilla. Gorilla gorilla.

Grampus or Killer, belongs to the Dolphins and Porpoises. Sturdy animal, short, solid head streamlined with body; tall dorsal fin, short, broad, oval flippers; 10–12 large teeth (crowns 2 in. long and nearly 1 in. in diameter) in each half of each jaw. Black above with a lighter, violet-shot patch behind the dorsal fin; belly white. There is an almond-shaped white patch above

and behind the eye and the white of the belly encroaches on the flanks towards the tail. Length of adult males up to $26\frac{1}{2}$ ft., of adult females to 20 ft. Common in North Atlantic. Voracious predator, hunts seals, dolphins, etc. Large herds of them even attack large baleen whales and tear great pieces out of their live prey. *Orcinus orca*.—In the North Pacific occurs the nearly related Pacific Grampus (*Orcinus rectipinna*), which has no white patch by the eye.

Grant's Gazelle, a large Gazelle, most nearly related to the Dama Gazelle and Soemmerring's Gazelle. Shoulder-height 33–34 in., record horn 30¼ in. Light cinnamon brown with white underparts; rump-patch large, including the tail and with black bordered extensions on to the hip joints. From the middle of Tanganyika Territory to Victoria Nyanza and Southern Abyssinia. In herds of up to 50 individuals; in some regions up to a few hundred; often in company with giraffes, zebras, oryx and hartebeests. Feeds on grass and leaves. Gazella granti.

Grant's Zebra, sub-species of the Bontequagga from the East African highlands from Tanganyika to Northern Uganda. Equus

(Hippotigris) quagga granti.

Grasshopper Mouse, strongly built mouse-like Rodent (subfamily Cricetines) with short, thick tail and white belly. Nocturnal; inhabits dry, open spaces. Lives on insects such as grasshoppers, etc.; also herbivorous. About 4 young born once or more times a year. $5\frac{1}{2}-6\frac{1}{2}$ in. long, of which $2-2\frac{1}{4}$ in. are tail. Two species in western North America. Onychomys leucogaster and Onychomys torridus.

Gray's Monkey, back reddish-brown, head with three black longitudinal stripes above. Cameroons and Congo. Cercopithecus grayi. (Now regarded as a sub-species of the Mona Monkey.

Cercopithecus mona.)

Great Ant-eater, the largest of the Ant-eaters. Coat rough with a bristly mane. Dark brownish-grey with a black mark bordered with white running from the throat to the centre of the back each side of the body. Tail with long stiff hairs hanging downwards. Total length up to 6 ft. 6 in. Terrestrial. One young at a birth. From Guatemala to Paraguay. Myrmecophaga tridactyla (= jubata).

Great Bat, see Noctule.

Great Dane, a dog intermediate between the mastiff and the greyhound. About 30 in. high. Coat short and sleek, brindled as a rule.

Great Grey Kangaroo, one of the largest species of Kangaroo. Nearly 10 ft. long (one-third of this is tail): when sitting it is as tall as a man. Female one-third smaller. Coat thick, smooth, greyish-brown, whitish below. One sub-species lives on the grassy plains and open forest of Australia, nowadays being continually

driven back into the interior. One sub-species lives in Tasmania. The young, just over an inch long at birth, are carried in the mother's pouch about 8 months. Macropus giganteus.

Greater Egyptian Gerbil, from Northern Nigeria to Egypt; a local race in Sinai. Head and body about 4 in., tail about 6 in.

Gerbillus pyramidum.

Greater Flying Phalanger, about 37 in. long (head and body about 17 in., tail 20 in.), resembling a large flying squirrel. Eastern Australia. From Queensland to Victoria. A small race (total length 30 in.) in Central Queensland. Nocturnal. Eats leaves and other vegetable matter. Petauroides volans.

Greater Horseshoe Bat (see also Horseshoe Bat), wing membrane attached just above the heel. Upper-parts greyish-brown in the males, more reddish-brown in the females; under-parts lighter; head and body 2½ in., tail 1½ in. long; wing span 13 in. Southern and Central Europe, and north as far as England and the Harz Mountains, North Africa and Asia as far as Japan. Gregarious among ruins and in caves. Come out at dusk. Fly low and awkwardly. Insectivorous. Rhinolophus ferrum-equinum. The English form is regarded as a distinct sub-species distinguished from the typical Continental race by its relatively shorter wings (forearm 52-55 mm. instead of 54-58 mm.). Rhinolophus ferrumequinum insulanus.

Green Guenons, those species of Guenon which have a greenish tinge on their backs. The greenish tinge is caused by black and yellow or brownish ring-markings on the grey hairs. Extremities lighter, grey. Grey to white below. Cercopithecus.

Green Monkey, from Senegal, Sierra Leone and Liberia. Introduced into some of the Cape Verde Islands, and into St. Kitts

and Barbados in the West Indies. Cercopithecus sabaeus.

Greenland Caribou, belongs to the Barren Ground Caribou group. Inhabits Greenland. Rangifer tarandus groenlandicus.

Greenland Hare, large Hare from Greenland and Ellesmere Land. Dirty white with scattered black hairs in summer, pure white in winter. Ears greyish, black-tipped. Very thick fur. Lepus

groenlandicus.

Greenland Right Whale, belongs to the family Balaenidae, or Right Whales. Reaches a length of 50-60 ft. Whalebone 10-12 ft. long. Large head, about one-third the length of the body. Black, white below. In Arctic Seas north of Bering Straits and west of Greenland; getting scarce nowadays. Formerly, next to the Northern Black Right Whale, an important Whale commercially, especially off Spitzbergen. Balaena mysticetus.

Greenland Seal or Harp Seal, a member of the family Phocidae, or True Seals, with a pelagic-arctic, almost circumpolar range, common chiefly round Greenland and Spitzbergen, General colour yellowish white; old males have the top of the head black and a large black, saddle-shaped mark on the back; old females are yellowish white, with a brownish tinge above, lacking the black markings of the male; sub-adults grey. Length of males up to $6\frac{1}{2}$ ft.; females $4\frac{1}{2}$ ft. Lives on the drift ice and comes south in winter to Norway and Newfoundland; occasionally visits the British coast. The single young ones, born in March, have a soft white coat and are known commercially as "white-coats." Greenland Seals are hunted for their skins and blubber; the yearly toll of the Newfoundland fleet amounts to 200,000–500,000, that of the European North Atlantic fleet to about 200,000. *Phoca groenlandica*.

Grevy's Zebra, largest and northernmost species of Zebra, up to 5 ft. at the withers. The body and legs right down to the hooves have narrow black stripes placed close together on a white ground. The crupper is pure white. Hooves broad, ears large and thickly haired. Lives in Southern Abyssinia and the neighbouring parts of Somaliland and East Africa. The herds keep to open or thinly treed country, never in thick bush; sometimes found in company

with the Oryx. Equus (Dolichohippus) grevyi.

Grey Hamster, genus of small, grey, light-bellied Hamsters. From Southern Russia and the Caucasus through Asia to China. Cricetulus.

Grey Himalayan Goral (see Gorals). Shoulder-height about $27\frac{1}{2}$ in., tail 3 in. Grey or greyish-brown, mixed with a certain amount of black. Horns short, usually about $7\frac{1}{2}$ in., record 9 in. Lives in the wooded parts of the Himalayas between 3,000 and 8,000 ft. Small troops of 4–8 animals common. Gestation about 6 months. One young in May or June. Nemorhaedus goral.

Grey or Vaal Rhebok, an Antelope of the Reduncine sub-family, about the size of a roe deer, shoulder-height 28 (female) to 31 in. Horns only in the male, almost straight, basal half ringed, record 11½ in. Hair somewhat woolly, grey, back darker than belly, head and legs with a brownish tinge. Black spot on the chin. Live in open hilly districts in Africa south of the Zambesi, come down into the valleys at night to water. Feed on grass. Live in pairs or up to 20 together. Very shy; hence valued as game. *Pelea capreolus*.

Grey Seal or Atlantic Seal, off the coasts of the North Atlantic and the Baltic, a member of the Phocidae. Common around Scilly, the Farne Islands, Shetlands, Orkneys, and coast of Northern Scotland. Has a long head and single-cusped cheek-teeth. Up to 9 ft. long. Colour grey, with irregular spots, white or light grey below. Lives in pairs or solitary, likes rocky coasts. Gestation 11½ months. A single young one, about 3 ft. long, is born in September–December (North Sea) or February–March (Baltic). Said to do damage to fisheries. Halichoerus grypus.

Grey Squirrel, indigenous to the U.S.A. Larger than the Red Squirrels. Two species: Eastern Grey Squirrel (Sciurus carolinensis), west as far as the prairie region; Western Grey Squirrel (Sciurus griseus), west of the Rockies. (Sciurus carolinensis was imported into England in the last century and has increased there at the expense of the native Red Squirrel.)



Grey Squirrel

Grey Whale, Californian, forms a family (*Rhachianectidae*) of the Whalebone Whales on its own. No dorsal fin but has two ventral grooves. Whalebone plates not numerous; short and thick; up to 16 in. long. Colour dappled grey to almost black. Up to 43 ft. long. Lives in the Pacific north of the Equator and appears off the Korean and Californian coasts. Undertakes regular yearly migrations along the coasts from the Arctic Circle to southern winter quarters, and likes to frequent shallow bays. The females come into estuaries in winter to drop their young. Recently it has been recorded from Atlantic waters (North Sea on coast of Holland). *Rhachianectes glaucus*.

Grey-backed Hamster, Belgian sub-species of the Common

Hamster. Cricetus cricetus canescens.

Grey-cheeked Mangabey, a species of Mangabey found from the Cameroons and the Lower Congo to Uganda, Tanganyika and Meru. Hair of the head long and erect, black in the middle and grey at the sides. Cheeks and neck and the shoulder mantles grey. Cercocebus albigena.

Greyhound, a breed of dog which existed several thousand years in Egypt and which has altered very little. Strong, lightly

built, fast, and hunting by sight.

Griffon (Brussels), a toy dog weighing about $5\frac{1}{2}$ lb. Its head is covered with coarse hair, and it has a moustache, beard and side-whiskers.

Grindhval, see Pilot Whale.

Grindhyal, Scammon's, another name for the North Pacific Pilot

Whale, see Pilot Whale.

Grison, a Mustelid related to the Tayra. Light grey above, brownish-black below. Length 25 in. of which 8½ in. are tail. South America. Lives in plantations, especially in the neighbourhood of buildings. Sometimes accounts for many hens. Galictis vittatus.

Grivet Monkey, a Green Guenon with dark face framed in white. From Sudan and Abyssinia, up to 4,000 ft. in the moun-

tains. Cercopithecus aethiops.

Grizzly Bear, the largest Carnivore of North America, found in several races and species in the western half of North America

from the Arctic Ocean to Northern Mexico. The typical Grizzlies (Ursus horribilis, etc.) are light brown or yellowish-brown, with a sprinkling of white, due to white-tipped hairs, on the back. The claws are long, slightly curved and usually longitudinally streaked with a lighter colour. An adult male is 6-81 ft. long, 3-4 ft. high at the shoulder and weighs between 350 and 880 lb. The largest form, the South Californian Grizzly (Ursus magister) which is now apparently extinct, is said to have weighed up to over 1,400 lb. The true Grizzlies seem to be almost or completely extinct in the southern parts of the Rocky Mountains and in the western prairie districts, but are common in British Columbia. Yukon and Alaska. The Bears from the adjacent islands belong to the Brown Bears: their colour is more uniform and less sprinkled with white, and their claws are shorter, darker and more curved. Amongst these are found the giants of American Bears: the Kodiak Bear (Ursus middendorffi) from the islands of Kodiak, Afognak and Shuyak; skins go up to 10 ft. in length: the Kenai Bear (Ursus kenaiensis) from the Kenai Peninsula in Alaska: the Alaska Bear (Ursus gvas) which is as large as the Kodiak Bear and is found in Alaska and the island of Unimak. Before the advent of modern guns Grizzlies were just as much feared as lions and tigers. Nowadays the most sought after trophy of American sportsmen.

Ground Squirrels, African, a well-marked ground-dwelling tribe, not essentially very different from the arboreal tribes. Hair short and bristly; tail almost as long as the body with the hair arranged on each side. Ground-living, digging deep holes. Several genera with many species. Include: Cape Ground Squirrel; Barbary Ground Squirrel; Sudan Ground Squirrel; Red-footed Ground Squirrel. Xerini.

Ground Squirrels (North American and Old World), body rather slender, long head, ears usually hidden in the fur, tail short with the terminal half bushy. Found in fields and plains where they dig holes in which they store up food and hibernate. Feed on seeds, roots, and berries; rarely on animal matter. Include: North American Ground Squirrels; Sousliks. Citellus. In recent classification the Sousliks, together with the Prairie Dogs, Marmots and Chipmunks, are included in the tribe Marmotini.

Ground-hogs, see Cane-rats.

Grysbok, one of the Neotragine Antelopes from South Africa, from the Zambesi to Mozambique. Shoulder-height 22 in.; horns only in male, simple spikes, $3-4\frac{7}{8}$ (record) in. Reddish-brown sprinkled with white, lighter below. Ears large, the outer sides brownish-grey. Lateral hooves present. In pairs in hilly, bushy country. *Rhaphiceros* (*Nototragus*) melanotis.

Guanaco, see Huanaco.

Guazupuco, see Marsh Deer. Guazuti, see Pampas Deer.

Guemals, a genus of deer from western and southern South America. Antlers small, each forming a two-pronged fork. Two species: Chilean Guemal and Peruvian Guemal. *Hippocamclus*.

Guenons, elegant long-tailed Monkeys. Live gregariously in the forests of tropical Africa. They form a large genus—Cerco-

pithecus.

Guereza (sensu stricto), a Colobus Monkey with several forms inhabiting the forests of tropical Africa. Black with long white hairs on the flanks and on the tail. Face framed in white. One of the most beautiful monkeys. Young ones are completely white. Most important species is Colobus abyssinicus.

Guinea Baboon, inhabits West Africa from Senegal to Togoland. Self-coloured reddish-brown or yellow. Body $2\frac{3}{4}$ ft. long. *Papio*

papio.

Guinea-Pig, a purely domestic Rodent of the family Caviidae. Was already being bred by the Incas of Peru at the time of the discovery of America, and was brought to Europe in the sixteenth century. Apparently a domestic form of the self-coloured brownish Peruvian Cavy. The Guinea-pigs of the Incas were self-coloured reddish-brown or white or skewbald of these two; they never had black markings. The modern Guinea-pigs are usually three-coloured, white, pale brown and black in large blotches, but they may be two- or self-coloured. Varieties are the "Abyssinian," with short coats with rosettes of long hair dotted about all over the body and the "Peruvian" or "Amazon," with very long silky hair. Herbivorous. Gestation 63–66 days; usually 2 or 3 at a birth, but up to 12 recorded. If crossed with the Aperea the hybrid is fertile. Kept as pets by children and also largely bred for medical research. Cavia cobaya (= Cavia porcellus).

Gundis, family of African Rodents, apparently related to the South American Octodonts. Stiff bristles, growing on the tips of fingers and toes, cover the claws and serve as brushes when digging in sandy places. Further, the two inner toes of the hind feet are furnished with a horny comb and rigid bristles, used by the animal in dressing its fur. From this feature the family gets its name, Ctenodactylidae. Best known species, Ctenodactylus gundi, comes from Algeria, Tunis and Libya. Plump with short ears, long stiff whiskers, strong limbs and a stumpy tail. Pale yellow sprinkled with black above; whitish below. Head and body

6½ in., tail ½ in.

Gymnuras, rat-like Insectivores, without spines and with a fairly long tail. Body longish, head with a long pointed snout. Occur in further India and the Malay Archipelago; one genus in China.—The Greater Gymnura (Gymnura gymnura) is black and white

with the tip of the tail usually white; head and body 12–14, tail $8-9\frac{1}{2}$ in. long. Nocturnal. The animal has a peculiar odour, rather like onions. Sumatra and further India.—The lesser Gymnura (*Hylomys suilla*) is reddish-brown and paler below; head and body 5, tail 1 in. long. Sumatra, Borneo, Java and further India.

Hackney, primarily and anciently a horse of medium size and quality for riding on the roads. The name comes from Old French Haquenee, "an ambling horse," of which word there are variant forms in Old Dutch, Spanish and Italian. Later, with the construction of light vehicles, such horses were often harnessed, the vehicles being called accordingly "Hackney Carriages."

Hairy Armadillo (see also Armadillo), 20 in. long and covered

with stiff hairs. Argentina. Euphractus villosus.

Hairy Saki, see Humboldt's Saki Monkey.

Hairy-armed Bat, see Leisler's Bat.

Hairy-eared Rhinoceros, see Chittagong Rhinoceros.

Hairy-footed Bat, see Bonin Island Bat.

Hairy-nosed Porcupine, inhabits the forest region of Lenkoran in Southern Caucasus. Nose thickly haired. Hystrix hirsutirostris, described from Afghanistan and treated by Russian zoologists, as a full species with several sub-species (of which the Lenkoran animal is one). But there is no essential difference from the Indian Hystrix leucura, of which all forms of hirsutirostris are best treated as sub-species.

Hairy-nosed Wombat, see Wombats.

Hairy-rumped Agouti, species of Agouti from Guiana and Northern Venezuela. The hair along the centre of the rump

forms a long black crest. Dasyprocta

prymnolopha.

Hammer-headed Bat, a West African relative of the Epauletted Bat with an enormously enlarged snout. Hypsignathus monstrosus.

Hamsters, group of Cricetine Rodents in Europe and Asia. See Common Hamster; Grey-backed Hamster; Golden Hamster; Dobrudscha Hamster; Grey Hamster. Cricetus, Mesocricetus and Cricetulus.

Hanglu, see Hangul (Hangul, Hanglu or Honglu are Kashmir names for the Kashmir Stag, Minyamar, being the name for the



Hamster

Hind. Barasingha is the Hindustani name of the species).

Hangul (Barasingh) or Kashmir Stag, a species of Deer from the Valley of Kashmir and neighbouring valleys. Brownish-grey in winter, lighter and redder in summer. Shoulder-height up to 52 in. Antlers usually with 5 points on each side, record length 50 in. Cervus hanglu (= Cervus cashmiriensis).

Hanuman, a Langur from India. About 5 ft. long, of which almost 3 ft. are the tufted tail (a male measured head and body $25\frac{1}{2}$ in., tail $42\frac{1}{2}$ in.). Greyish-white, with black hands and face. Is considered holy by the natives, hence is common in many districts where it is cheeky and troublesome. Semnopithecus entellus.

Hare, Belgian, see Belgian Hare. Hare, Calling, see Pikas.

Hare, Common, see Brown Hare.

Hare-lipped Bats, South Ameri-



Hanuman Langur

can family of Insectivorous Bats; have very long legs. Alone amongst bats they feed on fish which they catch with their large feet. *Noctilionidae*.

Hare-wallabies, Australian Wallabies, reminiscent of hares in size, shape, habits and colour. Tail fairly short. Lagorchestes.—Brown Hare-wallaby (Lagorchestes leporides), rump hair tipped white or grey, black patch on elbow. South Australia and New South Wales.—Rufous Hare-wallaby (Lagorchestes hirsutus), rump hair tipped red, no patch on elbow. Western Australia.—Spectacled Hare-kangaroo (Lagorchestes conspicillatus), upper surface yellowish-grey to yellow-red, two lateral white bands present, chestnut round the eye. Islands of north-west coast of Australia; represented by a brighter coloured form (Lagorchestes leichardti) on the mainland of Northern Australia.

Hares and Rabbits, family of the Duplicidentata. Distinguished by the long ears, short tail and long hind legs. Almost cosmopolitan; not in the Australian region (save imported), Madagascar, and southernmost South America. The Hares and Rabbits form the well-defined family Leporidae, but there is no sharp limit between the cursorial, longer-legged Hares and the burrowing, shorter-legged Rabbits. Many genera are recognized, the best-known being those which include European and North American Hares (Lepus); European Rabbits, wild and tame (Oryctolagus);

North American Rabbits (Sylvilagus).

Harnessed Antelopes, see Bushbuck. Harp Seal, see Greenland Seal. Hart, male of Deer, especially Red Deer.

Hartebeests, a genus of the Bubaline Antelopes. Large, ungainly antelopes with abnormally long faces with cow-like muzzles. Back slopes away from the withers. Horns in both sexes. Savannas and sandy plains of Africa. Include: Cape Hartebeest; Coke's Hartebeest; Lichtenstein's Hartebeest; Bubal Hartebeest; Western Hartebeest; Lelwel; Tora. Bubalis or Alcelaphus.

Hartebeests, Bastard, genus of Bubaline Antelopes. Large but lightly built animals. The back slopes away steeply from the high withers. Horns usually slightly lyrate; present in both sexes. From the savannas of tropical and South Africa. Include: Blesbok; Bontebok; Hunter's Hartebeest; Korrigum; Sassaby. Damaliscus.

Hartmann's Zebra, sub-species of the Mountain Zebra. Lives in a narrow coastal strip of Angola and Damaraland. Equus

(Hippotigris) zebra hartmannae.

Harvest Mouse, in Europe the smallest of the true mice, head and body up to 3 in., tail $2\frac{1}{3}$ in. Brown-red above, white or buffy below. Distributed from France and Italy to Great Britain, Jutland, Finland and Russia; east as far as Siberia. Does not occur in Scandinavia. In gardens, fields, thickets with long grass, etc. The ingenious round nest is built between corn-stalks or reeds. Eats corn, roots, etc., also insects and other animal matter. Climbs up stalks with ease. Bears 5–9 young several times a year. *Micromys minutus*.

Harvest Mouse (American), a Cricetine resembling a small house mouse. Upper incisors grooved. Central America; 7 species in

the Southern U.S.A. Reithrodontomys.

Hattock, a rare Lemuroid from Madagascar. Mixocebus

caniceps. Some include this form with the Sportive Lemurs.

Havana Rabbit, cigar-brown variety of Tame Rabbit, originating apparently in Holland. Very valuable as a fur animal. Weight $5\frac{1}{2}-7\frac{1}{2}$ lb.

Hedgehog, lives in the Old World. An Insectivore covered with



Hedgehog

spines and able to roll itself up in a ball for protection. The best known form (Erinaceus europaeus) lives in Europe from Great Britain and Ireland to Spain, Italy, Sicily and Greece. Comes out at twilight and during the night and lies hidden in hedges and in gardens during the day. Feeds on all sorts of small

animals up to snakes and rats and also on eggs and young birds (of species which nest on the ground), also fruit. Gestation 7 weeks; 3-6, rarely up to 8, young at a birth in July or August. In Hungary, Northern Bohemia and Eastern Germany occurs the

rather darker form (Erinaceus roumanicus). There are related forms in Asia and North and East Africa.

Heran, see Blackbuck.

Herola, see Hunter's Hartebeest.

Herring Hog, see Porpoise, Common.

Heuglin's Gazelle, upper-parts and flanks dark sandy-coloured, under-parts white; the two colours are separated by a distinct,

narrow black stripe. No spot on the muzzle. Tail almost completely black. Shoulder-height 27 in., record horn 11% in. Lives on the bush-plateaux of Abyssinia at 3,000-5,000 ft. Gazella tilonura.

Himalayan Black Bear (see also Bears), found from Persia through the Himalayas to China; black with a V-shaped white mark on the breast. Head and body 4 ft. 8 in. to 6 ft. 5 in. long, tail 3 in., shoulder-height about 2½ ft., weight up to 265 lb. In summer climbs up to 12,000 ft. in the Himalayas; a partial hibernator. Lives in wooded country. Feeds on all sorts of vegetation and fruits, climbing trees for the latter; it also has the reputation of being a fierce predator. Selenarctos thibetanus.



Himalayan Black Bear

Himalayan Langur, nearly related to the Hanuman, of which it is now regarded as a sub-species. Lives above 6,000 ft. in the mountains of Bhutan and Kashmir. Semnopithecus entellus schistaceus.

Himalayan Rabbit, variety of Tame Rabbit. White with ears,

tip of nose, tail and feet black; pink eyes.

Hinny, result of crossing a stallion with a she-ass. Smaller than a mule and rarely bred. Sterile.

Hippopotamus, lives in Africa south of the Sahara. Exterminated

or rare in many cultivated districts but still very common in other places. Up to 14 ft. long of which 20 in. are tail, 5 ft. high at the shoulder. Weight 2,000–3,000 kilograms (roughly 2 to 3 tons). Record length of a lower tusk 48 in. An aquatic animal living by lakes, rivers and swamps where it spends most of the day in the water. Comes out at night to feed on all sorts



Hippopotamus

of vegetation, sometimes invades sugar and other plantations.

Gregarious but old bulls solitary. Gestation about 8 months,

one at a birth. Hippopotamus amphibius.

Hippopotamuses, short-legged Ungulates, most closely related to pigs. Heavy bodies, head large with a broad, enlarged snout. Strong tusks in both jaws, incisors of the lower jaw peg-like and almost horizontal. Feet with 4 toes all of which touch the ground. Skin almost entirely naked, very thick. Africa south of the Sahara. Two genera and two species: Hippopotamus (*Hippopotamus*); Pigmy Hippopotamus (*Choeropsis*). Family *Hippopotamidae*.

Hirola, see Hunter's Hartebeest.

Hoary Bat, a near relative of the Red Bat (Lasiurus borealis), but larger. Greyish-white, yellower below. Head and body $3\frac{1}{4}$ in., tail $2\frac{1}{4}$ in. long. Ranges through Boreal North America from Atlantic to Pacific. Lasiurus cinerea.

Hoary Marmot (see Marmot), lives in the mountains of western North America from Alaska to Washington and Idaho. The largest of the North American Marmots with a total length of 30 in. Marmota caligata.

Hocheur Guenon, see Putty-nosed Monkey.

Hodgson's Sheep, see Tibetan Argali.

Hog-badger, an Asiatic Badger with a pig-like snout. Occurs from the Eastern Himalayas to Yunnan and Tenasserim. Several geographical races differing considerably in size, the head and body in adults varying in length from 2 ft. to 3 ft. 7 in. Arctonyx collaris.

Hog-deer, common Indian Deer. Distribution: from Sind and Punjab over the plains of the Indus and the Ganges to Assam, Burma, Tenasserim and Siam. Introduced into Ceylon. Comparatively low-built and powerful; 25½-29 in. high at the shoulder. Antlers 3-tined with long beams, record length 24 in. Coat reddishor yellowish-brown; in summer lighter, spotted light brown or white; belly darker than the back. Live singly or in twos or threes, chiefly on grassy plains but occasionally in wooded country; chiefly nocturnal. Antlers shed in April; rut in September or October; fawns born May or June. Cervus (Hyelaphus) porcinus.

—There is a second species, Cervus (Hyelaphus) calamianensis, from Caliamianes Island, one of the Philippine group. This is unspotted all the year round.

Hog-nosed Skunk, see South American Skunk.

Hollow-horned Ruminants, the family Bovidae of the Pecora or typical Ruminants. Have non-deciduous horns growing on bony cores springing from the frontal bones and containing numerous air-cells. Most of them are horned in both sexes. Not found in South America, Australia and Madagascar. Commonest in Africa and Asia. Include: Bovinae; Musk-ox; Sheep and Goats; Rupicaprinae; Antilopes.

Holstein Horse, a German breed of light draught horse.

Honey Mouse, member of the *Phalangeridae* from Western Australia. Small with very pointed nose. Worm-like protrusible tongue. Cheek-teeth minute and vestigial. Fur short, coarse and rough. Grey above with three dark longitudinal stripes, pale rust-coloured on the sides, yellowish-white below. Head and body $2\frac{3}{4}$ in., tail $3\frac{1}{2}$ in. Tail prehensile and thinly haired. Eats insects and nectar. *Tarsipes rostratus*.

Honey-badger, see Ratel.

Hooded Seal, belongs to the Cystophorinae. The male can inflate its nostrils to form the "hood." Coat dark ash-grey with dark brown spots; forehead and snout brown-black; belly lighter and unspotted. Males up to 8½ ft. long, females to 6½ ft. Inhabit the Arctic Ocean and the Atlantic from Spitzbergen to Greenland and Canada. Seen regularly off Norway and Newfoundland and rarely off the British Isles, France and New England, but chiefly on the drift ice in polar seas. Feeds on fish and cuttle-fish. The two-year-old ones are known as "bedlamers" to the sealers and the very young ones as "whitecoats" (cf. Greenland Seal). Cystophora cristata.

Hoolock Gibbon, a Gibbon about 3 ft. long. Black with a white line across the forehead. Lives in the hill regions of Assam and Burma. *Hylobates hoolock*.

Horse, Domestic, by the Bronze Age already well established as a domestic animal. The oldest European representation of a domestic horse is perhaps one on the wall of a rock-dwelling at Schonen in Southern Sweden (about 1600 B.C.). Apparently derived from at least three separate centres of domestication; an Indo-German, a Western European and a Mongolian. The Indo-German stock is derived from the Tarpan or some nearly related horse. This stock is light in the bone with a broad forehead and large eyes. Probably domesticated in the third millennium B.C. by Aryan peoples (Southern Russia?) and soon bred in many parts of Europe, Egypt and the Near East. From there spread all over Africa and Southern Asia as far as Celebes (sometimes as pony races). In Europe later largely displaced by the Western European stock and the Mongolian stock. The typical race of this stock is the Arab. The Western European stock derives probably from a Western European wild horse, which possibly still existed in Spain during Roman times-large, strong, heavyboned animals with a long, narrow head. From this stock come draught horses. The Mongolian stock derives mostly from the Mongolian wild horse. The purest stamp of this stock is the Mongolian pony. (For the various breeds of horse see under Arab, Blood, etc.)

Horseshoe Bats, family of Insectivorous Bats. Nose with a horseshoe-shaped fold of skin. Ears, unlike those of other

insectivorous bats, have no "tragus." Wings short and broad. Tail short. Live in the warm and to a certain extent in the temperate regions of the eastern hemisphere. Many species, five in Europe. Include: Greater Horseshoe Bat; Lesser Horseshoe Bat; Blasius' Bat; Euryale Horseshoe Bat. Rhinolophidae.

Hounds, powerfully built dogs with a smooth coat, long head and muzzle, low-set pendulous ears and pendulous upper lips. Bred for hunting by scent. The English breeds are traceable to hounds imported by the Conqueror. Harriers and beagles, used for hare-hunting, and stag-hounds, are older breeds than fox-hounds, which were probably developed by crossing the Old English hounds of bloodhound type with greyhounds. The rough-coated otter-hound is now dying out.

House Mouse, grey-black above, somewhat lighter below. Head and body about 3½ in., tail usually a bit longer. Distributed over practically the whole world; live commensally with man. Original home most probably in Asia. Prefer to live in houses but in summer also in gardens and fields. Omnivorous. 5–7 young born 5–6 times a year; gestation 22–24 days. White or coloured varieties are bred by fanciers, see Waltzing Mouse. Mus musculus.

House Rat, tail longer than head and body. Colour of back varies from brown, in "wild" forms (Rattus rattus alexandrinus and frugivorus) through slate-grey to black in the most advanced "parasite" (Rattus rattus rattus); similarly the under-parts vary from white or pale lemon, through brown, to slate-grey. Head and body 61-81 in., tail 8-10 in. Weight of adults rarely more than 8 oz., usually less (cf. Brown Rat). Originated in Asia where many wild races of the species inhabit the forests of the Indo-Malayan countries; came into Europe in early times and in the Middle Ages was already distributed over most of the Old World. Since the end of the eighteenth century has been driven out in many places in Western Europe by the Brown Rat; but the rebuilding of many cities in combination with rat-proofing against the Brown Rat has enabled the House Rat to re-colonize them. This is due to a difference in habits, the Brown Rat being a burrower and swimmer, entering the buildings through their basements and drains, whereas the House Rat is arboreal, entering buildings by roofs and windows. The House Rat has always been the common rat on ships and with shipping has spread to all parts of the world. Like the Brown Rat it is an economic nuisance, and entering into very close association with man it is the species chiefly responsible for the spread of bubonic plague. 8-10 young born 2-3 times a year. Rattus rattus.

Howling Monkeys, a sub-family of the Cebidae. The largest New World Monkeys; reach the size of a largish dog, but females smaller than males. Head with a high forehead and a definite snout. Body powerful and thickset. Tail longer than the body and with the lower surface of the tip naked. Hands and feet with five digits. Beard present. Live in herds in the forests from Guatemala and Honduras to Uruguay. Rarely leave the trees. Feed on leaves. Their frightful howl can be heard miles away, the sound being augmented by a remarkable modification of the hyoid bone which has been expanded and inflated to form a bony trumpet or resonating organ. They form the genus *Alouatta*.

Howling Monkey, Black, old males black, females and young straw-coloured. From Ecuador to Paraguay. Alouatta caraya.

Howling Monkey, Guatemalan, jet black. Comes from Guatemala and Honduras; occurs in the cold, damp forests of the Chilasco Mountains up to 6,000 ft. *Alouatta villosus*.

Howling Monkey, Red, from Venezuela, Colombia, Ecuador, Eastern Peru and Western Brazil. Colour of head, limbs and tail varying from brownish-red to blackish-purple. Alouatta seniculus.

Huanaco, a wild Llama from Peru, Chile, Patagonia and Tierra del Fuego. Chiefly reddish-brown, whitish below. About 7½ ft. long and 4 ft. high at the shoulder. Gestation 10–11¼ months; one at a birth. Wild form of the Llama (sensu stricto) and the Alpaca. Lama glama huanacus.

Huemul, see Guemals.

Humboldt's Saki Monkey, from the upper reaches of the Amazon in Brazil and Peru. The hair of the body is long and the coat looks like a bearskin rug; the hair on the head falls over the short-haired forehead. Tail very bushy. Colour chiefly black grizzled with grey, head more brownish, whiskers short and grey. About 3 ft. long, almost half of which is tail. *Pithecia monachus*.

Humpback Whale, a Rorqual with long flippers (one-quarter to one-third of the total length). Body heavy, relatively short. Nose and lips with knobby, bristle-bearing protuberances. 25-40 ventral grooves. Black, with irregular white markings below, flippers mostly white with knobs on the front edges. Up to 50 ft. long. Plankton- and fish-eating. Formerly the chief quest of whalers in the South Atlantic at South Georgia and off the African coast; killed in enormous numbers and all but exterminated. Atlantic and Pacific. Megaptera nodosa.

Humped Cattle, kind of Zebu with a fatty hump. India, Eastern Asia and Africa.

Hunter, a horse used in England for fox-hunting; preferably 15 to 16 hands high and three-quarters or seven-eighths bred.

Hunter's Hartebeest, one of the so-called Bastard Hartebeests. Differs from the other species in the long, smooth, upright horn-tips. Colour chiefly reddish-fawn, a white stripe between the eyes. Shoulder-height about 4 ft. Record horn $27\frac{1}{2}$ in. From a small

district north of the Tana River; inhabits grass land with few or no thorns. Damaliscus hunteri.

Hunting Leopard, see Cheetah.

Hussar Monkeys, see Patas Monkeys.

Hutias, large arboreal or terrestrial Rodents of the family Capromyidae. Form usually robust, not rat-like; tail haired, long and prehensile or much reduced. Three genera: (1) Capromys, Hutia-Conga, from Cuba with relatively long prehensile tail and arboreal habits; (2) Geocapromys, Hutia, from Jamaica, Swan Islands, and the Bahamas, with much shortened tail and terrestrial habits; (3) Procapromys, Hutia, from Venezuela, of small size, with tail half as long as head and body, possibly representing mainland ancestor of the island genera.

Hutia-Conga, best known species of Hutia, reaches a head and body length of 18–23 in., and a tail length of about 6 in. Yellow-grey and brown mixed. Inhabits Cuba; keenly hunted by the natives for food and now exterminated in many parts. Lives in forest regions in trees or in thickets. Nocturnal; vegetarian. Gestation 72 days, 1–3 young at a birth. Capromys pilorides. In addition three other species of Capromys, all closely related, inhabit Cuba.

Hyenas, a family of the Carnivores. The size of a wolf with a broad, short-snouted head, a back sloping away to the rump, and long legs. Hind legs thinner and shorter than the front ones. Claws blunt. Tail bushy. Body is often striped or spotted. Nocturnal carrion-feeders. Two sub-families: (1) Hyaeninæ, with powerful bone-cracking teeth, includes the true Hyenas of Africa and Southern Asia with 4 toes on each foot—Brown Hyena; Striped Hyena; Spotted Hyena; and (2) the Protelinae, with greatly reduced, or vestigial, molars, includes the Aardwolf with 5 toes on the fore-feet and 4 on the hind. Hyaenidae.

Hyraxes, an order of Ungulates, at first sight resemble marmots



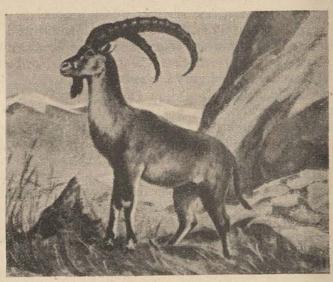
Hyrax

but are most nearly related to elephants. Have 4 toes on the fore-foot and 3 on the hind; these bear flat nails save the inner toes of the hind-feet which have claws. In the centre of the back is a patch of hair of a different colour from the rest of the coat and in the centre of the patch is an area of bare skin; this is a scent gland. Live in Africa from Senegal and Abyssinia southwards

and also in Palestine, Syria and Arabia. Some live in grass and desert regions (genus *Procavia*), some in rocks (genus *Heterohyrax*) and others in trees in forests (genus *Dendrohyrax*). Vege-

tarians. 2 or 6 nipples. 2-3 young, exceptionally 1. Hyracoidea. See Tree-hyrax; Syrian Hyrax; Abyssinian Hyrax; Cape Hyrax.

Thex, includes several species of Wild Goats distinguished by having scimitar-like horns of triangular cross-section with knotty cross-ridges on the fore side. (1) Alpine Ibex (*Capra ibex*), reddishgrey in summer, yellowish-grey in winter, neck, breast and legs blackish, belly and buttocks white. Head and body 53 in., tail 6 in., shoulder-height 34 in. Horns of male $31\frac{1}{2}$ - $44\frac{1}{2}$ in., of female only up to 7 in. Used to inhabit the whole Alpine region; now



Abyssinian Ibex (Capra walie)

almost extinct but still surviving in the Piedmont Alps and (reintroduced) in some other districts. (2) Abyssinian Ibex or Wali (Capra walie), like the Alpine Ibex, from the Simen Mountains of Northern Abyssinia, rare. Old males have a bony protuberance on the forehead. Shoulder-height 40 in. Record horn 44 in. long. (3) Nubian Ibex or Beden (Capra nubiana), the size of an Alpine Ibex. Knotty anterior surface of the horns very narrow; record horn $52\frac{1}{2}$ in. From the mountains of Nubia east of the Nile, Sinai Peninsula and Southern Arabia. (4) Asiatic Ibex or Sakin (Capra sibirica), larger than the Alpine Ibex, about 40 in. high at the shoulder. Record horn 58 in. Several sub-species in the mountains of Central Asia from Afghanistan and the Himalayas to the Altai and Southern Siberia. (5) West Caucasian Ibex or Western Tur (Capra severtzowi). For Pyrenean Ibex, see Tur.

Iceland Pony, a small pony supposed to be descended from

Norwegian horses introduced into the island in the eleventh

century.

Ichneumon or Egyptian Mongoose (see also Mongoose), a sacred animal in Ancient Egypt and often embalmed. Occurs in North and North-East Africa, and has sub-species ranging to the Southern Sudan, the Congo, Spain and Portugal. Greenish-grey, tail with a black terminal tuft. Head and body about 25 in., tail 18 in., shoulder-height 8 in. Lives in thick vegetation by rivers and in reeds bordering fields. Feeds on small mammals, birds, lizards, snakes, etc. Steals poultry and pigeons. 2–4 young at a birth. Herpestes ichneumon.

Idaho Pigmy Rabbit, the smallest wild rabbit of the U.S.A., reaching a length of 12 in. It is the only American wild rabbit to assume a light brownish winter dress. From Southern Idaho, South-East Oregon, North-East California and Northern and

Central Nevada. Brachylagus idahoensis.

Idmi Gazelle, see Edmi.

Impala, see Pala.

Indian Chevrotain, brown with white spots, the only Chevrotain of India. Length 18–22 in., height at shoulder 10–12 in. Habits same as those of the Malayan Chevrotain. Usually 2 at a birth.

Tragulus (Moschiola) meminna.

Indian Elephant, is smaller than the African Elephant and has a more domed head with a concave forehead, smaller ears and smaller tusks. Molars with much more numerous, crowded and thinner plates. Old males reach a height of about 10¼ ft. (exceptionally 10¾ ft.), females 8 ft. The tusks of the female, as a rule, and the male, sometimes, not protruding beyond the lips. Record length of male tusk 8¾ ft. The Ceylon Elephants nearly always have vestigial tusks. Live in herds in the forests of India, Ceylon, Burma, Siam, Cochin-China, Malay Peninsula, Sumatra and Borneo. Occasionally, especially in Siam, an albino variety occurs. Indian elephants have been used for heavy work since ancient times. The tame stock is continually being refreshed by wild ones which are caught and tamed. Gestation 18–22 months. One young, exceptionally two. It appears that a female calf has a shorter gestation than a male one. Elephas maximus.

Indian Flying Fox, from Burma, India, Ceylon. Reddish-brown, fore part of the back dark brown, face, ears and wing blackish. Head and body 12 in. long, wing span up to 50 in. Fruit-eating. Pteropus giganteus. A very similar species (Pteropus rufus) occurs

in Madagascar.

Indian Flying Squirrel, the largest species of Flying Squirrel, almost the size of a cat. From Peninsular India and Ceylon: includes several sub-species. Petaurista philippensis.

Indian Gazelle, see Chinkara.

Indian Gerbil, a rat-sized species of Gerbil from India, Ceylon, Persia, Mesopotamia and Syria, with a brush-tail slightly longer or as long as body. Head and body up to 7 in., tail to $8\frac{1}{2}$ in. Light brown-red above, white below. Lives in open, sandy plains, digs holes and tunnels in the ground. Gregarious, nocturnal. Often does much damage in cultivated parts. Eats grass, roots and corn. 12–15 at a birth. *Tatera indica* (divided into 12 subspecies of which 6 occur in India and Ceylon).

Indian Mole-Rat, rat from India with long hairs and bristles on its back. Not unlike a Brown Rat. Originally a fossorial field rat it has become, especially in Calcutta, a pest to mankind. To be reckoned with as a carrier of plague (cf. House Rat and Brown Rat). (It has been asserted that rats, as plague carriers, have caused more deaths than all the wars of history.) Bandicota =

"Nesokia") bengalensis.

Indian Pangolin (see also Pangolin), occurs in India and Ceylon. About the same size as Temminck's Pangolin, total length 50 in., of which 20 in. are tail. Like all Pangolins is nocturnal and eats termites and ants; spends the day in its burrow. Said to prefer hilly districts. 1–2 young born in the spring. Manis crassicaudata. The Chinese Pangolin (Manis pentadactyla), distinguished by its smaller size and more numerous scales, ranges from Formosa and Southern China to Assam and Nepal at moderate elevations.

Indian Porcupine, belongs to the Short-tailed Porcupines. Inhabits India, Ceylon and neighbouring parts of Western Asia to the Caspian and Palestine. Hystrix leucura.

Indian Rhinoceros, largest species of Asiatic Rhinoceros, reaches

a length of 12 ft. plus a tail of 26 in., and $6\frac{1}{3}$ ft. high at the shoulder, but most specimens do not exceed $10\frac{1}{2}$ ft. in length. Has a single horn, and the skin is divided into "armour-plates" by a few deep skin-folds. The skin is blackish-grey and naked. Length



Indian Rhinoceros

of the horn usually not over 12 in., record 24 in. A harmless creature, lives amongst high grasses and preferably near water and where it is well concealed, grazes morning and evening. A single young at a birth. Owing to the demand for rhino horn for medicinal purposes in China has been much hunted and is now only found in a restricted area along the foot of the Himalayas from Nepal to Assam. *Rhinoceros unicornis*.

Indian Wild Boar, black mixed with rufous or white, sometimes brownish, no white facial stripe. Strongly developed mane. Lower canine shaped as in the European Wild Boar. Boars reach a shoulder-height of 28-36 in. India from the Himalayas to Ceylon; a smaller race in Tenasserim and lower Siam. Sus cristatus.

Indian Wolf, smaller than the European Wolf. Head and body length up to 39 in., tail 14. in. Two forms occur: (1) the Woolly Wolf (Canis lupus chanco) found in the Western Himalayas in Kashmir with a wide range to the north through Central Asia and east to Yunnan; (2) the Small Indian Wolf (Canis lupus pallipes) which inhabits the plains of Northern India and the Peninsula to Dharwar. These forms do not differ in size, though they do in coat and colour. Both are now treated as sub-species of the Common or European Wolf. Canis lupus.



Indri (Indri indri)

Indri, the largest of all the living Lemuroids, reaching a length of 33 in. of which one inch is the reduced tail. Coat woolly, black and white. Arboreal and diurnal animal from the high forests of Eastern Madagascar. *Indri indri*.

Indrisidae, form a family of the Lemuroids and include the Indri, the Sifakas, and the Avahi from Madagascar. Long hind legs; the animals walk upright on these when on the ground.

Indrisidae.

Inia, see Amazonian Dolphin.

Insectivores, an order of small mammals feeding chiefly on insects and worms: the molars have pointed cusps for this purpose. They are mostly terrestrial but some are subterranean or arboreal. They do not occur in Australia, scarcely enter South America, and they are not so abundant in North America as in the Old

World. They include: Tenrecs; Golden Moles; Hedgehogs; Moles; Desmans; Elephant-Shrews; Solenodons; Tree-Shrews; Shrews. *Insectivora*.

Insectivorous Bats, sub-order of Bats. Snout usually short, ears often large, eyes small. Only the thumbs (on the hands) have claws. Cheek-teeth have pointed cusps. Chiefly small forms, insectivorous; some of them blood-sucking or fruit-eating. Cosmopolitan. *Microchiroptera*.

Inyala, see Nyala.

Irish Elk, see under Fallow Deer.

Irish Hare, sub-species of Blue Hare, which, however, has a red-brown winter coat. Only in very hard winters does the coat turn more or less white. Ireland. Lepus timidus hibernicus.

Irish Terrier, an old Irish breed of dog, but only bred pure since the middle of the nineteenth century. Intelligent and fond of children.

Isabella Gazelle, see Dorcas Gazelle.

Isabelline Bear, Red Bear, or Kashmir Brown Bear, a race of the Brown Bear. Found from Thian Shan to the Western Himalayas. Somewhat smaller than the European brown bear and lighter in colour (can be almost dirty-white). *Ursus arctos isabellinus*.

Isabelline Kangaroo, island form of Wallaroo from Barrow Island, Western Australia. Buffy red, white below. *Macropus robustus isabellinus*.

Isubra, a race of Wapiti from Northern Manchuria. Antlers shorter but stronger than in the Altai Deer. Young animals bright reddish-brown in summer, adults browner; winter coat brownish-grey, mane and underparts darker. Cervus canadensis xanthopygus.

Jack Rabbits, see Black-tailed Jack Rabbit; White-tailed Jack Rabbit; White-sided Jack Rabbit; North American Hares.



Isubra

Jackals, several species of Old World Wild Dogs, chiefly in Africa but also as far as India, Ceylon and Burma. One species extends into the Balkan Peninsula. Jackals are fox- or wolf-like animals with a hanging bushy tail. Chiefly nocturnal, they usually go about in packs. They will eat anything from carrion to sheep and goats. In the New World their place is taken by the nearly related Coyote. Include Oriental Jackal; Black-backed Jackal; Side-striped Jackal; Wolf-like Jackal.



Black-backed Jackal (Canis (Lupuella) mesomelas)

Jaguar, one of the Cats and the largest South American Carnivore. Head and body $5-6\frac{1}{2}$ ft. long, tail $1\frac{3}{4}-2\frac{1}{2}$ ft. Black, leopard-like spots on a reddish-yellow ground. Widely distributed



Jaguar

over South and Central America and found in North America as far as Texas, New Mexico and Arizona. Nocturnal. Will even attack men. 2-4 at a birth. Felis (Panthera) onca. Several races or species have been distinguished, the North American form receiving the name of Felis

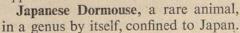
hernandesii. (N.B.—The Jaguar is sometimes called a "tiger" in South America.)

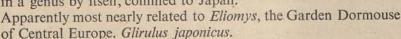
Jaguarondi, one of the Cats. Slenderly built, with an almost otter-like body, small head and tail as long as the body. Self-coloured but in two phases, a grey phase (Jaguarondi) and a rufous phase (Eyra) which occur on the same ground. Several races from Argentina and Paraguay to southernmost Texas. Total length 3½-4 ft. Lives in the thickest parts of forests; can climb. Goes about by day as well as by night. Preys on small mammals, birds and perhaps on frogs and fish. Gestation 9–10 weeks, 2–3 young at a birth. Felis (Herpailurus) yaguarondi.

Japanese Bear (see also Bears), is a relative of the Himalayan Black Bear. Selenarctos thibetanus japonicus. On the island of Hokkaido (or Yezo, the northern island of Japan) there is a race

of the Brown Bear called Ursus arctos yesoensis.

Japanese Deer, a species of Sika from Japan, in summer chestnut-brown with white spots, in winter blackish-brown without spots. There is a well-developed white patch bordered with black round the tail. Shoulder-height up to 34 in. (39 in. in a larger sub-species from Manchuria); antlers up to $26\frac{1}{2}$ in. in length. Cervus (Sika) nippon.





Japanese Monkey, a brownish Macaque with a bright red face and a stumpy tail. Lives in Japan; the northernmost of all monkeys. *Macaca fuscata*.

Japanese Serow, a species of Serow found only in Japan. Smaller and woollier than the ones found in India and China. No mane, tail bushy. Colour blackish-grey to reddish-brown, whitish below, legs blackish-brown. Capricornis crispus.

Java Pony, a small Tarpan-like pony originating in the island of Sumba, east of Java. Used for riding all over the East Indies.

Javan Rhinoceros (Lesser One-horned Rhinoceros), smaller and more lightly built than the nearly related Indian Rhinoceros. Skin divided into "armour-plates" as in the latter, but a mosaic of wrinkles as well. Blackish-grey, hairless. Up to 6 ft. high at the shoulders. A single horn, often lacking in females, reaches 9–10\frac{3}{4} in. long in the males. Distribution: nowadays restricted to Lower Burma, Tenasserim, Malay Peninsula, Sumatra and Java. Not at all common, the two-horned Sumatran Rhinoceros being the commoner. Lives in hilly, forest country up to a good height. Feeds on leaves and twigs. Rhinoceros sondaicus.

Javan Wild Pig, long head with three pairs of warts with yellowish bristles on the face. Black, belly and facial band reddish. Young ones self-coloured. Java. Lower canine ("tusk") with hind surface narrower than outer one instead of wider as in European Wild Boar. Sus verrucosus.

Javelin Vampires, genus of South American Leaf-nosed Bats, related to the Vampire. *Phyllostoma*.

Javeline, see Collared Peccary (Pecari angulatus).

Jerboa, Rodent with a long tail with a tuft at the end and long hind legs on which it hops. Steppe and desert-living in North Africa, Western and Central Asia, South-East Russia and Arabia. Nocturnal. Jaculus and Dipus.—Best known species: Jaculus jaculus, from North Africa, Syria and Arabia (body 63 in., tail 81)

in.); Dipus sagitta, Southern Russia between the Don and the Volga, Southern Siberia and Western Asia.

Jerboa, Five-toed, Rodent with very elongated hind legs on which it hops and a long tail with a tuft on the end. Occurs from Western Asia to Mongolia and North-West China. *Allactaga.*—Best known species is the Alactaga which occurs from South-East Russia to Mongolia. Rather smaller than a squirrel, reddishyellow above, white below; tail marked black and white. *Allactaga sibirica*.

Jerboa-like Pouched Mouse, a jumping, terrestrial Dasyurid the size of a mouse with a very long tail, very long hind legs and large ears. Insectivorous. Southern Queensland and New South Wales. Antechinomys laniger.

Jerboa-rats, rats from Australia with long ears and a long tail and elongated hind legs. Conilurus.

Jimela, see Topi.

Jirds, this is the name given to Gerbils of the genus Meriones, mouse-size or small rat-size. The genus contains about 75 forms, the majority Asiatic; it ranges from North Africa (Morocco), eastwards through Arabia, South-West and Central Asia to Mongolia and India and northwards into South-East Russia.



Jumping Hare

Jumping Hare, a Rodent with a body like a rabbit but with a long, bushy tail and long hind legs. Brownish-white above, white below. Hop along on the hind legs. Nocturnal and vegetarian; 3–4 at a birth. Possibly most nearly related to the Scalytails. From the grass country of South Africa. Pedetes caffer. A second nearly related species occurs in East Africa. Pedetes surdaster.

Jumping Mice, form a special family possibly related to Dormice on the one hand, to Jerboas on the other. Most of the forms are found in North America occurring chiefly in Canada and the northern U.S.A., but also in the mountains south to North Carolina and New Mexico. The American forms belong to two genera: (1) Zapus, includes most of the forms, and has a representative in Eastern Asia (sometimes placed in a special genus); (2) Napaeozapus, living in woodlands, includes a species ranging from Canada to North Carolina. These two genera form the sub-family Zapodinae. In Europe and Asia the Birch Mouse (Sicista) represents the same family, although in this case the mice do not jump, and forms the sub-family Sicistinae. Zapodidae.

Jumping Mouse (see also Jumping Mice), has very long hind legs on which it hops and a very long tail. Coat yellowish-brown,

white below; tail long. Total length 8–10 in., of which 4–6 in. are tail. Lives mostly in meadows and grassland but also in woods neighbouring on grass. One litter a year, 5–6 young. Occurs from Alaska and Labrador to California, New Mexico, Colorado, Missouri and North Carolina. Zapus hudsonicus (and 10 allied species).

Jumping Shrews, see Elephant-shrews.

Jungle Cat, widely distributed in several races from North-East Africa and the Caucasus through India and Ceylon to Burma and Indo-China. Total length 3 ft., tail (which has black rings) about 10 in. Uniform yellowish-grey to greyish-brown. Ears with small, black tufts. Nocturnal; preys on small mammals and birds, also on poultry. 3–4 young at a birth, apparently two litters a year. Felis chaus.

Kaama, see Cape Hartebeest.

Kaguang, see Colugo. Kakar, see Muntjacs.

Kalong, one of the Flying Foxes. The largest Bat, with a body length of 16 in. and a wing span of 5 ft. Back of the head, nape of the neck and belly rufous, rest of the body black. Fruit-eating. From the East Indies, especially Java, Sumatra, Banda and Timor. Pteropus vampyrus.

Kamchatka Beaver, see Sea Otter.

Kamchatka Bighorn, a race of Bighorn from Eastern Kamchatka. Colour dirty grey with a white rump, belly and legs white. Horns 34–39 in. long. Ovis canadensis nivicola.

Kandt's Golden Monkey, a race of the White-throated Guenon with a strong reddish-orange tinge. Found only on volcanic mountains north of Lake Kivu. Cercopithecus mitis kandti.

Kangaroo Rats, more than 80 species and sub-species in North America. Small "rats" not related to Murines but belonging to the family Heteromyidae, with elongated hind legs and short fore legs; long tufted tail; external, fur-lined cheek-pockets. Resemble jerboas and hop in the same way. Nocturnal and gregarious, from the plains and deserts of the warmer regions of western

North America. Dipodomys.

Kangaroos, True, and Wallabies, large genus of "Kangaroos" containing the largest forms. Hind legs very long compared with the fore legs. These animals move about by hopping and when they sit upright the tail serves as a prop. Native to Australia, Tasmania, New Guinea and the neighbouring islands. They are chiefly to be found on the great plains of Australia, where they feed on grass and small plants. They are divided into Small Wallabies, Large Wallabies and Kangaroos according to size. In this work the following forms are mentioned. Small Wallabies:



Golden Monkey (Cercopithecus mitis kandii)

Short-tailed Wallaby, Rufous-bellied Wallaby, Dama Wallaby, Parma Wallaby, Bedford's Wallaby, Pademelon Wallaby, Sombre or Brown's Wallaby, Aru Island Wallaby, Banded Wallaby, Red-legged Wallaby, Cape York Wallaby; Large Wallabies: Agile Wallaby, Bennett's Wallaby, Red-necked Wallaby, Black-striped Wallaby, Black-tailed Wallaby, Black-gloved Wallaby, Parry's Wallaby; Kangaroos: Wallaroo, Isabelline Kangaroo, Red Kangaroo, Great Grey Kangaroo ("Old Man"), Antilopine Kangaroo. The smallest species in the genus is the Sombre or Brown's Wallaby, and the largest is the Red Kangaroo. —For the significance of the word "Wallaby" in the fur trade see Wallaby. Macropus.

Kashmir Brown Bear, see Isabelline Bear.

Kashmir Stag, see Hangul.

Kastura, see Musk-deer.

Kenai Bear, see Grizzly Bear.

Kennion's Gazelle, related to the Seistan Gazelle, but somewhat smaller, males without the goitre-like swelling on the neck, horns in both sexes. Eastern Persia and probably into Baluchistan. Gazella fuscifrons.

Kerabau, South-East Asiatic race of the Domestic Buffalo. Has enormous horns; commonly white or very pale in colour.

Kermode Bear, a very small Bear, white in colour, considered by some to be an albinistic form of the American Black Bear. Found on Gribble Island, British Columbia and round Kitimat Arm of Douglas Channel. *Euarctos kermodei*.

Kerodons, related to the Guinea-pig; form the genus Kerodon. From South America, chiefly rocky regions. Nails of toes very short and bluntly pointed. Brownish or greyish, the belly lighter, sometimes whitish. Hunted by the Indians for food. Only one species now recognized: Rock Kerodon (= Rock Cavy) (Kerodon rupestris). Two other species, the Bolivian Cavy (musteloides = "boliviensis"), which lives in large colonies by Lake Titicaca, and Spix's Cavy (spixi) from Brazil, sometimes placed in Kerodon, are now among a number of species forming the genus Galea, which differs less from the true Cavies (Cavia) than does Kerodon.



Kerodon

Kiang, resembles a wild ass, deep reddish-brown, belly and legs white, dorsal stripe mane and tuft on the end of the tail black. Lives on the high desert plateaux of Ladak, Tibet and Sikkim at 13,000–18,000 ft. Usually in small herds but sometimes solitary. Equus kiang.

Kik, see Yarkand Gazelle.

Kilimanjaro Gnu, see White-bearded Gnu.

Kinkajou, a cat-sized Procyonid; the tail is longer than the



Kinkajou

body and can grip branches, etc., by winding round them. The coat is thick and soft, brown with a dark grey tinge. Nocturnal; feeds on fruit and other vegetable matter, also on small mammals, birds, eggs and insects. Found in the forest regions of South

and Central America and north to Mexico. Potos flavus.

Kirk's Colobus, a rare brown and red-coloured Colobus from the forests of the southern part of Zanzibar. Colobus kirki.

Kit Fox, small, North American Fox, body about 2 ft. long, tail 1 ft. Coat thick and short-haired. Black reddish yellow-grey with white-ringed guard hairs, flanks light reddish, belly white, tail greyish-rufous with a black tip. Found in the plains from Mexico to Saskatchewan. Two species: *Vulpes velox* and *Vulpes macrotis*.

Klipspringer, 20–22 in. high, a short-necked Antelope with large ears and a stumpy tail. Males have straight horns about 4 in. long. Coat composed of thickly growing wiry hairs, general colour speckled yellow and black. Several sub-species in scattered rocky regions from the Cape to the Sahara. Forms a sub-family on its own. Oreotragus oreotragus.

Koala or Native Bear, thickset, stupid, tailless Marsupial, the



Koala

original of the "Teddy Bear." Feet well adapted to climbing. The woolly coat is reddish-grey above and yellowish-white below; nose naked and black. Length 2 ft. Sluggish animal, almost entirely tree-living, herbivorous, feeding on various species of Eucalyptus. Native to Eastern Australia. The female bears one young at a time, which, when it creeps out of the pouch, is carried on its mother's back. In the fur trade it is known, together with the Wombats, as "Australian Bear." Phascolarctus cinereus.

Kob, an Antelope allied to the Waterbuck and Lechwe. Shoulderheight 321-35 in. Coat short and soft and in the typical race bright reddish-brown. Inner side of the ears white; a black stripe along the fore-sides of the limbs. Horns only in the male, up to 22\frac{3}{4} in. long. Lives in large herds, very fond of water. Found in several races in tropical Africa from Guinea to Uganda. Kobus (Adenota) kob. The West African form is called Buffon's Kob.

Kodiak Bear, see Grizzly Bear.

Kolinsky, a species of Mink extensively used in the fur trade. The stiff guard-hairs of the tail are used for paint-brushes ("sable brushes"). Mustela (Lutreola) sibirica.

Kolson, see Dhole.

Kongoni, see Coke's Hartebeest.

Konzoni, see Lichtenstein's Hartebeest.

Koodoo, see Kudu.

Kopet-Dagh Urial or Arkal Sheep, a large race of Urial, lives in large herds on the transcaspian steppes. Apparently the source of the long-tailed Western Asiatic domestic sheep, which were introduced into Europe and North Africa in olden times. Colour chiefly reddish-brown, ram's ruff white. Ovis vignei arkar.

Kordofan Gazelle (= Addra Gazelle), see Dama Gazelle.

Korean Goral, a species of Goral from Korea and Amurland. The northernmost form of the Goat-Antelopes in the Old World. Nemorhaedus raddeanus.

Korin Gazelle, similar to Heuglin's Gazelle, but more of a chestnut colour. Black muzzle-spot present. Shoulder-height 25 in., record horn 13% in. Several races found from Senegal and Nigeria to Sudan. Gazella rufifrons.

Korrigum, one of the so-called Bastard Hartebeests, bright reddish-brown with a black blaze on the face. Shoulder-height up to 4 ft. 2 in.; horn-length according to race, 15–28½ in. From Senegal to the borders of Sudan and Abyssinia and in Uganda and Kenya. Usually in grass country but sometimes in swamps. Several races including: Jimela; Tiang; Topi. Damaliscus korrigum.

Kudu, a genus of the Tragelaphines. Two species in Africa south of the Sahara. Very large Antelopes, the horns (none in



the females) wound in a cork-screw spiral. Back smooth-haired with white cross-stripes. The (Greater) Kudu is larger than a red deer, almost $4\frac{1}{2}$ ft. high at the shoulder; female smaller. Has the longest known horns, up to $51\frac{3}{4}$ in. in a straight line. Found in several races from the Cape through East Africa to Abyssinia and Somaliland. Lives chiefly in bush country. Strepsiceros strepsiceros.—Lesser Kudu, only about 40 in. high at the shoulder. Has two white marks on the breast which lacks the long hair found on the breast of the larger animal. Horns up to 27 in. in a straight line. East Africa from Abyssinia and Somaliland to the Rift Valley in Tanganyika Territory. Strepsiceros imberbis.

Kuhl's Deer, found on the Bavian Islands, between Borneo and Java. A relative of the Sambar. Shoulder-height about 27 in.

Cervus (Rusa) kuhli.

Kuhl's Pipistrelle, a Pipistrelle from the Mediterranean region, its range extending eastwards into Asia. The commonest bat of Southern Europe, going north as far as Southern Tyrol and Southern Switzerland. Wing has a light-coloured border running from hand to foot. Reddish-brown to blackish-brown, lighter below. Head and body 1\frac{3}{4} in., tail 1\frac{1}{2} in. long; wing-span 9 in. In villages and towns as well as round steep, rocky cliffs. Pipistrellus kuhlii.

Kulan or Chigetai, resembles a wild ass, a little smaller than the

Kiang, 4½ ft. at the withers. Light, reddish sandy-yellow with a black dorsal stripe, mane and tuft on end of tail; belly and legs white. Lives on the steppes of Transcaspia, Transbaikal and Mongolia. Equus hemionus.

Kusimanse, a West African Mongoose, self-coloured brown. Length about 22 in., of which 8 in. are tail. Said to dig for worms

and beetles. Easily tamed. Crossarchus obscurus.

Kwaroku, see Formosan Deer.

La Plata Dolphin, not exceeding 5ft. long, an estuarine Dolphin from the delta of the River Plate. *Pontoporia* (or *Stenodelphis*) blainvillei.

Ladoga Seal, relic race of the Ringed Seal in the Ladoga and

Onega Lakes. (Cf. Saima Seal.) Phoca hispida ladogensis.



Lake Chad Buffalo

Lake Chad Buffalo, sub-species of the Forest Buffalo from the Lake Chad region. Bubalus (Syncerus) nanus brachyceros.

Lamantin, American species of Sea Cow, which together with three other species forms the family Manatees. Up to 10 ft. long, weight 650–900 lb. Occurs along the coasts from the West Indies to the Orinoco

and Northern Brazil. A sluggish, entirely aquatic beast, it grazes off the seaweeds in shallow waters. Hunted by natives for food. One (two have been reported) young at a birth. Trichechus (Manatus) manatus.

Langurs or Leaf-Monkeys, a Southern Asiatic genus of Colobinae, from India, Ceylon and the East Indies. Slender and lithe with a very long tail. Short muzzle; no cheek pouches. Several species; gregarious. Include: Purple-faced Langur; Dusky Langur; Hanuman Langur; Himalayan Langur; Capped Langur;

Nilgiri Langur; Black-crested Langur. Semnopithecus.

Lar Gibbon, a Gibbon about 3 ft. long, greyish-black to yellowish-white with a naked, black face framed in white whiskers, and whitish hands and feet. Several races of it inhabit Tenasserim, Siam, the Malay Peninsula, Java, Sumatra and Borneo. Hylobates lar.

Large Cape Dormouse, a large South African Dormouse with the head marked black and white. Tail with a terminal pencil of hairs. Head and body about 6 in. long. *Graphiurus ocularis*.

Large Indian Civet (see also Civet-cats). Brownish-yellow with dark rufous spots, black stripes on the back. Tail with broad black rings. Length about 4 ft., of which $1\frac{1}{2}$ ft. are tail. Found in India, Burma and Southern China. Sleeps by day in thick

cover, hunts anything which it can overpower by night. Viverra zibetha.

Laristan Sheep, a Sheep, Wild, from Laristan, Southern Persia. Apparently related to the Red Sheep and the Kopet-Dagh Urial. Little known. Ovis laristanica.

Leaf-Monkeys, see Langurs.

Leaf-nosed Bats, American, a large family of Insectivorous Bats, with seven sub-families, from South and Central America (one or two species get into southern North America—e.g. the Californian Leaf-nosed Bat, q.v.). A leaf-like process of skin usually present on the nose, ears not connected and with "tragus." Insectivorous and also partly fruit-eating; some formerly thought to be blood-suckers—hence the alternative name "Vampire Bats" for the family. Include Vampire; Javelin Vampire; Longtongued Vampire; Short-nosed Vampire. *Phyllostomatidae*.

Lechwe, a medium-sized Antelope. Shoulder-height about 41 in.; horns only in the male, record length 35 in. Coat long and coarse, brownish-yellow above, white below. Tail long and tufted. Rhodesia, Nyasaland, Bechuanaland and to Portuguese East Africa and West Africa; in damp and marshy regions. Kobus

(Onotragus) leche.

Lechwe, Black, closely related to the Lechwe. Occurs in Northern Rhodesia and in neighbouring parts of the Congo. Old males often dark blackish-brown. Kobus (Onotragus) smithemani.

Lechwe, Mrs. Gray's, see Lechwe, Nile.

Lechwe, Nile, closely related to the Lechwe, the size of a fallow deer, 39 in. high at the shoulder. Hair long and bristly, dark umber-brown in old males, yellowish-brown below, a stripe along the back of the neck and a saddle-like mark on the withers yellowish-white. Lives in papyrus swamps on the White Nile and others rivers in Southern Sudan. Kobus (Onotragus) megaceros (or maria).

Leisler's Bat, a near relative of the Noctule. Dark reddishbrown, more yellowish-brown below. Length just under 4 in., of which $1\frac{1}{2}$ in. are tail; wing span 11 in. From Ireland and England across Central Europe to Siberia. Found in woods. *Nyctalus leisleri*.

Lelwel, a large Hartebeest, about 4 ft. 4 in. high at the withers. Horns surmounting a very high pedicle and forming a V, 20–26 in. long. Deep foxy red. From Sudan to Lake Chad, Uganda and

Kenya. Bubalis (or Alcelaphus) lelwel.

Lemmings, together with the Voles form a sub-family of Murine Rodents (see Voles and Lemmings). They occur in the northernmost parts of Europe, Asia and North America, where they inhabit the coniferous forests or the tundra. They are sturdily built animals with a stumpy tail and broad, heavy skull. There



Norway Lemming (Lemmus lemmus)

are four genera: Norway Lemming and Wood Lemming, in the Old World, Lemming Mice in the New World, and Collared Lemmings in both. In the late Pleistocene period, say 10,000 to 20,000 years ago, representatives of the Norway and Banded Lemmings came as far south as Ireland, England, France and Germany in which countries they have left abundant remains in the river and cave deposits associated with the bones and teeth of the mammoths, woolly rhinoceros, and reindeer and with the stone tools of early men.

Lemmings, Collared, Lemmings from high latitudes in the Oldand New Worlds. The only mouse-like Rodents to assume a white winter coat. Brownish or greyish in summer. Vole-like. Live in the tundra north of the forest line. Include: Banded Lemmings; North American Collared Lemmings; Greenland Lemmings. Dicrostonyx.

Lemmings, North American Collared, inhabit the Arctic regions of North America, coming as far south as the island of Unalaska. Three species, the chief being *Dicrostonyx hudsonius* and *Dicrostonyx rubricatus*.

Lemming, Banded, Old World representative of the Collared Lemmings, occurring from the Northern Urals through Northern Siberia to Kamchatka, and on the Arctic Islands from Novaya Zemlya eastwards. *Dicrostonyx torquatus*.

Lemming, Greenland, a Collared Lemming. Most nearly related to *Dicrostonyx rubricatus* from the North American mainland (see Lemmings, North American Collared). Lives in Greenland,

Grinnell Land, Ellesmere Land and Baffin Land. Dicrostonyx groenlandicus.

Lemming, North American, takes the place of the Old World Norway Lemming in Arctic North America along the Rocky Mountains south to Western Alberta. Six closely related species; chief form Lemmus trimucronatus. (Cf. Lemmings, North American Collared.)

Lemming, Norway, distinguished from other members of its genus by its brilliant colour, pied black and yellow above, yellow below. Ranges from sea-level upwards in Northern Scandinavia but in Southern Norway and Sweden it is normally confined to the mountains. In "Lemming years" the numbers rise to great heights and the Lemmings swarm and descend to the coastal plain even in Southern Norway. They then overrun the lowland belt and adjacent islands and vast numbers perish in the fjords and sea outside. Lemmus lemmus.

Lemming, Siberian, takes the place of the Norway Lemming cast of the White Sea in the tundra regions of Russia and Siberia. Smaller and less brightly coloured than the Norway Lemming. Lemmus obensis.

Lemming, Wood, vole-like, short-tailed species of Lemming. Dark slate-grey with a red-brown dorsal patch. Head and body up to 4 in., tail about $\frac{2}{3}$ in. Lives in the coniferous forests of Central Sweden from Jämtland to Närke, South-East Norway, and Finland. Feeds chiefly on moss. Usually a rare animal but in certain years numerous. Myopus schisticolor. (The range of the genus Myopus, represented by five closely related and very similar forms, extends from Norway eastwards right across Europe and Asia to the shore of the Sea of Okhotsk.)

Lemurids, family of Lemuroids embracing the Madagascan forms of the latter. Include: Lemurs; Gentle Lemurs; Mouse Lemurs; Sportive Lemurs; Dwarf Lemurs; Hattock. Lemuridae. (The Malagasy Indri and Aye-aye, though allied to Lemuridae, are now placed in different families, Indridae and Daubentoniidae

Lemuroids, mostly small to medium-sized arboreal mammals, form a sub-order of the Primates. They are the chief elements of the mammalian fauna of Madagascar, and are distributed over Africa, India, Ceylon and the East Indies as well. Most of them are nocturnal or active only at dusk. As a rule a single young at a birth. Include: Lemurids; Slow Lemurs; Tarsier; Galagos. *Prosimiae*. According to some modern authorities the Tree Shrews, *Tupaiidae*, should also be included in this sub-order.

Lemurs, genus of Lemuroids from Madagascar. Include: Ring-tailed Lemur; Crowned Lemur; Mongoose Lemur; Ruffed

Lemur. Lemur.

respectively.)

Lemurs, Slow, see Lorisidae.

Leopard, a large Cat found in Africa and Asia. Head and



body 4-5 ft. long, tail 2-3 ft., shoulder-height 13-2 ft. Deep ochreyellow to light greyish with black spots; belly white. Especially in India and the Dutch East Indies occur melanistic forms which are entirely black ("black panthers"). Although smaller than the lion and tiger, the leopard is just as

dangerous. Felis (Panthera) pardus.

Leopard-cat, the commonest of the small Indian Cats, about as large as a domestic cat, but with longer legs. (Head and body to 24 in., tail to 12 in.) Colour very variable, ground-colour usually yellowish-grey to yellow, spotted and striped dark-brown, white below. Four dark, longitudinal stripes running from the snout to the nape of the neck. Distribution: from Baluchistan through whole of India to Tonkin and the Philippines and south to the Dutch East Indies; north to Manchuria and Korea; not found in Cevlon. Chiefly nocturnal and fond of climbing trees. Felis (Prionailurus) bengalensis.

Leopard-seal, see Sea-leopard.

Lesser Cape Dormouse (see also Dormouse), white below and grey above. Head and body about 31 in. long, tail with terminal pencil of hairs. East and South Africa. Graphiurus murinus.

Lesser Flying Phalangers, genus of Australian Marsupials with flying membrane stretched between the fifth finger of the hand and the ankle. Tail evenly bushy throughout. Total length 14-30 in. Include: Squirrel Flying Phalangers, Short-headed Flying Phalangers, Yellow-bellied Flying Phalangers. Petaurus.

Lesser Horseshoe Bat, resembles the Greater Horseshoe Bat in colour, shape and habits, but is smaller. Head and body 11 in., tail 11 in. long; wing span 9 in. Europe north to the Baltic and England, Asia and Africa. A smaller sub-species in Southern Switzerland and the Mediterranean region. Rhinolophus hipposideros.

Lesser Mouse Lemur, best known species of Dwarf Lemur. Total length about 12 in., of which half is tail. Southern Madagascar. Microcebus murinus.

Lesser Rorqual or Pike-Whale, one of the Rorquals. Reaches a length of 35 ft. Black above, white below. A white band across the flippers. Dorsal fin rather high. Whalebone yellowish-white. North Atlantic, off the coasts. Like other Rorquals, it is widely distributed throughout the oceans of the world. Chiefly fisheating. Balaenoptera acutorostrata.

Lhasa Stag, see Thorold's Deer.

L'Hoest's Monkey, lives in the forests of the Congo, with a sub-species in the Cameroons and on Fernando Po. Back reddish-brown, shoulders, legs, belly and upper surface and tip of tail black. The long beard and the throat are white. Snout reddish, round the eyes bluish. Cercopithecus l'hoesti.

Lichi, see Lechwe.

Lichtenstein's Hartebeest (see also Hartebeests). Brown with a reddish-brown saddle. Shoulder-height about 4 ft. Horns very bent with large bases, record length 23 in. From the Sabi River through Portuguese East Africa and Rhodesia to Nyasaland and Tanganyika. Bubalis (or Alcelaphus) lichtensteini.

Linsang, African, belongs to a genus which is closely related to the Asiatic Linsang. Tail longer and spots smaller than in the latter. Head and body 38 in., tail 40 in. Forest regions of

Fernando Po and of West Africa. Poiana richardsoni.

Linsang, Asiatic, belongs to the Viverrids. Long head with pointed snout, short legs, tail almost as long as head and body. Coat short and soft, blackish-brown spots and stripes on a light grey or yellowish-white ground. Total length about 30 in. Solitary, nocturnal and rapacious; often attacks poultry. Two nearly related species, one, with spots separated, from the Himalayas to Southern China (*Prionodon pardicolor*) and the other slightly larger, with spots fused into broad transverse bands, in Tenasserim, Malay Peninsula to Siam and Sumatra (*Prionodon linsang*).

Lions, belong to the Cat family and are the largest Carnivores after the Polar Bear and the Tiger. Evenly coloured reddishbrown to tawny. Tail with a terminal tuft. Males with a mane on the neck and breast. Pupil round. Occur in several races in Africa, South-West Asia, Mesopotamia, Persia and North-West India. Do not occur in forests but in open grass country with a certain amount of scattered bush, also in desert and hilly regions. Hunt in troops by night. Gestation 102-112 days. 1-6 (usually 2-3) cubs in a litter. Cubs are the size of a half-grown cat at birth and have no mane or tail-tuft but are woolly and greyish with dark spots. There are various races of lion: (1) Barbary Lion (Felis leo leo) from North Africa. Large and yellowish. Mane thick and long and reaching to the middle of the back and extending along the belly. (2) Senegal Lion (Felis leo senegalensis) from Senegal and apparently as far as Eastern Sudan. Mediumsized, reddish-yellow, poor mane. (3) Cape Lion (Felis leo melanochaitus). Larger than the Barbary Lion. Dirty yellow with a very well-developed black mane which extends to the belly. Extinct. (4) Masai Lion (Felis leo massaica) the lion of East Africa, found in most parts of Kenya. Buffy-coloured with a yellow mane. (5) Somali Lion (Felis leo somaliensis) from Abyssinia and Somaliland. Small with large ears and a long tail;

mane not reaching the shoulders and not extending to the belly. Light yellowish-grey, sometimes more or less spotted. (Perhaps not distinct from (1) Felis leo leo.) Several other African races have been described. (6) Indian Lion (Felis leo guzeratensis) a relatively small lion somewhat like the Somali Lion. Nowadays found only in Gir in the State of Junagadh (about 200 individuals in 1936). (7) Persian Lion (Felis leo persica) the smallest of all the lions. There is a closely related lion in Mesopotamia (Felis leo asiatica). (The last three races from Asia would perhaps better be regarded as one for which the name Felis leo persica is applicable.) Lions, tigers and leopards form the sub-genus Panthera of the genus Felis.

Lion Marmosets, a genus of Marmoset found from Brazil to Panama; most nearly related to the Tamarins. Have a longish mane on the neck and sometimes also on the shoulders.—Lion Marmoset (Leontocebus leoninus) from the Amazon basin; total length about 16 in., of which half is tail. Olive-brownish, mane ochre; tail black above and yellowish-brown below; face black, whitish around the mouth.—Silky Marmoset (Leontocebus rosalia), from Brazil to Colombia and Panama; total length about 30 in., of which 18 in. are tail. Chiefly reddish-yellow, mane dark brown, face reddish-brown.

Little Ant-eater or 2-toed Ant-eater, an arboreal Ant-eater about the size of a squirrel. Head not so elongated as in the two other South American Ant-eaters. Coat golden-coloured and silky, tail can be wound round branches, etc. Mexico to Northern Brazil and Peru. Cyclopes didactylus.

Little Brown Bat, name applied to a few species of Mouse-eared Bat, widely distributed in North America. Myotis lucifugus, etc.



Little Skunk, see Spotted Skunk.

Llamas, New World Camel-like Animals. Much smaller than the Old World ones and without a hump. Coat long and woolly. Head sheep-like, ears long and pointed. Live in herds in the Andes from Southern Ecuador southwards, usually between 13,000–16,000 ft. and never lower than 7,000 ft. in the northern part of their range, but in the cold parts of Patagonia come down to the great plains. Two wild species: Huanaco; Vicugna. Two forms have been

domesticated from the former: Llama and Alpaca. Lama.

Llama (sensu stricto), a domestic form of the Huanaco. Larger than the latter, coat woolly, reddish-brown, yellow, white or

black, self-coloured or piebald or dappled. Bred in large herds by the natives of the Bolivian and Peruvian Andes; stands the cold of high altitudes. Males used as beasts of burden. Flesh of young ones edible. Wool valuable. Gestation 11½-13 months; one at a birth. Lama glama.

Loder's Gazelle, see Rhim Gazelle.

Long-beaked Echidna, a species of Echidna from New Guinea, with several races. Beak long and down-curved; spines sparse

and short. Zaglossus bruijni.

Long-eared Bat, recognized by the long ears which are almost as long as the body. Greyish-brown, lighter below. Length $3-3\frac{1}{2}$ in., of which $1\frac{1}{2}$ in. are tail; ears $1\frac{1}{2}$ in. long; wing span $9\frac{1}{2}$ in. Found over the whole of Europe and as far as North Africa and Asia. Hibernates. One young at the end of June or beginning of July. *Plecotus auritus*.

Long-eared Opossum or Common Phalanger, native to Australia. Its skin is known to the fur trade as "Australian Opossum." Coat fine and woolly, blue-grey or (which is worth less) entirely or partly reddish. Used to be mercilessly hunted (there were 6,000,000–7,000,000 skins in the fur trade every year about the beginning of the century); now there is a close season save for a few months and the production has sunk to about 2,000,000–3,000,000. Trichosurus vulpecula.

Long-eared Opossum, Brown, sub-species of Long-eared Opossum from Tasmania. Known to the fur trade as "Tasmanian Opossum." Considerably larger than the ordinary Long-eared Opossum, coat blue-grey to greenish-grey, sometimes reddish-brown to black-brown. From time to time protected. Annual production about 20,000 skins. Introduced into New Zealand, from where about 50,000 skins find their way into the fur trade

every year. Trichosurus vulpecula fuliginosus.

Long-footed Bat, fawn-coloured above, dirty white below. The whole foot entirely free from wing-membrane. Head and body 2 in., tail $1\frac{1}{2}$ in. Southern Europe as far as Southern Switzerland

and east into Asia. Myotis (Leuconoe) capaccinii.

Long-haired Spider Monkey, from Mexico and Central America. Hair blackish-brown and golden brown, soft and long and falling down over the flanks like a cloak. Ateles belzebuth.

Long-tailed Bats, a family of Insectivorous Bats with a long thin tail projecting far beyond the inter-femoral membrane. Occur in Egypt and from Southern Asia to Sumatra. Rhinopomatidae.—Only one genus, best known species is Rhinopoma microphyllum (the Tomb Bat) from Egypt.

Long-tailed Field Mouse, see Wood Mouse.

Long-tailed Goral, nearly related to the Szechwan Goral but

distinguished by the long, bushy tail-tuft and woolly winter coat.

Western China (Szechwan). Nemorhaedus caudatus.

Long-tailed Pangolin (see also Pangolins), a large scaled West African species occurring from Senegal to Angola. Total length 40-50 in., of which almost two-thirds are tail. Colour blackishbrown. A good climber; sleeps in the forks of branches and in holes in trees. Manis (Uromanis) longicaudata.

Long-tongued Fruit Bats, a sub-family of Fruit-bats with several genera. Snout elongated and tapering, tongue very long, thread-like and extensible. Tail short. From India to New Guinea, the Solomon Islands and Australia, and in Africa. The oriental Little Long-tongued Fruit Bat (Macroglossus minimus), smaller than a Noctule Bat, is the smallest of the Fruit-bats. Macroglossinae.

Long-tongued Vampires, a sub-family of the Leaf-nosed Bats from Central and South America. Snout long; tongue long, narrow and extensible and covered with needle-like papillae; these bats are specially adapted for feeding on soft fruits; they also feed on insects. Glossophaginae.

Lop-eared Rabbit, variety of Tame Rabbit, bred as French and English Lop-ears. Heavy self-coloured or "broken" coloured

animal with enormous pendant ears.

Loris, this name covers both the Indian forms of the Slow Lemurs. Arboreal, nocturnal and very indolent and sluggish. Feed on fruit and small animals.—Slender Loris (*Loris tardigradus*), almost the size of a squirrel, up to $10\frac{1}{2}$ in. long, from Southern India and Ceylon.—Slow Loris (*Nycticebus coucang*), from North-East Bengal and Assam to Tonkin, through Burma, Siam and the Malay Peninsula to Sumatra, Java and Borneo. Considerably larger, up to $14\frac{1}{2}$ in. long, and more heavily built than the former.

Lorisidae, family of Lemuroids including the African mainland and Asiatic (save the Tarsier) forms of the latter. The Loris from India and the Potto and Angwantibo (these form the Slow Lemurs) from Africa are stump-tailed and short-eared; the Galagos from Africa are long-tailed and have large, naked ears. Lorisidae.

Lump-nosed Bat, three species of Vespertilionid widely distributed in the U.S.A. Have a wart-like swelling on the nose and very large ears. Live in caves chiefly; appear before dusk. Corynorhinus rafinesquii, Corynorhinus macrotis and Corynorhinus phyllotis.

Lynx, cat-like animals. The distinguishing characteristics are a rather large head, tufted ears and side-whiskers. The legs are long and the tail short or vestigial. The pupils are vertical slits. Coat spotted or self-coloured. Found in all parts of the world except Malaya, Australia and South America; at least two species in Europe. Live usually in thick woods, but also occur in plains and deserts. Very rapacious. Includes: European Lynx; Spanish Lynx; Canadian Lynx; Bobcat; Barred Bobcat; Caracal. Lynx.



Canadian Lynx (Lynx canadensis)

Lyra Skunk, see Spotted Skunk.

Macaques, take the place of the Guenons in Asia. Occur in India and in the east as far north as Northern China and Japan. There is one species in North-West Africa and Gibraltar. Snout long but rounded; tail of variable length. Among the many species are included: Barbary Ape; Crab-eating Macaque; Japanese Monkey; Rhesus Monkey; Pig-tailed Macaque. Macaca.

Macaque, Brown, a Macaque from Burma, Siam, Indo-China and Southern China. Brown with a stumpy tail. Face red with black marks. *Macaca speciosa arctoides*.

Macaque, Hairy-eared, a relative of the Rhesus Monkey from China (Szechwan). Ears fringed with hair. Macaca lasiotis

Macaque, Himalayan, a species of Macaque related to the Rhesus Monkey. From the Himalayas, Assam and Upper Burma. *Macaca assamensis*.

Macaque, Lion-tailed, a species of Macaque. The coat is long and thick and the whiskers framing the face look like a mane. Black with a greyish mane, brownish-grey below. Tail of medium length with terminal tuft. Total length $2\frac{3}{4}-3\frac{1}{2}$ ft., of which 10–15 in. are tail. Inhabits the Western Ghats forests from Goa to Cape Comorin. Macaca silenus.

Macaque, Pig-tailed, a powerfully built species of Macaque. The tail is short and thinly haired and twisted like a pig's or else bent forwards over the back. Head and body 24 in., tail 6–9 in. Dark olive-brown above, forearm yellowish, belly yellowish-white, naked parts of the body dirty flesh-coloured. From

Tenasserim, Malay States, Sumatra and Borneo. More terrestrial than arboreal. Tamed for coco-nut picking in the highlands of the west coast of Sumatra and now used by botanists for collecting specimens from the tops of tall forest trees in Malaya. Macaca nemestrina.—The typical Macaca nemestrina nemestrina inhabits Sumatra, Borneo and the Malay Peninsula; Macaca nemestrina leonina represents the species from Upper Burma to Tenasserim, in the Mergui Archipelago and in Siam; Macaca nemestrina blythi is the form probably inhabiting the Naga Hills, in Assam, or British India, e.g. the valley of the Ganges.

Macneill's Deer, a little-known species of Deer from Western China, Szechwan to Kan-su and Yunnan. Related to the Red

Deer and the Wapiti. Cervus macneilli.

Madagascar Rats, family of Rodents from Madagascar. Most nearly related to the Mole-rats though they do not resemble the latter in external appearance. There are several genera and the largest are about the size of a Brown Rat. They are the only Rodents indigenous to the island. Nesomyidae.

Magellan Tuco-tuco, brownish-grey above, with a yellowish wash and a slight sprinkling of black; lighter below. Head and body 8 in., tail 2\frac{3}{4} in. From Patagonia. Digs like a mole in dry sandy plains. Nocturnal, feeds on roots. Known to the fur trade as "Chinchilla Rat," it is much used as a substitute for Chinchilla. Ctenomys magellanicus.

Maha, see Bear-monkey.

Malagasy Wild Pig, very closely related to the Bush-pigs, but smaller. Two races are found in Madagascar. *Potamochoerus larvatus*.

Malay Bear (see also Bears), found in Burma, Siam, Malacca, Sumatra and Borneo; apparently absent from Java. Relatively small, slender and long-legged. Head and body 4-4½ ft. long, tail about 2 in., shoulder-height 2 ft. 4 in. Coat short, black with a yellow, semilunar patch on the breast and a yellowish patch on the snout. Helarctos malayanus.

Malayan Chevrotains, differ from the Indian Chevrotain in having the upper-parts not spotted and the skin of the chin and throat bare and glandular instead of fully haired. Three species, each with several or many races, widely distributed through Indo-China, Malay Peninsula and East Indies. Greyish or reddish-brown above, whitish below, the three species are: (1) javanicus, large and greyer (head and body about 28 in., tail about 3 in., height at shoulder about 13 in.), from Sumatra, Borneo and Java, through the Malay Peninsula to Southern Tenasserim and Annam, and occurring on most of the adjacent and innumerable small islands, with many sub-species; (2) stanleyanus, medium sized and rufous in colour, from the Malay Peninsula and adjacent

islands; (3) kanchil, small, greyish on back, with dark or black neck stripe above (head and body 18 in., tail $1\frac{1}{2}$ in., height at shoulder 8 in.), ranging over much the same area as javanicus, with many races. All these forms are similar in habits Solitary in dense jungle and mangrove swamps, only in pairs during the breeding season. Move about at dusk, vegetarian. Gestation $5\frac{2}{3}$ months; usually two at a birth, sometimes only one. Tragulus javanicus, stanleyanus and kanchil.

Malayan Pangolin (see also Pangolin), occurs in further India, Sumatra, Java, Borneo and Celebes. Manis javanica.

Malayan Porcupine, see Short-maned Porcupines.

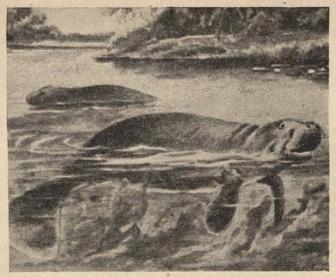
Malayan Tapir, a species of Tapir from South-East Asia. Black, with a large, continuous white area covering the middle and hindpart of the back, the flanks and belly and the upper-parts of the thighs. No mane. Length, nose to root of tail over curves 8 ft., plus a tail of 3 in., $3\frac{1}{2}$ ft. high at the shoulders. Distribution: from Tenasserim over the Malay Peninsula to Sumatra. Nocturnal, lives in dense jungle near water. Gestation 13 months. *Tapirus indicus*.

Malbrouck Monkey, a Green Guenon from the Lower Congo and parts of Angola. The grey of the back is tinged with yellowish-black. Face and ischial callosities light flesh-coloured, scrotum blue. Cercopithecus cynosurus.

Mami, see Badger, Japanese.

Mammoth, extinct, prehistoric elephants of huge size, shoulderheight up to 14 ft. Remains are found in Europe (including the North Sea whence many teeth and bones have been dredged). Northern Asia and North America: in Siberia, the chief source of fossil ivory, whole frozen specimens, with edible flesh, have been found. The hair is thick and long; reddish-brown. Tusks very large, used to a certain extent for ivory carving in China and extensively in arts and manufactures in Western Europe. English trade in Mammoth tusks dates from 1611; in 1872, 1,630 and in 1873, 1,140 very fine tusks weighing from 140 to 160 lb. each came to the London market; and such tusks have been for many years regular features of the ivory sales in London. The total number of tusks discovered in the quest for the markets is enormous, for only about 14 per cent are good and a further 17 per cent usable. The Mammoth reached the highest point of its development in the last epoch of the Ice Age. A magnificent skull, with the tusks intact, dug up in a brickyard at Ilford, Essex, in 1864, may be seen in the British Museum (Natural History). Elephas prinigenius.

Manatees, a family of the Sea Cows, from the warmer parts of the Atlantic. Have a rounded tail fin and vestigial nails on the fore-limbs. *Manatidae* (or *Trichechidae*). Contains one genus



Manatee (Manatus (or Trichechus) manatus)

Manatus (Trichechus). There are four species: Lamantin (Manatus manatus), about 8 ft. long, West Indies to the Orinoco and Northern Brazil; Florida Manatee (Manatus latirostris), up to 13 ft. long and weighing 2,000 lb., Florida coast north to Daytona, occasionally in Gulf of Mexico; Amazon Manatee (Manatus inunguis), from the Amazon; West African Manatee (Manatus senegalensis), from the West African coast between latitudes 16° N. and 10° S. It also occurs in Lake Tchad.

Manchurian Deer, a form of Sika, nearly related to the

Japanese Deer but bigger. Shoulder-height up to 39 in. Cervus (Sika) nippon mantschuricus.

Manchurian Roe, a species of Roe Deer from Manchuria, Korea and China. Somewhat larger than the European Roe, less seasonal variation in colour. Ears narrow and thinly haired. Antlers relatively small. Capreolus bedfordi.

Mandrill, a brightly coloured Monkey. Face purple with blue ridges, beard lemon-yellow. Coat blackish-greenish-grey, buttock patches violet, genital and anal regions naked and red. From Guinea. Mandrillus sphinx.



Mandrill

Mandrills, a genus of West African ground-living Monkeys

with two species; related to the baboons. Large head with a long snout and deeply furrowed cheeks. Tail reduced to a stump. Distributed from the Niger to the Congo but chiefly in Guinea.

Include: Drill; Mandrill. Mandrillus.

Mangabeys, genus of Monkeys from tropical Africa. Similar to the Guenons but have a longer snout. Mostly self-coloured and dark. Include: Grey-cheeked Mangabey; Collared Mangabey; Crested Mangabey; Agile Mangabey; Sooty Mangabey; Black Mangabey; White-crowned Mangabey. Cercocebus.

Manitoba Wapiti, a race of Wapiti from Manitoba and Saskatchewan. Darker than the typical Wapiti and with smaller

antlers. Cervus canadensis manitobensis.

Mantled Colobus, East African species of Colobus. Black with long, white hair on the cheeks, temples and shoulders and on end

of the tail. A forest living animal, Colobus palliatus.

Mantled Fruit-bats, a genus of Fruit-bats ranging through the whole Austro-Malayan region and represented by 12 species. Each wing is attached along the spine so that none of the back is visible. No claw on the index finger. Tail present. Fruit-eating; sleeps in caves. Dobsonia.

Manul, see Pallas' Cat.

Mara, see Patagonian Cavy.

Mara, Salina, see Dwarf Patagonian Cavy.

Maral, large form of the Red Deer, up to 54 in. high at the shoulder. Rufous in summer, sometimes spotted yellow, dark slate-grey in winter. Buttock-patch bright yellowish with a black border. Shoulders, thighs and under-parts almost black. Antlers large, 6-8 and even rarely 10-12 points on each, length up to $48\frac{1}{2}$ in. Distribution: from the Caucasus over the Crimea, Galicia, the Eastern Carpathians, the Caspian region, Northern Persia and Asia Minor. Usually regarded as an Eastern race of the Red Deer but separated as a full species by some workers. Cervus elaphus maral.

Marbled Cat, looks like a dwarf Clouded Leopard. Head and body up to 21 in., tail to 22 in. Found in forested hillcountry from the Eastern Himalayas through Burma and Malaya to the Dutch East Indies and Borneo. Felis (Pardofelis)

marmorata.

Marbled Polecat, a glossy mink-coloured Mustelid with numerous, irregular yellow spots, black below. Head and body up to 15 in., tail 61 in. Found in South-East Europe and from Palestine and Asia Minor to China. The fur is used in the trade under the name of "Perwitzky." Vormela peregusna.

Marco Polo's Sheep, see Pamir Argali.

Margay, see Tiger-cat, American.

Marica Gazelle, resembles the Goitred Gazelle, but both sexes

are horned and the males apparently lack the goitre. Central Arabia. Gazella marica.



Markhor

Marimonda, see Long-haired Spider Monkey.

Markhor, a Wild Goat, rather larger than an Alpine Ibex (about 41 in. high at the shoulder), occurring in several subspecies from Bokhara through Afghanistan to the Western Himalayas. The three-foot long horns (measured in a straight line, 5 ft. following the curve) have a screw-like twist and are either straight or spiral. Colour: in summer bright reddishbrown, in winter grey, fore-side of the legs and fore-half of the beard black. Fore-half of the body covered with a mantle-like mane in the male. Probably

the origin of the domestic goat of ancient Mesopotamia; this strain survives in the modern Circassian goat. Capra falconeri.

Marmosets, squirrel-like, gregarious Monkeys with a long bushy tail which is often ringed and never prehensile. Head round with large eyes and ears. Hairs of the back of the neck, ears and upper lip sometimes elongated. Legs longer than arms. Claw-like nails on all digits save the hallux which is opposable; pollex long but not opposable. Arboreal animals living in the tropical forests of Central and South America from Costa Rica to the tropic of Capricorn. The food is chiefly insects, then fruit. They form a family of the New World Monkeys. Include: Marmosets (sensu stricto); Lion Marmosets; Tamarins; Pinché Marmoset; Goeldi's Monkey. Hapalidae.

Marmosets (sensu stricto), genus of the Marmosets. Small, gregarious animals from the forests of Central and South America. Tail long with coloured rings. Sometimes have tufts of hair covering the ears. Include: Common Marmoset; Black-tailed

Marmoset; Pygmy Marmoset. Hapale.

Marmots, Rodents closely allied to Squirrels. Fat animals reaching the size of a hare. Ears and tail short. Live gregariously on plains or in mountains. Central Europe to the borders of Southern Russia and Asia and North America. Include: Alpine Marmot; Bobac; Hoary Marmot; Yellow-bellied Marmot; Woodchuck. Marmota.

Marsh Deer, largest South American Deer, about the size of a Red Deer but more slender. Chestnut-brown in summer, reddishbrown in winter. Antlers 5-pointed, up to 24 in. long. Calves not spotted. Live in herds in marshy regions of Brazil, Uruguay, Paraguay and Northern Argentine. Blastocerus dichotomus.

Marsh Mongoose, a Mongoose from tropical and South Africa, distinguished by its short tail. Head and body 25 in. long, tail 14½ in. Dark reddish-brown and yellowish-grey mixed. Herpestes (Atilax) paludinosus.

Marsh Rabbits, see Swamp Rabbits.

Marsupials, a primitive order of Mammals whose members show great diversity of shape, size and habit. The young are born after a short gestation, and in a very undeveloped though temporarily active condition; for immediately after birth they find their way, like caterpillars, across part of the maternal body to the nipples, which, in most species, are protected by an integumentary fold, which, when most strongly developed, forms the pouch or marsupium. Very often the number born exceeds the number of teats; the winners of the race to them survive, the losers perish. After securing a teat the young animal becomes firmly attached to it and so remains for a long period, milk being squirted down its throat at intervals by means of a special muscle controlling the mammary gland of the mother. When the appropriate stage of growth has been reached the young animal separates from the teat, returning to it at meal times. In the later stages of infancy the young continue to use the maternal pouch for shelter and for transport. In those species in which the pouch is but little developed or lacking altogether the young are carried on the mother's back. Three sections: Polyprotodontia (American and Australian) which includes Opossums, Dasyuridae, Bandicoots; Caenolestoidea (Western South America) with Caenolestes; and Diprotodontia (Australian and west to Celebes and Timor) including Phascolarctidae and Phalangeridae.

Marsupial Fox, see Long-eared Opossum.

Marsupial Mole, a mole-like member of the *Dasyuridae* forming a separate sub-family of its own with one species. Coat golden yellow with a silky sheen. Subterranean, mole-like in its habits. From the deserts of Central South Australia. *Notoryctes typhlops*.

Marsupial Squirrels, see Flying Phalangers.

Marsupial Wolf, see Thylacine.

Marten, see Pine-marten.

Marten, American, the North American representative of the Pine-marten. Light yellowish-brown to dark blackish-brown, throat-marking white to orange, sometimes lacking. The hairs are very rarely silver-tipped. Lives in the forests of North America and is known to the fur trade as "American sable." 1–5 (usually 3 or 4) young are born at the end of April. Martes americana.—A closely related species, the Pacific Marten (Martes caurina), is found in the west of North America from British Columbia to New Mexico.

Marten, Indian, one of the largest species of Marten. Head and

body to 25 in., tail to 18 in. Black or dark brown above, with a bright yellow throat and breast. Occurs in India and Burma and as far as China, Malacca, Sumatra, Java and Borneo. Not in Ceylon. *Martes flavigula*.

Marten, Pacific, see Marten, American.

Marten, White-cheeked, see Marten, Indian. Marten, Yellow-necked, see Marten, Indian.

Mastiff, a very old breed of dog, figuring in Babylonian monuments, the "Molossus" of the classical writers. Powerfully built, 2½ ft. high at the shoulder.

Mastiff-bats, a family of Insectivorous Bats. Snub-nosed, body heavy, tail thick and projecting freely from the tail-membrane. Feet broad and free from membrane. Wings can be folded away very neatly leaving the forearm free, this enables them to move about well on the ground. Widely distributed in the tropics and sub-tropics. One species in Europe and five in North America. Include: Californian Mastiff-bat; Rafinesque's Wrinkled-lipped Bats. *Molossidae*. The New Zealand Bat, often placed in this group, is now regarded as forming a special family of its own (see below).

Mastodon, a prehistoric elephant living about the same time as the Mammoth, Giant Sloth, Tapir, Wild Horse, etc., in North America. First half of the Pliocene; died out during the Ice Age. Mastodon americanus. Other species inhabited Europe (including Britain), Asia and Africa from Miocene times onwards.

Mataco, see Three-banded Armadillo.

Lepus mediterraneus.

Meadow Mice or Voles, amongst the most common of the small Mammals of North America; occur over the whole of the area from the tundra southwards; 45 species of the genus *Microtus*, the best known being the Pennsylvania Meadow Mouse (*Microtus pennsylvanicus* and nearly related species), which live in meadows and grass-land generally.

Mediterranean Hare, from Sardinia. Readily distinguished by its small size (hind-foot 4 in.) and dull colour. (The hares of Crete and North-West Africa are much larger (hind-foot to 5 in.) and make a nearer approach to the Common Hare, Lepus europaeus.)

Medium Hare, a well-marked sub-species or geographical race of the Brown Hare, characterized by its large size, rather light-coloured summer coat, and the frequency with which the grey winter coat is assumed. Tail black above, ears about as long as head, thighs and flanks white, not rust-red. Winter coat much lighter than the summer coat, but not white. Several races in Russia, Eastern Finland, Denmark. Lives in steppes and fields. Long regarded as a species under the name *Lepus medius*, which dates from 1840. The great naturalist and explorer Pallas was the

first to study this Hare in Russia and Siberia, and he not unnaturally though wrongly regarded it as a hybrid between the Varying and the Brown Hare. This led to the "species" being named hybridus in 1822. The correct systematic name is consequently Lepus europaeus hybridus—although the animal is not a hybrid.

Meerkat, a peculiar species of Mongoose placed in a special genus, characterized outwardly by its small and slender form and by its slender snout projecting far beyond the lips. Total length up to 2 ft., of which about one-third is tail. Greyish-brown with a yellowish tinge, 8-10 dark interrupted bands across the rump. Ground-living animals, found in South Africa. Live on small rodents, snakes, etc. Suricata suricatta (= Suricata tetradactyla).

Melon, see Spanish Mongoose.

Mexican Agouti, predominantly black, the neck and belly white. An Agouti from Mexico. Dasyprocta mexicana.

Mhorr Gazelle, see Dama Gazelle.

Mice, True, sub-family of the Muridae. From a scientific standpoint classified by the structure of the cheek-teeth. There are more than seventy genera containing more than fourteen hundred named forms spread over the Old World south of the Arctic regions, save Madagascar. A few species have world-wide distribution having been introduced by man. Include amongst others: Brown Rat; House Rat; Alexandrine Rat; Giant Rats; House Mouse; Harvest Mouse: Wood Mouse. Murinae.

Milu, see Père David's Deer. Mindoro Buffalo, see Tamaru.

Mink, American, similar to the Mink, Old World, but larger and fur woollier and softer. Upperparts a uniform dark umberbrown, rich and glossy in appearance, slightly darker along back



Mink, American

and tail, under-parts like upper-parts except for a white area on the chin and irregular white spots which may be scattered anywhere. Feeds on fish, water-rats, frogs, snails, etc. Pairing occurs from February to March; 5-6 young towards the end of April. The most important Mink from the point of view of the fur trade: between 600,000-800,000 pelts are used annually, the best coming from Labrador and the Hudson Bay district. Has been bred for a long time in North America and more recently also in Europe. Mustela (Lutreola) vison.

Mink, Old World, related to the Polecat and the Weasel. The same size and shape as the former, almost uniform brown with white lips and often a light spet on the throat. Head and body 16 in., tail 5½ in. From Northern Asia westwards through Northern

and Central Europe to South-West France; lacking in England, Western France, Switzerland, Denmark and Scandinavia and



Mink, Old World

possibly entirely exterminated in Germany. Fond of the neighbourhood of water and is found amongst reeds and in undergrowth, etc. Swims and dives well. Like a polecat in gait. Feeds chiefly on crustacea but also on frogs, fish and other aquatic animals. Mustela (Lutreola) lutreola.

—This species is bred on farms for the

sake of its fur and some beautiful varieties have been produced by selective breeding along Mendelian lines; but in the fur trade the Asiatic species such as the small Japanese Mink (Mustela itatsi) and the Chinese Minks (Mustela davidiana and Mustela stegmanni) and the Mink, American, play a more important part. (See also Kolinsky.)

Mithan, Assam name for the Gayal.

Mokos, see Kerodons.

Mole-rats, name applied to various mole-like, fossorial Rodents from Africa and Europe. Best known forms: (1) Cape Mole-rat (Georychus capensis) from the Cape; head and body 7 in. long; (2) Silvery Mole-rat (Myoscalops (= Heliophobius) argenteocinereus) from tropical Africa, head and body 6 in. long; (3) Sandmole (Bathyergus maritimus), from sandy coastal regions of South Africa; head and body 10 in. long; feeds on roots; (4) Naked Mole-rat (Heterocephalus), from Abyssinia, Somaliland and parts of East Africa, almost completely naked, head and body 4 in., tail 1½ in. long; (5) European Mole-rats (Spalax hungaricus from the Balkans and Spalax microphthalmus from Southern Russia, Southern Poland and Northern Rumania), eyes covered with skin, no ears or tail, about 8 in. long; other species of the same genus in North Africa and Western Asia; (6) East African Mole-rat (Tachyoryctes splendens), head and body about 9 in. long; golden sheen.

N.B.—The term Blesmol is often applied to the African molerats. Specimens of (1), (2), (3) and (5) are often found with a white mark on the top of the head.

Moles, subterranean Insectivores, shape plump and cylindrical. Fore-feet short and broad with shovel-like claws. Tail short. Ears buried in the fur. Eyes minute and in some covered over with skin. Europe, Northern and Central Asia, North America; one species in Northern India. Include: European Mole; Blind Mole; Eastern Mole; Western Mole; Shrew Mole; Star-nosed Mole.

Mole Vole, lemming-like Rodent from Southern Russia and

Southern Siberia. Habits fossorial, its digging done chiefly by its incisor teeth and skull (which are highly modified for that purpose) as in the Mole-rats (Spalax) and not by the hands as in the Mole (Talpa). An allied genus of Rodents (Prometheomys), recently discovered in the Caucasus, digs chiefly with its hands and so is modified like the Mole and not like Spalax. Ellobius talpinus.

Moloney's Guenon, a race of the White-throated Guenon from the highlands between Nyassa and Tanganyika. Cercopithecus

mitis moloneyi.

Mona Monkey, a Guenon with a reddish back, a white throat and a light red area round the mouth. Nigeria, Cameroons and Congo (introduced into some of the West Indies, e.g. St. Kitts

and Grenada). Cercopithecus mona.

Monachinae, sub-family of the Phocidae which includes forms in tropical and sub-tropical seas and all the Antarctic Seals save the Sea-elephant. See Monk Seal; Crab-eating Seal; Ross's Seal; Weddell's Seal; Sea-leopard. Monachinae. (In the most recent classification the Antarctic Seals are separated from the Monk Seal and placed in a special sub-family Lobodontinae.)

Mongalla Gazelle, intermediate between the Korin Gazelle and Thomson's Gazelle. Occurs from Northern Uganda to the Sobat

River. Gazella albonotata.

Mongolian Gazelle, see Zeren.

Mongolian Wild Horse, reaches a height of about 4½ ft. at the withers. Light isabelline brown with dark legs, lighter round the mouth, a black, stiff mane, black eel-mark and black tail. Formerly widely distributed in Asia but now restricted to the

Dzungaria desert and Kobdo. Equus caballus przewalskii.

Mongooses, slender, short-legged Viverrids with a long, coarse coat. The largest are somewhat larger than a cat, many are much smaller. Found mostly in Africa, but also in Southern Asia; one species in Spain. Include: Ichneumon; Indian Mongoose, Common; Spanish Mongoose; Marsh Mongoose; White-tailed Mongoose; Indian Mongoose, Small; Crab-eating Mongoose. Herpestes.

Mongoose, Banded, a Mongoose from tropical and South Africa. Brownish buffy-grey with dark bands across the back. Head and body about 19 in. long, tail about 11 in. Mungos mungo

(often incorrectly called Crossarchus fasciatus).

Mongoose, Egyptian, see Ichneumon.

Mongoose Lemur, a species of Lemur from North-West Madagascar and the Comoro Island. Males dull grey, nape of neck, top of head and whiskers rufous brown, ears, nose and throat white; females dull brown on the back, nape of neck, top of head and tail dark grey, forehead black, nose, whiskers and throat

white. Belly light reddish-yellow. Total length about 37 in., of which over half is tail. Lemur mongoz.

Monk Seal, black above; white or greyish-yellow below. Up to 11 ft. long. Lives in the Black Sea, the Mediterranean, and the neighbouring parts of the Atlantic as far as the Canaries and Madeira. Monachus albiventer.—There is a second species of the same genus, the West Indian Seal (Monachus tropicalis), in the Caribbean Sea, and a third, the Pacific Monk Seal (Monachus schauinslandi) from the tropical parts of the Pacific. (All are closely related and should perhaps be referred to a single species.)

Monkey-Lemur, see Crowned Sifaka.

Monkey, Round-faced, a species of Macaque from Formosa. Dark grey-brown with a red face. Very short tail. Pay nocturnal foraging visits to sugar plantations and orchards in summer. *Macaca cyclopis*.

Monkeys, see Apes and Monkeys.

Mono Monkey, see Howling Monkey, Guatemalan.

Monotremes, lowest order of Mammals, confined to Australia, New Guinea and Tasmania. Lay eggs. Echidnas carry their (usually) single egg in a ventral brood pouch; whereas Platypuses deposit their eggs, usually 2, in a nest concealed in an elaborately constructed burrow. There are no nipples, the milk glands opening on to two patches of skin on the belly. Digestive, urinary, and sexual tracts open into a common vestibule, the cloaca. Toothless mouths, the elongated, beak-like jaws being provided with a horny sheath; the embryos have teeth, however, and also an unpaired egg-tooth to open the egg-shell. The skin is haired, and in Echidnas has spines as well. Two families.— Echidnas and Duck-billed Platypuses. Monotremata.

Moor Langur, adults are glossy black, sometimes greyish. A

Langur from Java. Trachypithecus pyrrhus.

Moor Monkey, a Macaque from Celebes. Long snout and a vestigial tail. Sometimes included with the Black Apes. Macaca maurus.

Moose, the largest deer of North America, nearly related to the Elk of Europe, but apparently somewhat darker, in winter brownish-black to blackish. Record antlers: spread 65 in. with a total of 28 snags. Canada and the Northern United States from Maine to North Dakota and south in the Rockies to Yellowstone Park. Habits as in the European Elk. Alces americana (cf. Alaskan Moose).

Moroccan Gazelle, another name for Mhorr Gazelle, see Dama Gazelle.

Moroccan Hartebeest, see Bubal Hartebeest.

Mouflon, a Wild Sheep, from the mountains of Corsica and Sardinia, one of the sources of domestic sheep. Colour chiefly reddish- or blackish-brown, old rams with a greyish-white saddlepatch in winter. Shoulder-height about 26½ in. Ewes horned or hornless, Ovis musimon.

Mouflon, Asiatic, see Red Sheep.

Mountain Beaver, rather like a Prairie Dog in shape and size or better, a tail-less Musk-rat. Occurs on the western side of the Rockies in the states of Washington, Oregon and California. About 14 in. long. Tail vestigial. Brownish with a sprinkling of black hairs, greyish below. Nocturnal. Lives in colonies in burrows in hilly country where there is water. Vegetarian. 3-4 young in June. Aplodontia rufa.

Mountain Caribou, belongs to the Woodland Caribou group and comes from the north-west mountainous regions of North America, the largest of all the Caribous. Antlers large and powerful. Colour blackish-brown. The typical Mountain Caribou (Rangifer tarandus montanus) from the Selkirk Range in British Columbia to the Rockies of Montana, Idaho and Washington goes up to 4 ft. in height and 570 lb. in weight. The Rocky Mountain Caribou and Osborn Caribou are closely related.

Mountain Chinchilla (1), a Chinchilla from Bolivia and part of the Argentine which is slightly smaller than the Peruvian Chinchilla. In spite of official protection some thousands of skins appear in the market yearly. There are two forms, a "blue" one called locally "chinchilla boliviana" and a light brown one called "chinchillona." This latter name has also been applied to the Mountain Chinchilla (2). Chinchilla laniger.

Mountain Chinchilla (2), lives in the Andes from Peru south-

wards. About the size of a rabbit, has a long bushy tail and long ears. Fine hair, but somewhat coarser than that of the Peruvian Chinchilla; blue-grey with a yellowish tinge. Known (together with Mountain Chinchilla (1)) as "Chinchillona" to the fur trade. Lagidium peruanum.

Mountain Goat, see Rocky Mountain Goat.

Mountain Gorilla, a sub-species of Gorilla living in a comparatively cold climate high up on the slopes of the volcanic mountains north of Lake Kivu in the Eastern Congo. Has long, shaggy, black hair. Gorilla gorilla beringei.

Mountain Hare, see Blue Hare.



Mountain Gorilla

Mountain Paca, relative of the Paca from the mountains of Ecuador and Venezuela. Coelogenys taczanowskii.

Mountain Sheep, see Big-horns.

Mountain Zebra, a South African species of Zebra. Has narrow, black stripes on a white ground; easily distinguished by the



Mountain Zebra

"gridiron" pattern of the stripes on the crupper. The chief form used to be common in the mountains of the Cape but is now restricted to a small reserve in the Cradock district. One of the races, Hartmann's Zebra, lives in a narrow coastal strip in Angola and Damaraland. Equus (Hippotigris) zebra.

Mouse Hares, see Pikas.

Mouse Lemurs, Lemuroids from Madagascar. Of solid build; coat thick and woolly; ears naked and not protruding far beyond hair. Head roundish with large eyes suitable for nocturnal life. Tail about as long as head and body, total length 1–2 ft. Chiefly vegetarian, but also eat insects, small birds and eggs. *Cheirogaleus*.

Mouse-eared Bats, a genus of Vespertilionids in the Old and New Worlds. Include: Bechstein's Bat; Mouse-eared Bat; Natterer's Bat; Notch-eared Bat; Whiskered Bat; Rough-legged Water Bat; Long-footed Bat; Daubenton's Bat; Little Brown Bat. Myotis.

Mouse-eared Bat, with a wing span of 15 in., the largest Central European Bat. Head and body 3 in., tail $2\frac{1}{3}$ in. Central Europe to Denmark. Appears late in the evening with a low, clumsy flight. Myotis myotis.—There is a nearly related but smaller form (Myotis oxygnathus) which occurs in the Mediterranean region and as far north as Southern Tyrol and Italian Switzerland.

Mouse-tailed Bats, see Long-tailed Bats.

Moustached Monkey, a Guenon from Spanish Guinea to the Congo. Olive-green, bluish-grey below, face cobalt blue with a white moustache-like mark on the upper lip, and bright yellow side-whiskers. Tail rust-red. Cercopithecus cephus.

Moustached Tamarin, a species of Tamarin from the upper reaches of the Amazon in Brazil. Has a white moustache. Mystax mystax.

iysiax.

Muis-hond, see Striped Weasels.

Mule, result of crossing a male ass and a mare. Combines the size and strength of a horse with the patience, sure-footedness and endurance of the ass. Temperamental. Sterile. Cf. Hinny.

Mule-deer, distinguished from the Virginian or White-tailed Deer by its long ears and black-tipped tail. About 3½ ft. high at the shoulder. Two, sometimes one or three, fawns towards the end of May or in June. West of the Missouri from Alberta to Central Mexico. Odocoileus hemionus.

Mulita Armadillo (see also Armadillos), tail only half the length of body. 6-7 jointed bands. Central Brazil to Patagonia. Dasvpus hybridus.

Muntjacs, belong to the Deer family. Smaller than a roe deer, about 22 in. high at the shoulder. Antlers short, double-pointed, and growing on the end of a very long pedicle. Males with tusk-like upper canines. Colour chiefly reddish-brown or fallow. Six species in India and further India, Southern China, Formosa, Hainan, Ceylon and the large East Indian islands. Solitary or in pairs in thick vegetation.



Mule-deer

1 or 2 young at a birth. Best known species: Muntiacus muntjak.

Muridae, large family of Rodents. Cosmopolitan. Sub-families:
Cricetines; Crested Rats; Voles and Lemmings; Mice, True;
Gerbils: Beaver Rats. Muridae.

Murine Opossum, Brazilian Opossum often figured in old natural histories carrying its young on its back like Aeneas—hence its alternative name of Aeneas Opossum. Marmosa murina.

Muscat Gazelle, smaller than the nearly related Arabian Gazelle. Occurs in Oman, South-East Arabia. Gazella muscatensis.

Musk Ox, Arctic Hollow-horned Ruminant, somewhat inter-



Musk Ox

mediate between a cow and a sheep in form. Forms a sub-family on its own. Heavily built, very short-legged, with a long shaggy coat which reaches almost to the ground in winter. The coat has long, coarse guard-hairs and a fine under-wool which is an effective protection against cold. Tail a mere stump of $6\frac{3}{4}$ in. at most. Colour dark brown to almost black. Horns much enlarged at the bases which almost touch each other on the forehead; the horns bend downwards each side of the face and then turn outwards and upwards. Males have musk glands.

Shoulder-height up to 6 ft. Three sub-species in Arctic North America including its northern islands and Greenland. South to a line between Baker Lake (on the north-west shores of Hudson Bay) and Great Slave Lake. Wanders about in families of 5–6 or in small herds of 15–20 individuals and feeds on the sparse vegetation. In Pleistocene times came southwards through Europe as far as Southern England and France. Ovibos moschatus.

Musk Rat-kangaroo, rat-like Marsupial, a sub-family of the Macropodidae. Hind leg not much longer than the fore leg. Big toe opposable to the others. Ears large and naked. Head and body to 10 in., the scaly, hairless tail 6 in. Ground-living, diurnal animal from Queensland. Eats insects, worms, roots, berries, etc. Both sexes smell of musk. Hypsiprymnodon moschatus.

Musk-deer, small Deer with no antlers, separated from the true deer in a sub-family or sometimes a family of their own. About 3 ft. long and 20 in. high at the shoulder. Upper canines of the males form permanently growing tusks. Ears large. Tail very short. Coat stiff and long with thick wavy hairs. Colour dark brown to yellowish-brown above, belly whitish. A scent gland behind the navel in males; this secretes the well-known musk. Distribution: Central and Eastern Asia from Gilgit and Kashmir to Siberia, Korea, Western China and Cochin-China. Several races. Solitary, only in pairs during the breeding season. One, sometimes two, at a birth. Moschus moschiferus.

Musk-hog, see Collared Peccary (Pecari angulatus).

Musk-shrews, the largest of the Asiatic Shrews and closely related to the White-toothed Shrews, body length (without tail) 6 in.—The Brown Musk-shrew (Suncus murinus) occurs in Southern Asia, from Arabia to Southern China and Japan, and the Grey Musk-shrew (Suncus caeruleus) occurs in India, Africa, Mauritius and Madagascar. (Probably introduced in the two islands.)

Muskrat, Rodent living in and near water and belonging to the sub-family of Voles and Lemmings. Toes of the greatly enlarged and twisted hind-feet united by a short swimming membrane; outer border of foot with well-developed swimming fringe of stiff hairs; tail scaly and laterally compressed. Brown to yellowish above, grey below, tail black. Head and body about 12 in. long, tail 10 in. Weight of adults from 2½ to 4½ lb. Native to most of North America south of the tundra. Lives in large bands on the banks of lakes and rivers; the burrows have two entrances, one above and one below the water. In the autumn it builds conspicuous houses in marshes and ponds; these serve as food stores for the winter and as residences when the earth temperature falls too low. Chiefly herbivorous but also eats molluscs, fish and amphibia. 3-5 litters yearly of 3-12 young. Migrates for long distances in spring and autumn, chiefly along water-courses, but sometimes over land; a marked animal has been known to travel 35 miles against a strong current and to dig its burrows for the new home in the space of 15 days. Introduced into Bohemia in 1905, it has spread to Saxony, Silesia and the Upper Palatinate. An economic pest because it undermines dams, etc. Introduced into Finland in 1922, with happier results for a time-it has

since become a nuisance. Between 1927 and 1932 it was introduced to many places in the British Isles. Spread rapidly from centres in Shropshire, Sussex, Perthshire, and the West of Ireland. In Great Britain a state campaign for its extermination had to be organized and carried out. The fur, known as "Musquash," is of some value and enjoys a rising importance in the fur trade; muskrats are farmed, but the best skins come from Canada and New York State. Ondatra zibethica (= Fiber zibethicus).

Muskrat, Round-tailed, native of Florida, looks like a small Muskrat but has a round tail. Head and body 8 in., tail 5 in. Lives along waterways and by pools and swamps; less pronouncedly a water animal than the Muskrat. Feeds on grass, bark, roots, etc. Neofiber alleni.

Musquash, see Muskrat.

Mustelids, a family of the Carnivores, small or medium-sized, walking wholly or partly on the soles of the feet, body elongated, legs short, five toes on each foot. Most of them are predatory but some also eat vegetable matter. Found in all parts of the world save in Australia. Include: Badger; Pine-marten; Otter; Mink; Polecat; Skunks; Weasel; Stoat; Sable. Mustelidae.

Nagor, see Reedbuck, Bohor.

Nahur, see Bharal.

Nail-tailed Wallabies, genus of Wallaby from the Australian continent. The tip of the tail is horny. *Onychogale*.—Bridled Nail-tailed Wallaby (*Onychogale frenata*), the size of a hare, grey with grey or black neck and white shoulder stripes. Head and body 22 in., tail 18. in. Eastern Australia.—Crescent Nail-tailed Wallaby (*Onychogale lunata*), grey with dark red neck and white shoulder stripes. Head and body 20 in., tail 13 in. Western and South Australia.—Fawn Nail-tailed Wallaby (*Onychogale unguifera*), large, yellow-red; very long tail. Head and body 26 in., tail about 26 in. North-West and Northern Australia.

Naked-backed Fruit-bat, distinguished from other Fruit-bats by its almost naked back (fur restricted to a narrow spinal stripe). Wing span 30 in. New Guinea. *Pteropus papuanus*.

Naked-tailed Armadillo, see Tatouay. Nanger, a race of Dama Gazelle (q.v.).

Narwhal, closely related to the White Whale. Arctic Seas; very rarely in temperate latitudes. No functional teeth other than the tusks. The male has one, and sometimes two, long, straight, and spirally twisted tusks which attain a length of 8 ft. or more. When two are present the spiral twist is in the same direction in both. The tusks are usually vestigial in the female. Dorsal fin a low ridge. Whitish, spotted darker; young ones darker. Up to 20 ft. long, not including tusk. Occurs in "schools" of 15 to 20

individuals; feeds on squid, small fishes and crustaceans. Monodon monoceros.

Native Bear, see Koala.

Native Cats, white-spotted genus of the Dasyuridae with many



Native Cat

species, resemble a marten in appearance and habits. Live in Australia, Tasmania and New Guinea, prey on birds. Dasyurus.— The Common Native Cat (Dasyurus viverrinus) from New South Wales, Victoria, South Australia and Tasmania

is brownish-yellow with large white spots. Head and body 18 in., tail 12 in. Known to the fur trade as Native Cat, or "Australian Cat." A colour phase "Dasyurus maugei," black with white spots, is much used for fur linings. About 10,000 skins in the trade annually. Five other species are known.

Natterer's Bat, or Reddish-grey Bat, has the posterior margin of the wing fringed with short, slightly curved, stiff hairs, most conspicuous along the edge of the interfemoral membrane. Greyish-brown above, white below, ears and wings dusky. Head and body up to 2 in., tail 1½ in.; wing span 10 in. From Central Sweden to France, Great Britain and Ireland, the Alps and the Urals. Appears late, flying low and slowly; usually seen in wooded regions and orchards. Myotis nattereri.

Negro Langur, see Moor Langur.

Negro Tamarin, belongs to the Tamarins. Deep black, but the back and outsides of the legs have an ochre admixture. Live in small troops in the tall forest trees of North-East Brazil and Guiana. Leontocebus ursulus.

Neotragines, sub-family of the Antelopes with well-developed slender tails of moderate length. Horns usually only in the male; short simple spikes. Africa south of the Sahara. Include: Oribi; Royal Antelope; Suni; Dwarf Antelopes; Grysbok; Steinbok. Neotraginae.

Newfoundland Caribou, belongs to the Woodland Caribou. Nearly related to the American form, Rangifer tarandus montanus, but larger and lighter in colour. Comes from Newfoundland. Rangifer tarandus terraenovae.

Newfoundland Dog, a large powerful dog, usually with curly, black hair. Rather like a St. Bernard.

New Guinea Giant Rat, very large Rat from New Guinea with long, thick hair. Undercoat of wool about 1.2 to 1.4 in. long, the

scanty outer-coat hairs almost double that length. Mallomys rothschildi.

New World Monkeys, or those from South and Central America, form a section, or superfamily, of the sub-order Anthropoidea, which contains monkeys, apes and man. The largest are about the size of a medium dog and are not so large as the largest Old World Monkeys. Broad internarial cartilaginous septum; nostrils directed outwards. Fingers and toes with flat or claw-like nails. Tail usually as long as the body and often prehensile. Cheekpouches and ischial callosities (bare patches on the buttocks) lacking. Arboreal forms restricted to forest regions. The families: Cebidae; Marmosets. Ceboidea or Platyrrhini.

New World Porcupines, a family of Rodents, not closely related to the true Porcupines of the Old World. Arboreal animals with sharp claws, and, in Central and South American forms, a prehensile tail. Quills short, mixed in with the hair. Include: Tree-Porcupines and North American Porcupines. Erethizontidae.

New Zealand Bat, most nearly related to the Mastiff-bats, but now placed in a special family, Mystacinidae, less highly specialized in certain respects than the Molossidae. It is the only bat peculiar to New Zealand, for the other bat, a Vespertilionid, living



New World Porcupine

there, occurs also in Australia. Mystacina tuberculata.

Night Ape, a Douroucouli distributed from Guiana through Brazil to Peru. Greyish-brown with a rufous wash below. Three

black longitudinal stripes on the head. Aotes trivirgatus.

Nile Buffalo, northernmost sub-species of the Black Buffalo, first described from the White Nile region; inhabits a large part of Abyssinia west of Lakes Stefanie, Abaya and Zwai and found south as far as the north end of Lake Kivu. Horns smaller than in the Uganda Buffalo; record span 44 in. Bubalus (Syncerus) caffer aequinoctialis.—This form should not be confused with the tame buffalo of Indian origin often bred in the Nile region.

Nile Rat, see Striped Mice.

Nilgai or Blue Bull, an Indian representative of the Tragelaphines. Iron-grey with white marks on the jaws and fetlocks. Horns only in the males, up to 11\frac{3}{4} in. long, crescentic in shape, bending forwards and slightly inwards. Male 8 ft. long (of which 20 in. are tail) and about $4\frac{1}{2}$ ft. high at the shoulder. Lives on the plains of Peninsular India. Gestation 8 months; two calves, rarely only one. Boselaphus tragocamelus.

Nilgiri Langur, closely related to the Purple-faced Langur.

Lives in Southern India. Kasi (= Pithecus) johni.

Nine-banded Armadillo (see also Armadillo), about 16 in. long, of which half is tail. Between the fused plates of the fore and after ends of the body are 9 jointed bands. Flesh is eaten. South and Central America, one sub-species in Southern Texas and in

Mexico. Dasypus novemcinctus.

Noctule or Great Bat, the largest British Bat. Head and body just over 3 in., tail $2\frac{1}{8}$ in.; wing span 15 in. Reddish-brown, somewhat lighter below, ears and wings blackish-brown. From England and Central Scandinavia to the Mediterranean and eastwards over almost the whole of Europe and Central Asia. Appears in the evening before sundown, flying high and fast. Nyctalus noctula.—In Italy and Switzerland there is a larger, not very well-known form (Nyctalus maximus) with a head and body $3\frac{1}{2}$ in. to nearly 4 in. long and a tail of $2\frac{1}{2}$ in.

Non-ruminants, sub-order of the Even-toed Ungulates or Artiodactyla. Two families: Pigs and Hippopotamuses. Neobunodontia. (Note.—In the most recent classification, the one which recognizes Artiodactyla as a full order, the Pigs and Hippo-

potamuses are much more widely separated.)

North American Bighorns, the only wild sheep of the New World. Live in the high mountains of western North America as far south as Mexico. In the U.S.A. found now only at high altitudes in inaccessible places; formerly at lower altitudes but driven out by relentless shooting. Very good climbers. Live on grass and small plants. 1 or 2 young early in spring. American zoologists distinguish two species with various races; European workers mostly distinguish but one species. The northern species (Ovis dalli) has slenderer horns, the colour varies from entirely or almost pure white ("White Sheep," Ovis dalli dalli) to dark grey or almost black ("Black Sheep," Ovis dalli stonei). From Alaska and Yukon to the mountains of Mackenzie and British Columbia. The southern species (Ovis canadensis) is chiefly dirty-to brownish-grey; from Alberta and Washington to Northern Mexico.

North American Bison, also called "buffalo" in North America, related to the European Bison. An adult male reaches a height of 68 in. at the withers and a length of 10 ft. from snout to root of tail. At the beginning of the nineteenth century was still present in countless numbers on the North American prairies from Athabasca to Mexico and from the western parts of the eastern

states to the Blue Mountains of Oregon. Reduced to 635 animals by 1889 through improvident slaughter. The numbers have been

increasing since the beginning of the twentieth century through preservation in reserves in the west of Canada and the U.S.A. Now total about 18,000–20,000 head of which 12,000–15,000 are in Canada. Strictly preserved. Bos (Bison) bison.—There is a northern race known as the Wood Bison.



North American Bison

North American Chipmunks (see

also Chipmunks).—Eastern Chipmunk (Tamias striatus) bright reddish-brown above with 5 black longitudinal stripes. Eastern North America.—Western Chipmunk, 15 species of the genus Eutamias, belong to the same genus as the Asiatic Chipmunk. From western North America.

North American Flying Squirrels (see also Flying Squirrels), two species, widely distributed over wooded regions to Texas and Florida and in mountains to Mexico and Guatemala. One brood a year of 3-6 young.—Glaucomys volans: southernmost Canada,



North American Flying Squirrel

Eastern and Central U.S.A. to Texas and Mexico.—Glaucomys sabrinus: Alaska, Canada, North-Eastern and Western U.S.A.

North American Ground Squirrels, include 4 genera with 31 species. The most important genus is *Citellus* with 25 species from the prairies, deserts and other open country of North America. Closely related to the Sousliks of the Old World. There are from 5 to 13 or 14 young at a birth.

North American Hares, 11 species which may be divided into two groups. (1) Species with white or pale grey winter coats: Arctic Hare; Greenland Hare; Varying Hare; White-tailed Jack Rabbit. (2) Species with brownish winter coats differing little from the summer coats; White-sided Jack Rabbit; Black-tailed Jack Rabbit. In addition several species of "Wild Rabbit," i.e. Cottontails (Sylvilagus). Leporidae.

North American Pika, Mouse- or Whistling-Hares from the mountain ranges of western North America. Also known as Coney (not to be confused with "coney," meaning the Hyrax, of the Bible, or the old English use of "coney," meaning a wild rabbit). Four to twelve species with many races. Most important species:

North American Porcupines, compact short-tailed animals; the thick coat carries quills amongst the hairs and bristles. Colour blackish sprinkled with lighter shades; quills white with black tips. Total length to 3 ft. 4 in., of which 6 in. are tail. Inhabit the forest regions of North America north of 40° and in the mountain ranges come down almost to the Mexican border. Sluggish creatures, they are nevertheless skilful climbers and spend much of their time in trees. Feed on bark, buds and leaves, and in winter chiefly bark and small twigs; very fond of salt. Do not hibernate. Reproduce once a year, 1–2 (rarely up to 4) young. Two species; Canadian Porcupine (Erethizon dorsatum), from Eastern Canada, with hairs tipped with whitish, and Yellowhaired Porcupine (Erethizon epixanthum), distributed from Alaska south to California and Arizona, with greenish-yellow or brownish tipped hairs.

North American Rabbits, several races, widely distributed over the U.S.A. and the southernmost part of Canada. See Cottontails;

Brush Rabbit; Swamp Rabbit; Idaho Pigmy Rabbit.

North-eastern Hare, from Russia, Eastern Finland, Baltic and Eastern Prussia, according to various authorities either a race of the Medium Hare or the Brown Hare. In summer creamy yellow mixed with black above, cheeks whitish; in winter grey above,



Ochotona princeps.

North-East Siberian Bighorn

flanks white. Lepus medius hybridus (=Lepus europaeus hybridus, see Medium Hare).

North-East Siberian Bighorn, somewhat lighter greyish than the Kamchatka Bighorn, has relatively slender horns and short, thickly haired ears like the latter and the northern races of the North American Bighorn (Ovis dalli). Ovis canadensis borealis.

Northern Serotine, a Northern European Bat, the most common

bat in Scandinavia; in Germany found in Eastern Prussia and south in the mountains as far as the Alps. Head and body $2\frac{3}{4}$ in., tail $1\frac{3}{4}$ in. long; wing span $10\frac{1}{2}$ in. Eptesicus nilssonii.

Norway Lemming, from Northern Norway and Northern Finland to the White Sea. Head and body about 6 in., tail \(\frac{1}{2} \) in. In



Norway Lemming (Lemmus lemmus)

certain years the Lemmings increase in numbers to an extraordinary degree and undertake mass migrations into regions where they do not usually occur. When the advancing army reaches the sea they dive in and swim on until they perish. In late Pleistocene times was abundant in the British Isles, France and Germany, leaving its bones and teeth in deposits containing remains of the Mammoth and Woolly Rhinoceros. Lemmus lemmus.

Norway Rat, see Brown Rat.

Norwegian Elk-hound, a dog of the Eskimo type.

Notch-eared Bat, hinder edge of interfemoral membrane sometimes fringed with stiff, straight hairs. Outer edge of ears with a deep notch. Greyish-brown above, whitish below. Head and body 2 in., tail $1\frac{1}{2}$ in. long; wing span $9\frac{1}{2}$ in. Southern Europe, France and a few places in Germany (Cologne, Bonn). Myotis emarginatus.

Nubian Wild Ass, sub-species of the African Wild Ass, occurs in Sennaar and Nubia. Reddish or brownish-grey, lighter below, dark dorsal stripe and shoulder stripes, legs unstriped; 3\(^3_4\)-4 ft. at the withers. Equus (Asinus) asinus africanus.

Nutria, see Coypu.

Nyala, one of the Bush-bucks, almost as big as a red deer, males about 42 in. high at the shoulder with horns varying in length from 27 in. to $32\frac{7}{8}$ in. (record). Colour smoke-grey (females chestnut-brown) with white cross-stripes and a few white spots in the thigh. Males with a well-developed mane and long hair on the breast. Found in forests from Northern Natal through



Mozambique and Nyasaland to Lake Mweru. Tragelaphus angasi.

Nyala, Mountain, with a shoulder-height of about 4 ft., one of the largest of the Tragelaphines, almost as big as the Kudu. Horns form an open spiral, up to 44 in. long on the outside curve. Colour fawnish-brown with a few white marks, including a row of spots along the flanks. From the Sahatu Mountains

of Gallaland in Abyssinia. Tragelaphus buxtoni.

Nyasa Gnu, a race of the Brindled Gnu, browner than the latter, face usually with a white cross-band. Nyasaland. Connochaetes (Gorgon) taurinus johnstoni.

Ocelot, one of the cat-like animals. Occurs in South-West Texas, Central America and a large part of South America. Rows of dark, black-rimmed spots on a reddish-yellow to brownish-grey background, head and neck with dark, longitudinal stripes. Length 50–55 in., of which about 18 in. are tail. Lives in forests and wherever the vegetation is thick. Nocturnal. Feeds on small mammals and birds, also poultry. Two young at a birth. Felis (Leopardus) pardalis.—The Texas race is called Felis pardalis griffithii.

Ochodona, Mongol name for a species of Pika from the Trans-

baikal and Mongolian steppes. Ochotona dauricus.

Octodonts, South American family of Hystricomorphous Rodents, many of them very like rats in size and colour. Include: Tucotucos; Spiny Rats; Bush Rats. Echimyidae (Octodontidae).

Odd-toed Ungulates, an order of mammals belonging to the Ungulates. Large animals usually possessing an odd number of toes on each foot, the middle one being the largest. Walk on the tips of the toes (i.e. on hooves). Distribution: Asia, Africa, Central and South America. Three families: Horses; Tapirs; Rhinoceroses. *Perissodactyla*.

Oersted's Squirrel Monkey, see Red-backed Squirrel Monkey.

Okapi, a species of the Giraffidae living in the Ituri and Semliki Forests of the Belgian Congo, most nearly related to extinct Tertiary Giraffes. First discovered in 1900. Shoulder-height of 5 ft. 4 in., smaller than the Giraffes; males smaller than females. Two short, skin-covered, conical horns in males only; the tips have a naked, ivory-like cap. Ears long and broad. Body a uniform dark reddish-brown, thighs, haunches and upper parts of fore legs with horizontal zebra-like white stripes. Lower parts of legs white with black markings. Shy and nocturnal, living singly or in pairs



Okapi
(Okapia johnstoni)

in the densest part of the damp forest. Feed on particular leaves. One young in May. (A live male can be seen in the London Zoo; it feeds on leaves of evergreen oak.) Okapia johnstoni.

Old World Monkeys, these include the apes as well. Large or small forms with a narrow nasal septum, nostrils close together with the opening directed downwards. Fingers and toes all with nails. Tail variable in length or lacking, but never prehensile. The buttocks often have bare patches of toughened skin (ischial callosities) and are sometimes highly coloured and swollen. Cheekpouches are frequently present. Mostly arboreal but some are rock-dwelling. Three families: Anthropoids; Gibbons; Cercopithecidae. Catarrhini.

Old World Porcupines, usually just called Porcupines; a family of Rodents. Sturdy animals with compactly built bodies; the dorsal surface covered with long quills, which are erected when the animal is in danger. Tail usually short and with truncated quills. Hide in holes during the day and sally forth at night for roots and fruit. Live in the warmer parts of the Old World, with the exception of Madagascar and the Australian region. One species in Southern Italy and Sicily. Include the Short-tailed Porcupines and the Brush tailed Porcupines. Hystricidae.

Oldenburg Horse, a German breed of horse, also called "German

carriage horse."

Olive Baboon, inhabits the rocky regions of tropical Africa from West Africa to the Sudan-Abyssinian borders, the Congo and Lake Victoria. Coat grizzled with a greenish-brown tinge. *Papio anubis*.

Onager, a light animal resembling a wild ass; is in fact the "wild ass" of the Bible. Has long ears and a tuft on the end of the tail. Occurs in several races from western Central Asia to North-West India, Baluchistan, Persia and Syria. White with a large yellowish area on each flank and a black dorsal stripe, mane and tail tuft. A gregarious, steppe-living animal, the herds being led

by an old stallion. Hunted for meat. Equus onager. Opossums (New World), family of Marsupials ranging in size from that of a mouse to that of a cat, somewhat rat-like in appearance. Pointed head, carnivorous teeth; 10 incisors in the upper jaw and 8 in the lower. Fore and hind limbs about the same length; five-toed; big toes of hind-feet clawless and opposable. Tail usually long, naked at the end and prehensile, but in the Short-tailed Opossums it is short, haired and non-prehensile. Pouch rarely complete, usually formed by two folds or else lacking. Nipples 5-27. The usually numerous young are often carried on the mother's back. South and Central America. Two species in the U.S.A. Live on all sorts of animals from small mammals to worms and insects, and partly on fruits and vegetables. Chiefly forest and bush living but a few inhabit human dwellings. One species fishes in streams.—Genera. (1) Didelphys, large Opossums with welldeveloped pouch, 5-13 nipples and bristles amongst the fur; the Opossum. (2) Metachirus, small to medium sized with incomplete or well-developed pouch, 5-13 nipples, no bristles, Thick-tailed Opossum. (3) Philander, Woolly Opossum, woolly, with pouch folds and 5-7 nipples. (4) Marmosa, over 30 species, the size of a mouse, arboreal, insectivorous, with very long tail. No pouch, 7-19 nipples. (5) Peramys, short, non-prehensile tail, Short-tailed Opossum. (6) Chironectes, Water-opossum.—Didelphyidae.

"Opossum, Australian," as a fur-trade name, see Long-eared

Opossum.

Opossum Mouse, see Pigmy Flying Phalanger.

Opossum, North American, or Virginia Opossum, from the U.S.A., the size of a cat. The coat has a white woolly undercoat and long black and white guard hairs. The female bears 6 to 8 young once or twice a year. The Opossum is much hunted, its skin being used for cheap fur and its flesh being good to eat. To guard against extinction, 20 States have a close season varying from 2 to 4½ months. The trade deals with 5,000,000 to 6,000,000 skins annually. Didelphys virginiana.—A race of Mexican Opossum inhabits the coastal regions of Texas.—In South America there are several species of Opossum; yearly several hundred thousand skins come on the market, chiefly from the Argentine.

"Opossum, Tasmanian," as a fur-trade name, see Long-eared

Opossum, Brown.

Opossums, Australian, see Australian Opossums.

Orang-Utan, the only Anthropoid of Asia, living in Borneo and Sumatra. Hair shaggy, reddish-brown; face dark yellowish in youth and later brown to black. Males have a beard and swollen

expansions of the cheeks and stand $5\frac{1}{2}$ ft. high; females smaller. Truly arboreal. Save in the mating season the males are solitary and the females usually live with the sub-adults and young ones. Vegetarians. Simia satyrus (= Pongo pygmaeus).

Oribi, the largest of the Neotragine Antelopes, about the size of a roe deer. Several species on African plains from the Cape to Senegal and Abyssinia. Ourebia.—Best known species, Ourebia ourebi, occurs from



the Cape to Southern Congo. Bright sandy rufous, white below.

Oriental Jackal, rufous white and grey mixed, dirty white below.



Oriental Jackal

Head and body $25\frac{1}{2}$ –32 in. long, tail $8\frac{1}{2}$ –12 in., shoulder-height $17\frac{3}{4}$ – $19\frac{3}{4}$ in. The species, divided into 4 sub-species or geographical races, ranges from South-East Europe through Southern Asia, including Persia, India and Ceylon, to Burma and Siam. Nocturnal; hunts in packs which even come into villages. Gestation 9 weeks; 5–8 young. Canis aureus.

Oriental Wild Cattle, form a sub-genus of Bos which includes all cattle. A more or less distinct ridge, formed by elongated neural spines of the dorsal vertebræ, extends from the nape to the middle of the back where it terminates suddenly. Lower parts of the legs white or yellowish and sharply demarcated from the rest of the body, the colour of which varies between black and reddish-brown. Include two wild forms each with a tame variety, Bantin (with Bali Cow as tame form) and Gaur (with Gayal as tame form). Bibos.

Oriental Wild Pigs, a group of species distinguished from the Wild Boar by the shorter face and very concave profile. Numerous local forms all over India, further India, Eastern Asia, Japan, Formosa, Java, Sumatra and Borneo. Have taken a part in the origin of the Domestic Pig. Include: East Indian Wild Boar (Sus vittatus), White-whiskered Swine (Sus leucomystax from Japan and Formosa); Indian Wild Boar (Sus cristatus, from India, Ceylon, Burma to Siam).

Orygine Antelopes, sub-family of large Antelopes with a haired

muzzle and long, more or less tufted tails. Long horns in both sexes, straight, scimitar-like or spirally wound. Desert- and plain-dwelling in Africa, Arabia and Mesopotamia. Include: Blaauwbok; Roan Antelope; Sable Antelope; Oryx; Addax. Oryginae (or Hippotraginae).

Oryx, members of the Orygine group of Antelopes. Large animals; horns in both sexes; long, straight or slightly curved spikes. From the deserts and plains of Africa south of the Sahara, Arabia and Mesopotamia. Include: Beisa; White Oryx; Arabian Oryx; Gemsbok. Oryx. (The Oryx of the ancients appears to have been either the Beisa or the White Oryx.)

Oryx, Scimitar, see White Oryx.

Osborn Caribou, nearly related to the Mountain Caribou. Goes up to 5 ft. high at the shoulder and 700 lb. in weight. From the Cassiar Range in British Columbia to the Yukon. Rangifer tarandus osborni.

Otter Hound, a small, self-coloured, rough-haired hound used for otter-hunting. Probably originating as a cross between a beagle and a French hound.

Otter, Indian Small-clawed, smaller than the Common Otter, and with reduced claws. Usually called a "Clawless Otter." Length of head and body 20–24 in., tail 11–14 in. Found in South-East Asia from the East Indies to the Himalayas and China; not in Ceylon, though in Southern India; not in Central India, though in Himalayas eastwards from Nepal. Habits as in the Old World Otter. Amblonyx cinerea.

Otter, North American, resembles the Common Old World Otter in appearance and habits. The fur is more valuable and is known as "Virginia Otter," the best coming from Newfoundland, Labrador and the Hudson Bay district. Widely distributed over North America. Lutra canadensis.

Otter, Old World or Common, an elongated, short-legged Mustelid, adapted to an aquatic life, head very flat with a rounded snout and ears which can be shut. Feet webbed, tail more than half as long as body. Coat short and thick, dark, glossy brown above, whitish-brown below. Head and body 23–31 in. long, tail 16–19½ in., weight 15–30 lb. Found in Europe (including British Isles), North Africa, Northern Asia and certain parts of India. Lives along the banks of watercourses and lakes, and on various parts of the sea-coasts of the British Isles and the Baltic. Is thoroughly at home in the water but has a clumsy gait on land. Chiefly nocturnal; has its home in holes in banks which it either finds or digs for itself. Lives chiefly on fish, but also eats frogs, crustacea, etc. Kills more than it eats and is therefore looked on with disfavour by fishermen. Does not hibernate. 2–4 young are born in the spring (though otters will breed at any time). The

fur is of value, and Otters have been so hunted down that in some regions they are rare and only 20,000-30,000 pelts reach the market annually. *Lutra lutra*. *Lutra* is one of the most widely distributed genera in the world; the species are all very much alike and there are less than a score of them altogether.

Otter, Sea, see Sea Otter.

Otter, South American, a giant Otter reaching a length of $6\frac{1}{2}$ ft., including the $27\frac{1}{2}$ -in. flattened tail. *Pteronura brasiliensis*.

Otter-civet, a Viverrid which leads an amphibian life; shaped rather like an Otter. Fur very dense and soft, with small round ears and a short cylindrical tail. Brown with long, yellowish-white whiskers. Head and body $23\frac{1}{2}-25\frac{1}{2}$ in., tail 6 in. Malay Peninsula, Sumatra and Borneo. Can climb up sloping trees. Feeds on fish, birds and fruit. Cynogale bennetti.

Otter-shrews, a sub-family of Insectivores from West Africa. *Potamogalinae*. The only species is *Potamogale velox*. Lives in the water like an Otter and swims with the aid of its laterally-compressed tail. Head and body 12 in. long and tail the same length, Colour brown above, whitish below. Feeds on fish. Cameroons. Congo and Angola.

Ounce, see Snow-leopard.

Owl-faced Monkey, see Night Ape.

Paca, a large Hystricomorph Rodent, forms a genus and subfamily of the Dasyproctidae. It owes its sub-family rank chiefly to the extraordinary development of the zygomatic arches of

the skull; they are converted into great bony cheek-plates (without a parallel elsewhere in the order Rodentia) which cover in a great part of the mandible and the muscles of the cheek which move it. Heavy, long-legged, tail vestigial, large internal cheek-pouches present. Fur harsh. Colour brownish with longitudinal rows of white spots. Length up to 28 in. An entirely nocturnal herbivore



Paca

and a good swimmer. South and Central America from Brazil to Mexico, chiefly in swampy lowlands. *Coelogenys* (= *Cuniculus*) paca, with several sub-species. A second species, the Mountain Paca (*Coelogenys taczanowskii*) occurs in the mountain forests of the Andes in Ecuador and of the Pedregosa Mountains in Venezuela. It has thicker and less harsh fur, narrower claws and various skull characters which distinguish it from the species of the plains.

Pacarana, rare and little known large Hystricomorph Rodent, forming a sub-family on its own. It looks rather like a Paca,

but has a well-developed and fully-haired tail. Black or brownish with longitudinal rows of white spots. Lives in the forest regions of the Andes in Peru, Ecuador and Colombia. *Dinomys branickii*.

Pacific Harbour Seal, differs from the Common Seal only in a few skull characters, and is its Pacific representative. From Alaska and the Pribilov Islands to Mexico. *Phoca richardii*.

Paco, see Alpaca.

Pademelon Wallaby, small Wallaby; head and body 26 in., tail 18 in. Coat long and soft, brown-grey with rust-red neck above, whitish below. In bush country of Southern Queensland, New South Wales and Victoria. *Macropus thetidis*.

Pagi Island Monkey, see Pagi Snub-nosed Monkey.

Pagi Snub-nosed Monkey, from Pagi Island off the south coast of Sumatra. Closely related to the Proboscis Monkey. Simias concolor.

Pahmi, see Ferret-badger.

Pala, a species of true Antelope placed in a special genus considered by some authorities to form a sub-family on its own. Larger than a Fallow Deer, almost 80 in. long (of which 12 in. are tail) but of slenderer build. Shoulder-height about 39 in. General colour bright reddish-brown, under-parts and round the eyes white. A black spot on the fetlock. The male has slender, widely lyrate horns, ringed on the lower half. Record length 33 in. Distribution: from Little Namaqualand and Bechuanaland to Angola and through Rhodesia, Nyasaland, Tanganyika Territory and Kenya to Southern Uganda. Lives in thick bush on the edge of open country and seldom wanders far from water. In former times found in great herds but now chiefly in small troops of 10–50. Feeds on grass and also leaves. Hunted by lions and leopards. Six races in different parts of the range. Aepyceros melampus.

Pale Bat, a pale yellowish-grey Vespertilionid with large ears from south-western U.S.A. Head and body up to nearly 3 in., tail nearly 2 in. Lives in crevices in rocks and in buildings. A fast

flier. Antrozous pallidus.

Palestine Gazelle, most nearly related to the Edmi Gazelle and

the Chinkara; from Syria and Palestine. Gazella gazella.

Pallas' Cat, a wild cat found in the rocky regions of Central Asia from Transcaspia to Tibet and Mongolia. About the size of a domestic cat, head and body 21 in., tail 10 in. long. Coat long and thick, light yellowish or whitish-grey, with more or less crowded black spots on the crown and a few narrow black stripes on the rump; tail with black rings. Preys on small mammals, especially pikas and birds. Felis (Otocolobus) manul.

Pallas' Eastern Tur, another name for the Eastern Caucasian

Tur, see Tur.

Palm-civet, a somewhat marten-like oriental Viverrid with a

tail as long as its body; tail can be rolled up, not prehensile. About the size of a cat or smaller, shoulder-height to 7 in.; head and body from 18 to 28 in., tail 17 to 26 in., the measurements varying with the race. Body coat of long contour hairs, and more or less under-wool, varying with latitude, in winter. Blackish or grey, often with dark spots. Nocturnal and arboreal; feed on small mammals, birds and fruit. Many races in India and Ceylon,



Palm-civet, African

further India, Southern China, the Dutch East Indies and the Philippines. Paradoxurus hermaphroditus. Two other nearly related species are now recognized as occurring in "British India;" Paradoxurus zeylonensis from the highlands of Ceylon and Paradoxurus jerdoni, with two sub-species, from Southern India.

Palm-civet, African, also called Two-spotted Palm-civet, resembles a Palm-civet but has soft hair. Colour variable but usually dark yellowish-grey-brown with dark spots, somewhat lighter below. There is a light spot on each shoulder. The tail has dark rings. Length 31–32 in., of which at least half is tail. Nocturnal and arboreal and feeding on small mammals and birds. West African forests. Nandinia binotata.

Palm-civet, Masked, closely related to the Palm-civet, but without body pattern and with tail only two-thirds the length of head and body. Range from Kashmir through the Himalayas into Southern and Central China. Formosa, Hainan, Burma, Andamans, Malay Peninsula, Sumatra and Borneo. Yellowishgrey, head black with a white stripe, feet black. Nocturnal; a good climber. Paguma larvata. A second species with winter coat woolly and matted and shorter tail (half the length of head and body) occurs in Tibet. Paguma lanigera.

Pamir Argali, race of the Argali from Pamir and adjacent parts of Central Asia. Has the longest horns of any wild sheep, they are in the form of an open spiral directed outwards, record length

75 in. Ram about 36½ in. high at the shoulder. Colour of upper-parts light speckled brown with a reddish tinge in winter; face, under-parts and legs white. Ovis ammon poli.

Pampas Cat, a long-haired, silvergrey Cat with oblique longitudinal,



Pampas Cat

rufous-brown stripes. Length about 4 ft., of which 1 ft. is tail. Occurs in South America from Patagonia to Peru and Southern Brazil. Feeds chiefly on small rodents. Felis (Lychailurus) pajeros.

Pampas Deer, about the size of a roe deer. Antlers 3-pointed. Colour reddish-brown or fallow with a white ring round the eye, belly whitish. Fawns indistinctly spotted white. Live in open plains from Brazil to Northern Patagonia. Blastocerus bezoarticus.

Panda, a remarkable Asiatic Carnivore with characters suggesting affinity with the Giant Panda and more remote relationships with Bears on the one hand and Procyonids on the other.



Panda (Ailurus fulgens)

It is now placed in a special family, Ailuridae. In outward appearance it looks like a heavily built cat with possibly a touch of a marten about it. Head and body 20–24 in. long, tail 15–18 in. The coat is thick, soft and long, deep, glossy red above, black below and on the legs. The long, bushy tail is rufous with indistinct lighter rings. Found in hill-forests between 7,000 and 12,000 ft. from Nepal over the Eastern Himalayas and Assam to Szechwan and Yunnan. Climbs well and lives in holes in trees. Vegetarian, but also eats eggs and insects. Two young are born in the spring. Ailurus fulgens. (Referred now to two sub-species: (1) the typical form from Nepal and Sikkim; (2) an eastern race, Ailurus fulgens styani, from Yunnan, Szechwan and Upper Burma.)

Panda, Giant, a peculiar bear-like Carnivore, not related to any other living species unless it be to the Panda. It is placed,

with a nearly related fossil genus from Burma, in a separate family Ailuropidae. Somewhat smaller than the brown bear, length 6 ft. Outward form in general bear-like, but with the short tail better developed and the hind-quarters falling away in a peculiar fashion recalling what is seen in hyenas. A special bone in the fore-paw, developed alongside the thumb and supporting a large pad, forms a curious prehensile organ adapted for grasping the bamboo shoots on which the animal feeds. The colour is black and white in sharply demarcated areas: black spectacles and ears, black hind legs and black fore legs, the black



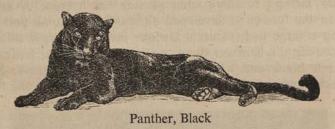
Giant Panda (Ailuropoda melanoleuca)

of the latter being continued up over the shoulders to form a continuous band over the back of the neck; rest white. Found in the lonely woods and mountains of Eastern Tibet and South-West China. Feeds on bamboo shoots and other vegetable matter. Ailuropoda melanoleuca.

Pangolins or Scaly Ant-eaters, an order of African and Southern Asiatic Edentates. Upper-parts of the body and tail covered with overlapping horny scales, which make the animals look rather like enormous pine cones. Only the sides of the head, the belly and the inner sides of the legs are haired. Tail long and powerful. Colour brown or yellowish-brown. No teeth, tongue thread-like and extensible. Pangolins can roll themselves up in a ball. Nocturnal, living on termites and ants. Forest- or savannadwellers; the former can climb. Only one family, Manidae. Include: Long-tailed Pangolin; Tricuspid Pangolin; Chinese Pangolin;

Malayan Pangolin; Temminck's Pangolin; Giant Pangolin; Indian Pangolin. *Pholidota*.

Panolia, see Eld's Deer. Panther, see Leopard.



Panther, Black, a black variety of Leopard found mostly in the East Indies and in India.

Papillon, a toy dog weighing 4-7 lb., has a curled-up, bushy tail

and long-haired erect ears.

Papuan Wild Pig, found in New Guinea, probably feral descendants of domesticated or semi-domesticated Oriental Wild Pigs introduced by man. Sus papuensis.

Para, see Hog-deer.

Parma Wallaby, reddish on the back. The Eastern representative of the Dama Wallaby. South-East Australia. Macropus parma.

Parry's Wallaby, large Wallaby from the rocky regions of Eastern New South Wales and Queensland. Soft woolly coat, blue-grey, reddish tinge on rump. Hands and face black.

Macropus parryi.

Parti-coloured Bat, resembles the Northern Serotine. Fur dark brown above with a silvery tinge; under-parts cream buff; line of demarcation sharply defined on sides of neck. Head and body $2\frac{1}{2}$ in., tail $1\frac{3}{4}$ in.; wing span $11\frac{1}{2}$ in. Central Scandinavia to the Alps and Central Asia, chiefly in mountainous and wooded regions. Once taken in England at Plymouth (a straggler). Vespertilio murinus.

Pasang, see Wild Goat.

Patagonian Cavy, included by some authorities in the sub-family of the Cavies, by others with the Capybara. Lives on the dry desert steppes of Patagonia. In many respects like a hare (hence its alternative name Patagonian Hare) but hind legs longer, with three toes, bearing hoof-like claws, arranged as in the Perissodactyle Ungulates, and ears shorter. Brownish-grey above, light cinnamon on the flanks and breast, white belly. Head and body 18 in., tail 2 in. Diurnal. *Dolichotis patagona*. A smaller species, *Dolichotis salinicola*, occurs in Argentina.

Patagonian Hare, see Patagonian Cavy.

Patas Monkeys, closely related to the Guenons, but not

arboreal. Orange-red above; whitish on belly, legs and tail; black face. Tropical Africa. Erythrocebus.—The Patas Monkey (Erythrocebus patas) with a black nose occurs in many races from Senegal to the Cameroons and the Congo; Hemprich's Hussar Monkey (Erythrocebus patas pyrrhonotus) with a white hairy nose is East African, and various races of it occur from Kordofan to Uganda and the Upper Congo. (Note.—All the forms which have



Patas Monkey (Erythrocebus patas)

been described in this group are now regarded as races of Erythrocebus patas.)

Peba Armadillo, see Nine-banded Armadillo.

Peccaries, the representatives of the pig family in the New World. Found in North and South America. Include: Collared Peccary; White-lipped Peccary. *Tayassuinae* (or *Dicotylinae*).

Pecora, Linnaeus' name for certain families of the Ruminants.

Include: Deer, Hollow-horned Beasts, and Giraffes.

Pekin Deer, a species of Sika distinguished by its size (shoulderheight about 43 in.), and by the fact that in adults the white buttock patch is scarcely perceptible. Chestnut-brown; in summer with large, white spots; in winter long-haired with very reduced spotting. From China and Manchuria. Cervus (Sika) hortulorum.

Pekinese, a small dog which was bred originally in China in Buddhist temples and in palaces. Long-haired and with a "pushed-in" face, tail curled up and bushy. Some specimens were imported into England in the sixties of the last century and have been bred

here since.

Pelzeln's Gazelle, inhabits barren stony regions with low-growing bushes along the coast of Northern Somaliland. Very similar to Speke's Gazelle but somewhat bigger (shoulder-height about 25 in.), more reddish and without the nasal corrugations. Record horn 14¹/₄ in. *Gazella pelzelni*.

Pen-tail, see Tree-Shrews.

Percheron, a French breed of draught horse, has no long hair on the legs.



Père David's Deer

Père David's Deer, a peculiar, heavily built Deer with large antlers, the front branch of which divides twice, the hind branch being undivided. Unknown in the wild state. The only specimens used to be in the gardens of the Summer Palace at Peking, but these were exterminated in the Boxer rising in 1900. Some specimens were sent to Europe prior to this date and their

descendants survive in the park of

Woburn Abbey, England, and also in some zoos. Elaphurus davidianus.

Persian Gazelle, see Goitred Gazelle.

Peruvian Cavy, origin of the domestic Guinea-Pig. Cavia tschudii (= Cavia cutleri).

Peruvian Chinchilla, very valuable fur animal from the Peruvian Andes. Looks like a rabbit but has a long bushy tail. Head and body 10–12 in., tail 10 in. Coat soft and silky, blue-grey above, white below. Formerly very numerous, but now, as a result of improvident slaughtering, rare and protected. The fine silky hair was made up into cloaks, etc., as far back as in the days of the Incas. Chinchilla laniger.

Peruvian Guemal, a Guemal from the Andes of Ecuador, Peru, Northern Chile and Bolivia at altitudes of 11,000–16,000 ft. Somewhat smaller (34 in. high at the shoulder) than the more southerly Chilian Guemal. Under-parts markedly lighter than the back. Hippocamelus antisensis.

Perwitzky, see Marbled Polecat. Peschaniki, see Caspian Souslik.

Phalangeridae, family of Australian Marsupials with three subfamilies: the *Phalangerinae*, the Musk Rat-kangaroos, and the Kangaroos. Long, sometimes prehensile tail; 6 upper and 2 lower incisors.

Phalangerinae, Marsupials forming a sub-family of the Phalangeridae, includes forms from the size of a mouse to the size of a cat. Short, broad snout, usually a long prehensile tail. Dexterous

climbers, some with parachute. 2-4 young at a time. Mostly herbivorous, sometimes insectivorous, or omnivorous. Live in Australia and Tasmania and the islands up to and including the Celebes and Timor. Include the following: Cuscus, Australian Opossums, Ring-tail Opossums, Flying Phalangers, Dormouse-phalangers, Honey Mouse. *Phalangerinae*.

Pharaoh's Rat, see Ichneumon.

Phascogales, genus of Dasyurids the size of a squirrel or smaller, many species. From Australia, New Guinea including Salawati, and Tasmania. Arboreal or terrestrial. Best known species: the Brush-tailed Phascogale (Phascogale penicillata). Phascogale.



Phalanger

Phascolarctidae, family of Australian Marsupials comprising the Koala (*Phascolarctus*) and the Wombats (*Phascolomys*). These are often placed in separate families. Clumsy animals without a tail. The former is arboreal (see Koala) and has the first two fingers opposable to the others; the latter are fossorial. The two middle incisors in the upper jaw very large, the others small or missing. Two incisors in lower jaw. Two mammae, large pouch. Known to the fur trade as "Australian Bear" and "Native Bear." *Phascolarctidae*.

Phenacomys, six species of Vole. Little known but widely distributed in North America. Four species are ground-living like European Voles, but two from California and Oregon are tree-living and are known locally as "Tree Mice."

Phocidae, family of the Pinnipedia. No external ear (cf. Seals, Eared), hind-feet stretching out behind to form a rudder, cannot be bent forward for locomotion on land. Move about on land by wriggling and heaving their bodies. Known to the trade as "hair-seals." Three sub-families: Phocinae or True Seals; Monachinae or Monk Seals; Cystophorinae or Crested Seals. Phocidae.

Pichiciago, see Fairy Armadillo.

Pichiy Armadillo, see Dwarf Armadillo.

Pig-footed Bandicoot, Bandicoot from the Australian mainland with elongated hind legs, pointed snout, and very long ears. Fur coarse and straight; but not spiny. General colour grizzled grey; under-parts white. The size of a small rabbit. Length of

head and body about 10 in., of tail 4 in. Toes very reduced, only two on fore-feet and one on hind-feet being well developed. Eats

insects. larvae, plants. Choeropus castanotis.

Pig-tailed Macaque, Burmese, nearly related to the Pig-tailed Macaque. Lives in Arakan and Upper Burma, extending south to Tenasserim and to Siam and the Mergui Archipelago. Introduced to the Andamans. Macaca nemestrina leonina.

Pigmy Flying Phalanger, two species of small Flying Phalanger.

—The best known species, also called Opossum Mouse, scarcely attains 6 in. in length, half of this being tail. From the forest regions of Eastern Australia. Acrobates pygmaeus. The other species (Acrobates pulchellus) comes from a small island near Dutch New Guinea.

Pigmy Flying Squirrel, a Flying Squirrel from Arakan and Cochin-China. Head and body $4\frac{3}{4}$ -5 in. long, tail the same length.

Hylopetes spadiceus.

Pigmy Hippopotamus, only about 6 ft. long. Greenish-blue-black above, greenish- or yellowish-grey below. Less aquatic than the Hippopotamus, only going in the water for a bathe. Wander about at night in pairs, feed on shoots, fruit and grass. Found along the coastal regions from Sierra Leone to Nigeria. Choeropsis liberiensis.

Pigmy Hog, a Wild Pig about the size of a hare, like a small edition of an Oriental Wild Boar. Brown or blackish-brown; young ones red-striped on a brown ground, belly white. Females with only 3 pairs of nipples. From the Terai on the southern foothills of the Himalayas in Nepal, Sikkim and Bhutan. Live in herds of 5–20 in the long grass. Sus (Porcula) salvanius.

Pigmy Right Whale, though it possesses a small crescentic dorsal fin it is classified with the Right Whale on account of the absence of ventral grooves. Whalebone very long and white. Only 16–20 ft. long. In the South Pacific off Australia and New

Zealand; rare. Neobalaena marginata.

Pigmy Shrew, a red-toothed Shrew with head and body 2-2\frac{1}{3} in. long and a tail about 1\frac{1}{2} in. Upper-parts brown with a greyish tinge, flanks yellowish, belly whitish-grey. Found nearly all over Europe, including the British Isles, in Central Asia as far as Sachalin and in North Africa. The smallest European mammal not counting the white-toothed Etruscan Shrew. Sorex minutus.

Pigmy Sperm Whale, closely related to the Sperm Whale, but only 10–13 ft. long. 12–13 teeth in each side of the lower jaw. Short head; small, crescentic dorsal fin. Apparently cosmopolitan, chiefly in the warmer seas; rare, few specimens known. Has been seen off the North American coasts and in the North Sea. Kogia breviceps.

Pigs, a family of non-ruminant Artiodactyles. Head pointed, nostrils opening on the naked stumpy end of the mobile snout. Thinnish legs, each with 4 toes of which only the middle two touch the ground. In all parts of the world but in the Australian region only in New Guinea. Prefer boggy wooded country. Up to 12 young at a birth, more in the domestic pig. Include: Pigs, True; River-hogs; Forest-hog; Wart-hog; Babirusa; Peccaries. Suidae.

Pig, Domestic, domesticated in ancient times in Europe and in Eastern Asia from Wild Pigs, nowadays bred everywhere. The old European farm pigs come from the Wild Boar and the Eastern Asiatic ones from the Oriental Wild Pigs, probably chiefly from the White-whiskered Swine. The modern, heavy breeds of Europe are probably due to crossing the old European ones with introduced domestic Chinese stock.

Pigs, True, genus of Pigs including the true Wild Boars. Distribution: Europe, Asia, New Guinea and Africa north of the Sahara and in Eastern Sudan. Include: Wild Boar; Pigmy Hog;

Oriental Wild Pigs; Warty Pigs. Sus.

Pikas, small Duplicidentata, short-eared and tailless. Fore and hind legs almost equal in length. Steppe and mountain animals, spread from South-East Europe, through Northern Asia to the mountain ranges of West North America. Sometimes called Calling Hares from their penetrating whistle. Include: Dwarf Pikas, Siberian Pikas; Ochodona; North American Pika. The single

genus Ochotona forms a family. Ochotonidae.

Pilot Whale, belongs to the Dolphins and Porpoises. Reaches a length of 24–28 ft. Head large and round with a very prominent forehead. Flippers long and pointed, dorsal fin fairly long. 8–12 sharp teeth in each half of each jaw, the largest teeth barely ½ in. in diameter. Black with a central white streak on the belly which is expanded into a heart-shaped patch between the flippers. Lives chiefly on cuttlefish. Lives in great schools in the North Atlantic and is caught in quantities off the Faroes every year. Globicephala melaena.—The Short-flippered Pilot Whale (Globicephala brachyptera), whose flippers are at most one-sixth of the total length is found in the Atlantic from New Jersey to the Gulf of Mexico; the North Pacific Pilot Whale (Globicephala scammoni), is very similar. N.B.—Other names for the Pilot Whale are Caa'ing Whale, Grindhval and Blackfish.

Pinché Marmoset, a small Marmoset from Colombia. Brown; the long hair hanging from the back of the head, the arms, shins and belly white; tail blackish-brown with a reddish-brown root. Total length 28 in., of which 16 in. are tail. Oedipomidas oedipus.—A closely related species, Geoffroy's Marmoset (Oedipomidas

geoffroyi) comes from Panama and Costa Rica.

Pine Mouse, North American relative of the Burrowing Vole. Pitymys pinetorum.

Pine-marten, one of the Mustelids. Dark-brown with a yellowish spot on the throat. Head and body 19 in. long, tail 9½ in. Found in Europe as far south as Northern Italy, Sardinia and the Balearic Islands, and from Ireland eastwards through Asia, as far as Manchuria, the Altai and the Himalayas. Lives in coniferous and in deciduous forests. A good climber; nocturnal. Feeds on squirrels, but also on other animals up to hares and young roedeer; also feeds on berries. Gestation about 9 weeks; 3-4 (rarely 2 or 5) young at a birth in March or April. The fur is used in the trade. Martes martes.

Pinnipedia, a sub-order of Carnivores whose members are very highly specialized for life in the water. Body stream-lined, head small with external ear small or lacking, tail short and cone-shaped or rudimentary. Extremities fin-like, the five digits being webbed and the nails usually rudimentary. Live chiefly on fish; walruses and sea-elephants also eat molluses from the sea-bottom. Except for the Monachinae, which live in warmer seas, they are found in the cold and temperate waters of both hemispheres. A few races of the Ringed Seal occur in land-locked seas. Usually gregarious and polygamous. One, at most two, young at a birth; the young are born fully developed and can at once follow their mothers. Three families: Seals, Eared; Walrus; Phocidae. Pinnipedia.

Pinzgauer, a heavy Alpine draught horse.

Piping Hares, see Pikas.

Pipistrelles, the smallest of the Vespertilionid Bats. Fars not attached to each other at bases, longer than broad; tail enclosed in the inter-femoral membrane. Widely distributed over the world, many species. Include: Common Pipistrelle; Alpine Pipistrelle; Kuhl's Pipistrelle; Rough-skinned Pipistrelle; Pipistrelle North American. Pipistrellus.

Pipistrelles, North American, the smallest of the North American Bats. Live in caves and rocky crevices. There is one eastern species (Pipistrellus subflavus) and one western (Pipistrellus hesperus).

Pitheciinae, a sub-family of the Cebidae distributed over the northern part of South America. Small or medium-sized Monkeys with a supple tail which is entirely haired. Include: Saki Monkeys; Uakari Monkeys. Pitheciinae.

Plague Rat, see Indian Mole-rat; also House Rat.

Plain Rat-kangaroo, Marsupial belonging to the Rat-kangaroos. Broad head, thick, soft coat. Sides yellow. Length of head and body about 18 in., of tail 14 in. Lives on the arid plains of the interior of South Australia. Caloprymnus campestris.

Pluto Monkey (= Diadem Monkey), a Guenon without a beard

but luxuriant side-whiskers and a white band across the forehead. From Lower Guinea and Angola. Cercopithecus mitis mitis

(= Cercopithecus leucampyx = Cercopithecus pluto).

Pocket Gophers, a family of heavily-built, short-legged subterranean Rodents. Eyes and ears small, tail medium length and thinly haired. External cheek-pockets present. Often do much harm by gnawing the roots of trees, shrubs, etc. No hibernation. Nine genera and many species in the U.S.A. Geomyidae.

Pocket Mice, about 40 species in North America. Small, mouse-like animals with external, fur-lined cheek-pockets; tail fairly long; hind legs long, ears smallish. Spend day sleeping in burrows. From the plains and deserts of south-western and mid-western North America. Several litters a year; 4-7 young. *Perognathus*.

Pocket Rats, see Kangaroo Rats.

Pointer, a hound-like dog used for indicating the presence of

game-birds.

Polar Bear, a very large, white Bear, with a total length of 7–9 ft., of which $3\frac{1}{2}$ – $4\frac{1}{4}$ in. are tail; weight 700–1,600 lb. Lives in north polar regions and feeds on all sorts of marine animals from seals to fish. No hibernation. Two cubs at a birth. *Thalarctos maritimus*.

Polar Hares, see Arctic Hares. In the fur trade not only Arctic Hares but also other species with white winter coats, especially

Blue Hares, are known as Polar Hares.

Polar Island Caribou, a name given to various sub-species of Caribou inhabiting many of the Arctic islands of the Old and New Worlds, such as Spitzbergen, the New Siberia Islands and the islands of Arctic North America. They include both Woodland and Barren Ground Caribou (e.g. Rangifer tarandus pearsoni, from Novaya Zemlya and Rangifer tarandus pearyi from Elles-

mereland respectively.)

Polecat, belongs to the Mustelid family. Much larger and stronger than a Weasel, the coat has long, blackish-brown guard-hairs and creamy to light rufous under-fur which is visible through the guard-hairs. Under-parts, feet and the bushy tail black. Head and body in adult males up to 17½ in., tail to 7½ in.; females smaller. Occurs in Europe from Great Britain (not Ireland), Central Sweden and South-East Finland to Central Europe and the Mediterranean. Likes to be in the neighbourhood of water, in summer lives in holes in the ground, in winter sometimes in buildings. Chiefly nocturnal, feeds on frogs, small mammals, birds, eggs, fish, etc. Very predacious and sometimes attacks poultry. Gestation 8–9 weeks, 3–7 young. The fur is used, about 600,000–700,000 pelts coming into the fur trade yearly. Mustela (Putorius) putorius.

Polecat, Black-footed, the North American representative of

the Polecat. Pale yellowish-brown above, mixed with dark brown on the top of the head and back, yellowish-white below, round the eyes and feet black. Found east of the Rocky Mountains from North Dakota and Northern Montana to Texas. *Mustela (Putorius) nigripes*.

Polecat, Marbled, see Marbled Polecat.

Polecat, Russian, smaller than the common Polecat, the hair, especially the guard-hairs, shorter and lying flatter. Southern Russia and Southern Siberia. About 650,000 pelts are used annually in the fur trade. Said to be the origin of the Ferret. Mustela (Putorius) eversmanni.

Pollack Whale, see Rudolphi's Rorqual.

Pomeranian, a small dog belonging to the Eskimo group.

Ponies, small horses. Each of the three stocks from which spring the domestic horses of to-day produces ponies. See Horse, Domestic.

Poodle, a dog of German origin, it was formerly used as a water-dog for flushing and retrieving game. The coat is in thick curls which are sometimes lengthened into ringlets or cords reaching the ground.

Porcupines, form two families of Rodents: the Old World

Porcupines and the New World Porcupines.

Porpoise, Common, belongs to the *Delphinidae*. Head rounded in front with no trace of a "beak." 25–28 teeth in each half of each jaw. Low, triangular dorsal fin; flippers oval. Upper surface, flippers and tail black; belly white. Length up to 6 ft. North Atlantic and North Pacific; round the British Isles, in the North Sea and in the Baltic in schools. Sometimes goes 25 miles or more up river estuaries. *Phocaena phocaena*.—There are no Porpoises in the Mediterranean, but there is a special form (*Phocaena relicta*) in the Black Sea.

Porpoise, Dall's Harbour, related to the Common Porpoise but in a genus of its own. Up to 6 ft. long. Off the coasts of Alaska. Phocaenoides dalli.

Porpoises, see Dolphins and Porpoises.

Pottfish, see Sperm Whale.

Potto, belongs to the Slow Lemurs. Body slender, head roundish with a jutting-out snout, medium-sized eyes and small ears. Fore and hind limbs of about equal length. Short, woolly coat, reddish grey-buff above mixed with black, lighter below. About 14 in. long, of which $2\frac{1}{2}$ in. are tail. Nocturnal. Feeds on fruit and small animals. From Nigeria and Angola through the Congo forests to Kenya. Several races. *Perodicticus potto*.

Potto, American, see Kinkajou.

Pouch-winged Bats, tropical and sub-tropical American Freetailed Bats. The males have a glandular pouch on the upper surface of the wing in front of the elbow (in the females the pouch is rudimentary); this secretes a red, strong-smelling substance. Saccopteryx.

Pouched Mice, genus of small Dasyurids. Take the place of

Shrews in Australia and Tasmania. Sminthopsis.

Pouched Rats, genus of rats from Africa with cheek-pouches. Saccostomus (Eosaccomys).—Best known species: Cape Pouched Rat (Saccostomus campestris) from South and South-East Africa.

Prairie Wolf, see Coyote.

Prairie-dogs, fat, short-tailed Rodents related to the Marmots and intermediate between the latter and the Sousliks and North American Ground Squirrels. Ears small. Inhabit the prairies and other open country of North America from Montana and North Dakota to Mexico. Diurnal, living in large colonies; their burrows are often continuous for a mile. They have a characteristic "bark." Chiefly vegetarian but also eat birds' eggs. The burrows are often shared by a burrowing owl and the rattlesnake. In the northern part of their range they undergo a short hibernation. There are usually 4 at a birth, occasionally 6–8. Include: White-tailed Prairie-dog; Black-tailed Prairie-dog. Cynomys.

Preuss's Monkey, closely related to the White-throated Guenon but darker. Cameroons and Fernando Po Island. Cercopithecus

l'hoesti preussi.

Prevost's Squirrel, one of the most beautiful Squirrels, coloured black, white and red. Malacca, Sumatra and Borneo. Sciurus prevosti.

Primates, include Man, Apes, Monkeys and the Lemuroids. Some recent authorities also place the Tree Shrews in this order.

Prince Alfred's Deer, a relative of the Sambar from the Philippines, distinguished by its blackish-brown, white-spotted coat and smaller size. Shoulder-height about 28 in. Cervus (Rusa) alfredi.

Proboscidea, an order of mammals probably most nearly related to Sirenia and Hyracoids. They are heavily built animals, with the nose developed as a prehensile organ (the trunk), the incisor teeth converted into tusks, and the molars into millstones for grinding down the coarse vegetable substances upon which they feed. They include the largest land animals. During Tertiary times there were numerous, widespread genera and species but they are now on the decline and confined to the two species of Elephants which inhabit Africa and parts of Asia. *Proboscidea*.

Proboscis Monkey, a reddish-brown relative of the Langurs, lives in Borneo. The male has a swollen nose which hangs down over the mouth. The female and young are snub-nosed. Nasalis

larvatus.

Procyonids, most nearly related to Bears. Small or medium forms with a long, bushy and usually ringed tail. Live in America:

Cacomixtle, Raccoon, Kinkajou. Procyonidae. The Asiatic Panda and Giant Panda are more or less closely related; but they are now placed in separate families.



Pronghorn

Pronghorn or Pronghorn Antelope,

forms a special sub-family of the Ruminants. Hollow-horned sembles an antelope and a wild sheep. Horns with a single snag on the forward edge; shed every year; only in the male. Reddish-buff above. white below. A well-developed buck, the shoulder. 35½ in. high at Formerly very common on the prairies of western North America; now almost extinct and strictly protected. Gestation about 6 months:

2 young, sometimes 3. Antilocapra americana.

Przewalski's Gazelle, closely related to the Goa, but somewhat larger and with shorter horns (only in the male), occurs from Eastern Turkestan to Gobi and Kansu. Gazella przewalskii.

Przewalski's Horse, see Mongolian Wild Horse.

Pudu, the smallest American deer. Resembles the Brockets but has no hair-whorl on the face. Antlers are short, simple spikes. Two species from western South America. Pudu.—Chilean Pudu (Pudu pudu) is principally reddish-brown, sprinkled with yellow, head and legs darker. Shoulder-height 131 in. From Chile. From Ecuador comes the somewhat larger Ecuadorean Pudu (Pudu mephistophiles).

Pug, a diminutive representative of the Mastiff stock, but with

the tail curled over the back.

Puku, closely related to the Kob but the hair is longer and bright reddish-yellow and the legs are a uniform reddish-brown. Horns relatively short and stout, to 203 in. in length. In the Chobi and Zambesi valleys and also in Northern Rhodesia and Nyasa-

land. Kobus (Adenota) vardoni.

Puma (= Cougar or Mountain Lion) next to the Jaguar is the largest of the cat tribe in the New World. Total length about 8 ft., of which 23 ft. are tail; females smaller. Colour varies according to the locality, dark yellowish-red to grey, brown or yellowishbrown, belly lighter. Found from Patagonia over nearly the whole of South and Central America, in the west of North America as far as Vancouver Island. Formerly over the whole of North America as far as Southern Canada. Wooded or forested regions, in South America also on grassy plains. Chiefly nocturnal, but hunts also by day. Good climber. Preys on all sorts of mammals up to the size of a deer, also on birds. Attacks domestic animals, especially foals; avoids man. 1-5, usually 2, at a birth; the young are spotted. Felis (Puma) cougar (= concolor).

Purple-faced Langur, a Langur from Ceylon. Smoky-brown with greyish-white loins and white whiskers. Kasi (= Pithecus) senex

(= kephalopterus).

Putty-nosed Monkey or Hocheur Guenon, almost black with the back sprinkled with white and yellowish; nose white-tipped. Cameroons and the Congo, east to Kenya. With 12 sub-species. Cercopithecus nictitans.

Pygmy Buffalo, see Anoa.

Pygmy Marmoset, the smallest Monkey, reaching a maximum length of 12½ in., of which half is tail. Buffy yellow mixed with black; back and flanks with black cross bands, tail with indistinct rings. From the upper reaches of the Amazon; ranges north to Mexico. Habits probably as in other Marmosets (sensu stricto). Hapale (Cebuella) pygmaea.

Quagga, a form of Zebra exterminated between 1860 and 1873.

Stripes confined to the head and neck. Body reddish-brown, belly, legs and tail white. Lived in large herds south of the Orange River in South Africa. For surviving, completely striped races of the same species see Bontequagga. Equus (Hippotigris) quagga quagga.

Queensland Ring-tail Phalanger,

see Ring-tail Phalanger.

Quica Opossum, see Chichica.



Bontequagga

Rabbit, Snowshoe, see Varying Hares.

Rabbit, White, albino fur Rabbit bred from the Dutch Rabbit in England. Weight only about 4½ lb.

Rabbit, Wild, see European Rabbit. Rabbits, see Hares and Rabbits. Rabbits, Tame, see Tame Rabbits.



Rabbit-bandicoot

Rabbit-bandicoot, very long-eared Bandicoot from South and Western Australia. Hair soft and silky, ashygrey on the back and sides with a pink tinge on the nape of the neck, belly white. Soles of hind-feet almost wholly covered with thick hair. Tip of tail has a horny nail. Head and

body 18 in., tail 9 in. Nocturnal, sleeps during the day in its own burrows. Feeds on insects, larvæ, roots. Some 50,000 skins

come into the fur trade yearly under the name of "Dalgety."

Thylacomys lagotis.

Rabbit-eared Mice, genus of Cricetine Rodents from the Argentine and Patagonia; range extending to Uruguay and Southern Chile. Resemble a young rabbit that has just left the nest but have a tail half the length of the body. *Reithrodon*.

Rabbit-rats, see Jerboa-rats.

Raccoons, Procyonids from North Central and South America. Procyon lotor is found in North America south of latitude 50° N. It is a powerfully built animal about 30 in. long, including a



Raccoon (Procyon lotor)

tail of about 10 in. which is bushy and has dark rings. The coat is grey, brown and black mixed; there is a black mask round the eyes. Water-loving and nocturnal, but is a good climber and lives in holes in trees or in clefts in rocks. Omnivorous. Whenever possible washes its food before eating it, hence its German name of "Waschbaer." 3–6, usually 4, young at a birth. Hibernates in the northern part of its range. *Procyon pallidus* is a light grey form from the Colorado Desert. The Crab-eating Raccoon (*Procyon cancrivorus*), a South American form, is longer in the leg than the North American form and is said to eat crabs. It is found chiefly on the east coast. The fur of Raccoons is known as "coon" and that of the South American form is the more valuable. About 600,000 to 800,000 skins are used annually.

Raccoon-like Dog, a short-legged, almost marten-like Wild Dog with a short, bushy tail. Head and sides of the neck usually light

ashy, rest of the body brownish. Head and body 24 in., tail 6 in., shoulder-height 8 in. Found in Japan, Northern China and Amur. The pelts are mostly made up into fur caps and are known as "Japanese Fox." Nyctereutes procyonides.

Rafinesque's Bat, a Vespertilionid occurring in the Eastern U.S.A. as far as Arkansas and Western Texas; also in Cuba;

resembles a large Pipistrelle. Nycticeius humeralis.

Rafinesque's Wrinkled-lipped Bat, the only European species of Mastiff-bat. Half of the tail is free from the narrow interfemoral membrane. Head and body $3\frac{1}{3}$ in., tail $2\frac{1}{3}$ in., wing span 12 in. Brownish-red above, lighter below. Wings swallow-like. Mediterranean region; has been recorded from Basle. Nyctinomus teniotis.

Ragoa, see Goa.

Rasse, a small Viverrid, related to the civet-cats. Occurs in India and Ceylon and from there as far as Southern China and Java; introduced into Sokotra, the Comoro Islands and Madagascar. Greyish-yellowish-brown with rows of dark spots. Tail ringed. Body 26 in., tail 14 in. long. Viverricula indica (= malaccensis).

Rat-bandicoots or True Bandicoots, genus of Australian Bandicoots, distinguished by their short ears, long pointed nose and short-haired, or nearly naked tail. Live in Australia, Tasmania, and New Guinea. Do much damage in gardens and cultivated fields. Live on roots, berries, windfall fruit and other vegetable diet, as well as on insects and worms. *Perameles.*—Best known species: Long-nosed Bandicoot (*Perameles nasuta*), the size of a rabbit. Head and body 16 in., tail 5 in. Eastern Australia.

Rat-kangaroos, small Marsupials belonging to 4 genera of the sub-family of the Kangaroos. Live in Australia and Tasmania. Include the following: True Rat-kangaroos (*Potorous*); Rufous Rat-kangaroos (*Aepyprymnus*); Bettongs (*Bettongia*); Plain Rat-

kangaroos (Caloprymnus) (q.v.).

Rat-kangaroos, True, brown above, yellowish below, form together with a few nearly related species the genus *Potorous*, recognizable by the naked nose and short hind legs. Head and body up to $16\frac{1}{2}$ in., tail 10 in. Use all four feet in running. Eastern and South Australia. Eat plants and dig for roots. Do much harm agriculturally. Bear a single young 3-4 times a year. *Potorous tridactylus*.

Ratel or Honey-badger, one of the Mustelids, of which it forms a special sub-family. About 3 ft. long (head and body up to 33 in., tail to 6 in), short-legged, broadshouldered, short-tailed, ash-grey above, blackish-brown below.



Ratel

Digs well and makes its own hole in the ground. Nocturnal; lives on small rodents, birds, reptiles, snails and worms, also roots and fruit; very fond of honey. There is one species (with several races) which is found from India to Arabia and throughout Africa south of the Sahara. *Mellivora capensis* (= ratel).

Rats, White-tailed, a South African genus of Cricetine Rodent resembling a Water-Vole in external appearance. They are

nocturnal animals living in open country. Mystromys.

Red Bat, a fast-flying Vespertilionid with long, narrow wings. Coat dark golden-brown. Head and body 2½ in., tail 2 in. Never far from woods, often appears before sundown. In North America from Canada southwards. Lasiurus borealis.

Red Bear, see Isabelline Bear.

Red Brocket, a small deer occurring from Guiana to Paraguay and Rio Grande do Sul in dense forest country. Glossy reddishbrown. Shoulder-height about 26 in. *Mazama americana*.

Red Buffalo, see Forest Buffalo.

Red Deer, reddish-brown in summer, greyer in winter. Buttock-patch bright rufous to (in winter) whitish or almost straw-coloured. Calves white-spotted in their first months. Shoulder-height 45–57 in. Antlers, with 6 or more points on each, 31–43 in. long. Distribution: from South-West Norway, the extreme south of Sweden and the British Isles over Central and Southern Europe (not on the mainland of Italy, but in Sardinia and Corsica) to North-West Africa, Asia Minor, the Caucasus and Northern Persia. Several races. Successfully introduced into New Zealand. Prefers country in which deciduous woods alternate with cultivated land or else moorlands with streams. Lives in herds. Remains hidden during the day and moves about in search of grazing at dusk. Gestation 33–34 weeks, 1 or 2 calves at the end of May or beginning of June. (See also Barbary Stag; Maral.) Cervus elaphus.

Red Gazelle, only known from one skin and skull from Algeria. Length of horns $11\frac{5}{8}$ in. Perhaps a larger form of the Korin Gazelle. Gazella rufina.

Red Hartebeest, see Cape Hartebeest.



Red Kangaroo

Red Kangaroo, the largest species of Kangaroo. Male as tall as a medium-sized man. Length of head and body about 65 in., of tail 42 in. Male red; head, legs and tail grey; the female considerably smaller and usually blue-grey with light underside. Widely distributed over the

plains of the interior of Eastern, South-East and South Australia in several sub-species. Lives in herds, by day seeks sheltered bushy places, comes out at twilight to feed. The fur of the female has some value. *Macropus rufus*.

Red River-hog, a West African species of Bush-pig from Guinea to the Cameroons and the Congo. Bright reddish-brown with a short white mane down the back, head black and white. Tufts of hair on the ears. Up to 4 ft. 6 in. long plus a tail of 10 in. and 2 ft. high at the shoulders. *Potamochoerus porcus*.

Red Sheep, a Sheep, Wild, nearly related to the Mouflon. Occurs in many races from Cyprus and Asia Minor to Transcaucasia and Iran. In summer reddish; in winter browner with a light saddle-patch. Shoulder-height varying between 26½ in. and 33 in. accord-

ing to the race. Ewes hornless. Ovis orientalis.

Red Souslik (see Souslik), occurs west of the Urals from Kazan

to Orenburg. Citellus rufescens.

Red Squirrel, European, a woodland animal ranging from Ireland and Great Britain through Europe, from the Mediterranean coast to tree-line in the north, eastwards into Asia through Southern Siberia to Northern China, Manchuria and Japan. Tail bilaterally haired; ears, at least in winter, with conspicuous tufts. In the British races the tail and ear-tufts show striking seasonal changes, the blackish-brown colour of winter bleaching to pale yellow or white by July. Spends most of its time in trees where it builds a nest (or "drey") of twigs, leaves and moss in forks or in holes in the stem; the nest has the entrance at the side. No hibernation. Feeds on pine cones, nuts, acorns, beech-nuts, fruit and buds; also eggs and young birds. Gestation about 4 weeks; 1–2 broods a year; 4–5 at a birth. The fur is used, the best coming from Russia and Siberia. Sciurus vulgaris.

Red Squirrel, North American, colour mostly reddish-brown. Occurs in the forests of Alaska, Canada and the Northern U.S.A. Three species. The Red Squirrel (*Sciurus hudsonicus*), yellow below and the hairs on the sides of the tail yellowish.—Douglas Squirrel (*Sciurus douglasii*), rusty below, hairs on the side of the tail yellowish or white. West of the Rockies.—Fremont Squirrel (*Sciurus fremonti*), white below, hairs on the side of the tail white.

Rockies in the southern states.

Red Uakari Monkey, from the upper reaches of the Amazon in Western Brazil and Peru. Length of head and body 28 in., of tail $6\frac{1}{2}$ in. Gregarious and diurnal; feeds chiefly on fruits.

Cacajao rubicundus.

Red-backed Mouse, American Bank Vole. Light chestnut colour above, yellowish on the sides and belly, feet light grey; $5\frac{2}{3}$ in. long, of which $1\frac{1}{2}$ in. are tail. Occurs in several species which inhabit the forest or bushy regions of North America, wherever there is cover. Most important species: *Evotomys gapperi*.

Red-backed Squirrel Monkey, from Panama. Top of head

black, back and sides glossy red and limbs olive-brown. Saimiri oerstedii.

Red-eared Monkey, a Guenon from Fernando Po and the Cameroons. Body grey, nose spot and ear tufts reddish-brown, hands and feet black and beard yellowish. Cercopithecus cephus erythrotis.

Red-faced Spider Monkey, an entirely black species of Spider Monkey with a reddish face. About 4½ ft. long, of which more than half is tail. From Guiana, Northern Brazil and Eastern Peru.

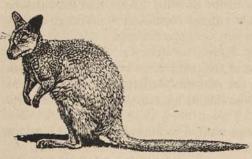
Ateles paniscus.

Red-footed Ground Squirrel, a Ground Squirrel from tropical Africa, Sierra Leone along the southern fringe of Sahara and Sudan to Kenya. Xerus (Euxerus) erythropus.

Red-fronted Gazelle, see Korin Gazelle.

Red-legged Wallaby, very closely related to the Banded Wallaby (Macropus stigmaticus). Lives in Southern Queensland and New South Wales. Macropus wilcoxi.

Red-necked Gazelle (= Addra Gazelle), see Dama Gazelle.



Red-necked Wallaby

Red-necked Wallaby, one of the Large Wallabies. Grey, back of neck brown-red, whitish below. Length of head and body about 42 in., of tail about 30 in. Southern Queensland, New South Wales and Victoria. Together with Bennett's Wallaby

known as "Bush Wallaby" to the trade. Macropus ruficollis.

Red-ruffed Lemur, a race of the Ruffed Lemur from North-East Madagascar. The ruff is rufous and so are most of those parts which are white in the Ruffed Lemur. Lemur variegatus ruber.

Reddish-grey Bat, see Natterer's Bat.

Reduncines, sub-family of large or medium-sized Antelopes. Horns of various shapes; only in the males. Africa south of the Sahara. Most of them very fond of water. Include: Grey Rhebok; Reedbuck; Waterbuck. Reduncinae.

Reedbuck, a roe-like Antelope, 36–37 in. high at the shoulder. Upper-parts and flanks greyish-reddish-brown, neck reddish-brown, under-parts white. Tail short, bushy. Horns only in the male, 15–17 in. From South Africa to Bahr-el-Ghazal on the east and to Angola on the west. Lives on grassy plains, in valleys with reeds and in open woodland, but never far from water. Redunca arundinum.

Reedbuck, Bohor, widely distributed in many races in tropical Africa north of the Zambesi. Shoulder-height 28–30 in.; horn-record according to race from $10\frac{3}{4}$ – $16\frac{3}{8}$ in. (the latter from Sudan). Bright fawn-coloured with a white belly, tail short and bushy. Tips of horns usually hooked forwards. Females hornless. Live by preference in grass-country near water. Redunca redunca.

Reedbuck, Mountain, with a shoulder-height of $28-32\frac{1}{2}$ in. almost as large as the Reedbuck, but the horns less hooked at the tip and colour greyer. Lives in hilly country from Natal, Zululand and Bechuanaland to Southern Abyssinia. Redunca

fulvorufula.

Reindeer (domestic), the only deer to be domesticated by man, plays an important part in the lives of the nomadic peoples of the Arctic Circle. Originally only in the Old World; introduced in the New World comparatively recently. Several forms of Reindeer have been domesticated including the Scandinavian Reindeer and the Finnish Reindeer. The tame ones do not live in stalls but wander about in herds watched by their owners. Produce meat and milk and are used for drawing sleighs and for carrying packs and (in Siberia) for riding. Gestation 8 months; usually only one at a birth.

Reindeer, see Caribou.

Reticulated Giraffe, one of the two species of Giraffes. Reddishbrown with a white net-work pattern. Median and forehead horns well developed. From Somaliland to Northern Kenya. Giraffa reticulata.

Retrievers, sporting-dogs used for retrieving game. Labrador Retriever is entirely black, Golden Retriever is a rich brown.

Rex Rabbit, peculiar variety of Tame Rabbit. The guard hairs of the coat are almost entirely lacking but the undercoat is soft, thick and velvety. Arose as a mutation or "sport" from the wild rabbit in France and is a pure breed. First shown in Paris in 1924. Very valuable as a fur rabbit. The pure breed is dark brown; other shades have now been bred, e.g. black, white and chinchilla.

Rhebok, Grey, see Grey Rhebok.

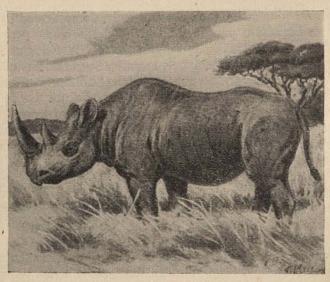
Rhebok, Rooi, see Reedbuck, Mountain.

Rhesus Monkey, a common Indian species of Macaque. Himalayas and Northern India, east to Burma, Siam, Indo-China and Hainan and north through China to Pekin. Greenish-grey, white below; face, ears and hands flesh- to copper-coloured; Ischial callosities red. Length of head and body to 25 in., of tail to 12 in. Stands high altitudes and a hard climate but often comes down to the plains in winter. *Macaca mulatta* (= rhesus).

Rhim Gazelle, has long (up to $16\frac{1}{4}$ in), slender and relatively straight horns. Somewhat bigger than the Edmi Gazelle, shoulderheight 28 in., and much paler. Light sandy-brown above and white

below, with the dividing stripe indistinct. Ears almost entirely white. From the sandy wastes of Algeria, Tunis and Western Egypt to Nubia and Sennaar. *Gazella leptoceros*. (N.B.—The term "Rhim" or "Rim" is also applied to the pale forms of Gazelle in Arabia.)

Rhinoceroses, a family of Odd-toed Ungulates and the largest land mammals bar the elephant; have one or two horns (composed of ceratinized skin) placed medianly on the nose. Skin thick and usually naked, sometimes sparsely haired, often folded so that the skin seems to be made up of armour-plates. Short, sturdy



Black Rhinoceros (Rhinoceros [Diceros] bicornis

limbs with 3 hoof-bearing toes. Tail of medium length with a thin terminal tuft. Formerly, like the Elephants, represented by many species in Europe and North America, the group has dwindled and is now confined to South-East Asia and Africa. Present distribution: South-East Asia from Eastern Bengal to Siam, Sumatra, Java and Borneo; Africa south of the Sahara. Five species: Indian Rhinoceros; Javan Rhinoceros; Sumatran Rhinoceros in Asia; Black Rhinoceros and White Rhinoceros in Africa. Rhinoceroses are solitary or live in pairs or in families, chiefly in open country or in bush near water. Active mostly at night, feed on leaves, twigs and grass. A single young at a birth. Rhinocerotidae.

Rhinoceroses, African, differ from Asiatic Rhinoceros in the lack of "armour-plates." Two horns. Include: Black Rhinoceros and White Rhinoceros (q.v.) Sub-genus (or genus) Diceros.

Rib-faced Deer, see Muntjac.

Ribbon Seal, resembles the Common Seal in structure and size, but has a very remarkable colour pattern; it is dark brown with clear-cut white rings round the neck, the bases of the flippers and round the body in the hip region. Rare round the Aleutian Islands and Alaska, commoner (but not very common) round the Pacific coast of Siberia. *Phoca fasciata*.

Rice Rats, rat-like Cricetines, ranging in size from Harvest Mice to Rats, with many species in South and Central America. Oryzomys.—Two species in U.S.A., Oryzomys palustris in the Gulf states and along the Atlantic coast to New Jersey, a subspecies of Oryzomys couesi from the Rio Grande Valley. The size of a small Black Rat with long coarse hair. Nocturnal, living in meadows and grass-land; occasionally harmful. 1–2 litters of 3–7 young.

Rietbok, see Reedbuck.

Right Whale, North Atlantic, black, sometimes dappled white. Attains a length of 53 ft. Head and whalebone shorter than in the Greenland Right Whale; whalebone up to $8\frac{1}{2}$ ft. long. Nowadays rare but in the early Middle Ages was hunted by the Basques in the Bay of Biscay under the name of "Sarda." *Eubalaena glacialis*.

Right Whale, Pacific, closely related to the North Atlantic Right Whale, occurs in the North Pacific. A large uneven protuberance on the tip of the nose and warts on the lips and head.

Up to 50 ft. long. Eubalaena sieboldii.

Right Whale Porpoise, Pacific, see Dolphin, Right Whale.

Right Whale, Southern, takes the place of the nearly related North Atlantic Right Whale in Antarctic Seas. Like the North Atlantic and the Pacific Right Whales, it possesses a "bonnet" (as the callosity on the snout is called). Attains a length of 50 ft., the longest plate of "baleen" or whalebone measuring sometimes as much as 7 ft. 4 in. Used to be very common and a century ago was killed off in thousands. To-day rare or exterminated in many regions. Eubalaena australis. (The three nominal species of Eubalaena noticed here are probably only sub-specifically different from each other.)

Rim, see Rhim Gazelle.

Ring-tail, see Ring-tail Phalangers.

Ring-tail Opossum, see Ring-tail Phalangers.

Ring-tail Phalangers, several species of genus *Pseudochirus* belonging to the *Phalangeridae* in Australia, Tasmania and New Guinea. Hands prehensile as in the Koala. Long prehensile tail. About a million skins in the trade each year.—Queensland Grey Ring-tail Phalanger (*Pseudochirus peregrinus*), from Queensland to South Australia and the nearly related *Pseudochirus archeri* provide

most of the "Ring-tail Opossum" of the fur trade. Hair fine, thickly growing, blue-grey to brownish. A larger species from Western Australia is the "Rock Opossum" of the fur trade. Hair

longer and silkier, grey-black to black.



Ring-tailed Lemur

Ring-tailed Lemur, a species of Lemur. General colour grey, tinged with brown; top of head and snout black; face, ears and belly whitish, a circular black mark round each eye. Tail ringed black and white. Total length about 40 in., of which 18 in. are tail. Live in the forests of South-West Madagascar. Lemur catta.

Ringed Seal, belongs to the Phocinae or True Seals. Grey or blackish above with whitish rings, lighter below. Up to 6 ft. long, females smaller. Arctic circumpolar, not common in the North Sea and Baltic, more numerous in the Gulf of Bothnia. A single young is born on the ice in March or April; it has a soft, grey-white coat. Feeds on fish and crustacea. Phoca hispida.—Really an Arctic form, the Ringed Seal in the Baltic

is regarded as a part of a relic fauna. Still more interesting are the other relic forms which live in brackish or fresh water: the Saima Seal (*Phoca hispida saimensis*) in the land-locked Lake Saima water system in Finland, the Ladoga Seal (*Phoca hispida ladogensis*) in Lake Ladoga and Lake Onega, the Caspian Seal (*Phoca hispida caspica*) in the Caspian, and the Baikal Seal (*Phoca hispida sibirica*) in Lake Baikal. (Pallas, 1811, also recorded it from Lake Oron but this has not been confirmed.) The skins are of use commercially.

River-hogs, see Bush-pigs.

Roan Antelope, belongs to the Orygine group of Antelopes, bigger than the Sable Antelope, but with shorter, less curved horns (record length 37½ in., possibly 39 in.). Shoulder-height up to 5 ft. or more. Greyish- to reddish-brown, belly white, head in old ones marked with black and white. Several races found in Africa south of the Sahara as far as the Orange and Vaal rivers, but not in the forests of the Congo basin. Hippotragus equinus.

Rock Opossum, see Ring-tail Phalangers.

Rock-wallabies, genus of Wallabies living in the rocky parts of Australia. Exhibit great skill in leaping and climbing over

rocky ground, using the long tail as a balancing pole. Nocturnal and vegetarian. Petrogale.—The best known species is the Brush-tailed Rock-wallaby (Petrogale penicillata), head and body about 29 in., tail 23 in.; coat reddish-brown. South Australia. In the fur trade it is known as "wallaby" along with some of the true Wallabies. Other species are: Yellow-footed Rock-wallaby (Petrogale xanthopus), South Australia; Short-eared Rock-wallaby (Petrogale brachyotis), North-West



Rock-wallaby

Australia; Little Rock-wallaby (Petrogale concinna), North-East Australia; Western Australian Rock-wallaby (Petrogale lateralis); Plain-coloured Rock-wallaby (Petrogale inornata), Northern Australia.

Rocky Mountain Caribou, from the Mount Robson region of British Columbia and Alberta. The largest of all Caribou, 8 ft. long. Brown-black to almost black. Rangifer tarandus fortidens.

Rocky Mountain Goat, the only American representative of



Rocky Mountain Goat

the Goat-Antelopes. Goat-like, hair long and white. Males about 40 (up to 43) in. high at the shoulder and weighing 300 lb. Horns in both sexes, about 9 (record 11½) in. long and bent slightly backward. Live in the Rockies in British Columbia, Montana, Idaho, Washington and the ranges of the coastal region to Southern Alaska. The long, fine under-wool has long been used by the Indians for weaving. Flesh no good to eat. One or two young

towards the end of April or in May. Oreamnos americanus.

Rodents, the largest order of Mammals, including nearly 3,000 species, nearly 7,000 named forms, and forming more than a third of the land mammals. World-wide distribution. Very varied in form but all having the incisor teeth and the jaw muscles specially modified for gnawing. Two sub-orders: Duplicidentata, with a second pair of small incisors placed behind the chief pair

in the upper jaw. Include the Hares, Rabbits and Pikas. Placed in a separate order in recent systems of classification. Simplicidentata, with only one pair of incisors in the upper jaw. Include Squirrels, Rats and Mice, Porcupines and allied forms—Rodents

proper of modern systems. Rodentia.

Roe Deer, form a genus of the Deer family. Antlers small, with 3 points, no brow tine. Tail barely visible. From Central Sweden, Southern Norway, and Great Britain over Central and Southern Europe to Asia north of the Himalayas. Three species: European Roe (Capreolus capreolus); Siberian Roe (Capreolus pygargus), and Manchurian Roe (Capreolus bedfordi). Capreolus.

Roloway Monkey, race of Diana Monkey from the Gold Coast. Long, pointed beard white, inner sides of the thighs whitish or

yellowish. Cercopithecus diana roloway.

Rorquals (sensu stricto), genus of Rorquals, cosmopolitan. Long and slender, head not usually more than one quarter the total length. Flippers relatively short, narrow and pointed; dorsal fin small and set far back. Include: Bryde's Whale; Blue Whale; Common Rorqual or Finner; Rudolphi's Rorqual or Sei Whale; Lesser Rorqual or Piked Whale. Balaenoptera.

Rorquals, a family of the Whalebone Whales. Anterior ventral surface of the body with numerous grooves; small dorsal fin present. Baleen (whalebone) short. Include: Humpback Whale;

Rorquals (sensu stricto). Balaenopteridae.

Ross's Seal, the smallest of the Antarctic Seals, up to about 8 ft. long; belongs to the sub-family *Monachinae* according to older writers; now placed with the other Antarctic Seals in a special sub-family *Lobodontinae*. Blackish or brownish-grey above,

lighter below. Ommatophoca rossi.

Rough-legged Water-bat, greyish-fawn above, whitish below, ears and wings greyish-brown. Head and body 2½ in., tail 2 in., wing span 12 in. From the Atlantic eastwards through Central and Southern Europe into Asia, north to Sweden. Central Asia to the Altai. Flies low over water, appears late in the evening. Myotis dasycneme.

Rough-skinned Pipistrelle, very like the Common Pipistrelle, but slightly larger. Head and body $1\frac{3}{4}$ in., tail $1\frac{1}{3}$ in. long; wing span 9 in. Southern and Central Europe. Pipistrellus nathusii.

Roulin's Tapir (= Mountain or Pinchaque Tapir), a Tapir from the Andes of Colombia, Ecuador and Western Peru. Coat thick and close, greyish-black; a white mark on the upper lip as far as the corners of the mouth. Tapirus pinchaque (or roulini).

Royal Antelope, an Antelope of the Neotragine group. The smallest ruminant, with a shoulder-height of about 10 in. In the coastal forests from Liberia to Southern Nigeria. Neotragus

pygmaeus.

Rudolphi's Rorqual or Sei Whale, up to 53 ft. long. Blue-black; white below from chin to anus with wavy border line. Whalebone black with a white fringe, the "hair" being fine and silky—used for wigs. 60–100 ventral grooves. North Atlantic, rare in American waters, but recorded from Florida and Virginia. Frequent in the South Atlantic where it is hunted at South Georgia and elsewhere; attains a length of 56 ft., the longest plate of baleen in such a specimen being about 31 in. in length. Plankton feeder. Balaenoptera borealis.

Ruffed Lemur, a species of Lemur with thick, woolly hair. Top of the head, hands, feet and tail black, ruff white, and the rest of the body piebald black and white. Yellow eyes. Total length somewhat over 3 ft., tail longer than head and body. Eastern

Madagascar. Lemur variegatus (cf. Red-ruffed Lemur).

Rufous Hare-wallaby, see Hare-wallabies.

Rufous Rat-kangaroo, large species of Rat-kangaroo with powerful hind legs. Reddish with indistinct white stripe on the hips. Length of head and body 21 in., of tail 15 in. New South Wales. Moves about like a kangaroo. Nocturnal. Aeprymnus rufescens.

Rufous-bellied Wallaby, small short-tailed member of the Large Wallabies, resembles the Short-tailed Wallaby, but is bigger. Length 4 ft. 9 in. Victoria and Tasmania. *Macropus*

billardieri.

Ruminants, sub-order of the Even-toed Ungulates or Artio-dactyla. Stomach divided into four parts. The grass, etc., is swallowed and passes through the first two compartments. It is then regurgitated and chewed ("chewing the cud" or "ruminating") and when swallowed for the second time passes through the last two compartments of the stomach. The Ruminants form a large group of animals and are distributed all over the world save Australia. Five families: Camel-like Animals; Chevrotains; Deer; Hollow-horned Beasts; Giraffes.

Rusa (in Malaya), see Sambar.

Russian Dormouse, recalls the Fat Dormouse, but is much smaller and differently coloured. Head and body about 4 in., tail about 3 in. long. Brownish-grey above, white below, the two colours sharply divided; an elongated black spot from eye to ear. Occurs from Silesia, Hungary and Tyrol to the Caucasus. Same habits as Fat Dormouse. *Dyromys nitedula*.

Sable, a valuable fur animal, closely related to the Pine-marten which it resembles except for its lack of throat marking. Lives in the extensive forests of Central and Eastern Siberia, nowadays much rarer than formerly. The colour of the fur varies according to the locality, coniferous forests yielding darker furs than



Sable (Martes zibellina)

deciduous forests; the most valuable are the blue-black furs with silver tips. Martes zibellina.

Sable, American, see Marten, American.

Sable Antelope, belongs to the Orygine group of Antelopes. Males blackish-brown to glossy black, sides of the head and the



Sable Antelope



Sacred Baboon

belly white; females browner. Shoulder-height of the male about $4\frac{1}{2}$ ft.; horns scimitar-like, record length $64\frac{3}{8}$ in. (from Angola). Widely distributed from North-West Transvaal to Kenya and Angola. Prefers hilly grass country with few trees; comes down to low-lying wooded areas during the rains. Hippotragus niger.

Sacred Baboon, best known species of Baboon living in Somali-

land and the African and Arabian coasts of the Red Sea; formerly also in Egypt. Males light silver-grey with a mantle-like mane, females grevish-brown. Face flesh coloured, buttock patches bright red. Gregarious and mountain-living. Comopithecus (or Papio) hamadryas.

Saguin, see Common Marmoset.

Saiga, together with the Chiru, forms a sub-family of the Antelopes. Nose inflated and very large, overhanging the lower jaw. Muzzle hairy. Horns lyrate and ringed, about 12 in. long (record 143 in.), only in the males. Coat dirty vellowish in summer, longer and thicker and whitish in winter. Length up to 4 ft. 3 in., of which 4 in. are tail, shoulder-height about 2 ft. 6 in. Lives in herds on the

steppes of Western Asia; also in



Saiga

South-East Russia where they are not so numerous as formerly. In late Pleistocene times the range extended to South-East England. Saiga tatarica.

Saikik, see Yarkand Gazelle.

Saima Seal, relic race of the Ringed Seal in the Saima water system of Finland (Saima, Hankavesi, Puruvesi, Orivesi, Pyhäselkä). Formerly more widely distributed. Has lived in these lakes since the time when they were connected with the Arctic Ocean. Phoca hispida saimensis.

Saki Monkeys, belong to the sub-family Pitheciinae. Sturdily built with long, curly hair and a thick, bushy tail. Tuft of hair on the head. Forests of northern South America, chiefly the Amazon region. Two genera: Pithecia with the White-headed Saki and Humboldt's Saki; Chiropotes with the Black Saki and the White-nosed Saki.

Sakin, another name for the Asiatic Ibex, see Ibex.

Salt-Range Urial, the smallest and reddest of the Urials, shoulder-height only 32 in. From the mountains of the Punjab, chiefly the Salt Range. Ovis vignei punjabensis.

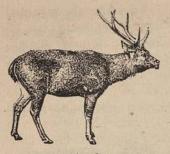
Salt's Dik-dik or Beni Israel, a Dik-dik from Abyssinia and Eastern Sudan; 14 in. high at the shoulder. Solitary or in pairs

in bush country. Madoqua saltiana.

Saluqi, an eastern Greyhound used for hunting Gazelles. Ears pendulous and with long hair; tail also with long hair.

Samango Guenon, a race of the White-throated Guenon from South-East Africa. Cercopithecus mitis (=albogularis) labiatus.

Sambar, chiefly dark- to blackish-brown, has a mane on the neck. Antlers 3-tined. The Indian race reaches a shoulder-height



Sambar

of 5 ft. 4 in. and has antlers up to 50 in. long. The small Philippine form only goes up to 28 in. high at the shoulder. More than a dozen sub-species. Distribution: India, Ceylon, Assam, Burma, Malaya, Siam, Borneo, Hainan, Formosa, Guam and the Philippines. Cervus (Rusa) unicolor.

Samoyede, see under Eskimo Dog. Sand-bear, see Hog-badger.

Sand-mole, see Mole-rats.

Sand-pig Badger, see Hog-badger.

Sand-rat, Naked, see Naked Mole-rat under Mole-rats.

Sangnai, see Eld's Deer.

Sapajous, see Capuchin Monkeys.

Sarda, see Right Whale, North Atlantic.

Sassaby, one of the so-called Bastard Hartebeests (sometimes known as the Bastard Hartebeest). Bright chestnut with black markings and a black blaze. Horns spreading outwards and backwards and then inwards in a crescentic curve, relatively short, record length 17½ in. Shoulder-height 46–48 in. Lives on grassy plains and in bush country from the Orange River to Tanganyika. Damaliscus lunatus.

Scaly Ant-Eaters, see Pangolins.

Scaly-tails, Rodents resembling the Flying Squirrels; found



Scaly-tail (Anomalurus)

in the forests of tropical Africa. The tail is haired but the proximal ventral surface bears two rows of horny scales which act as climbing irons. Two genera (Anomalurus and Idiurus) have a gliding membrane along each flank from fore to hind leg, the third genus (Zenkerella) lacks this membrane. Anomaluridae.

Scandinavian Reindeer, often simply called Reindeer, used to live in the tundra and mountains of Northern Scandinavia and Finland; in the middle of the nineteenth century as far south in Sweden as Northern Dalecarlia. Nowadays only in the mountains of Southern Norway, interbred with Feral Reindeer. In addition perhaps also in isolated patches in Northern Finland and adjacent parts of Sweden. Dark grey-brown in summer with dark legs, lighter in winter with almost white flanks. About 3 ft. high at the shoulder. The chief source of the tame Reindeer of Scandinavia. Rangifer tarandus tarandus.

Schadenberg's Giant Rat, largest species of the true Rats; lives on the Island of Luzon (Philippines). Total length 34 in., of which 15½ in. are the thick, bushy-haired tail. Crateromys schadenbergi. (For African Giant Rats see Gambian Pouched Rat.)

Schipperke, a small, black dog of Belgian origin. Typically

there is no trace of a tail. Foxy head and erect ears.

Schnauzer, a medium-sized dog which is bred in two varieties, a smooth and a rough-haired form.

Schomburgk's Deer, a relative of the Swamp Deer from Northern Siam and Yunnan. Brown, whitish below. Height at shoulder about 41 in. Antlers complex, much forked, up to 33 in. in length. *Rucervus schomburgki*.

Schreiber's Long-winged Bat, a short-eared Vespertilionid with long, narrow wings. Head and body $2\frac{1}{2}$ in., tail $2\frac{1}{2}$ in., wing span 12 in. Brownish-grey, greyish-white below. Southern Europe as far as Southern Switzerland. *Miniopterus schreibersii*.

Sea Bears, see Seals, Fur.

Sea Cows, a small order of entirely aquatic mammals, phylogenetically related to Elephants. Body fusiform, naked save for a few scattered bristles, tail expanded laterally to form a horizontal shovel-like tail fin. Head with protruding swollen upper lip, well provided with bristles; eyes and ears small. Fore limbs modified to form flippers articulating at the elbow, no hind limbs. Two teats on the breast. The front teeth are replaced by horny plates; but in the Dugongs the upper incisors are converted into a pair of tusks, the cutting edges of which project from the jaw in the males, but remain completely concealed in the bone in females. Live in shallow coastal waters in the tropics and also go up estuaries. Vegetarians. Two families: Dugongs and Manatees; there is also the extinct Steller's Sea Cow. Sirenia.

Sea Lions, three genera of Seals, Eared. They have no under-

coat (as opposed to the Seals, Fur), hence their pelts are no good for fur. The Californian Sea Lion (Zalophus californicus) occurs



Sea Lion

from Southern Mexico to Northern California. Males over 7 ft., females considerably smaller. Colour yellowish-brown.—Steller's Sea Lion (Eumetopias jubata) occurs from Bering Strait to San Francisco. Very similar to the foregoing externally but larger, males to 13 ft.—In southern seas; the Australian Sea Lion (Zalophus lobatus) from New Zealand and Australia, and the

Auckland Islands. Sea Lion (*Phocarctos hookeri*).—Sea Lions congregate in large numbers at their breeding-places; they have a single young at a birth.

Sea Lion, Northern, see Steller's Sea Lion, under Sea Lions.

Sea Lion, Patagonian, see Sea Lion, Southern.

Sea Lion, Southern, belongs to the Seals, Eared. Occurs round the coasts of Patagonia and the Falkland Islands and round Chile as far as the Galapagos Islands. The coat has no underfur; hence it has no value. The male has a mane. Yellow-grey to brown-grey. Male to 7 ft. long, female smaller. Gestation about 10 months, single young at a birth. Otaria byronia.

Sea Otter, a very valuable fur animal and the only Otter which is entirely marine. Of all its relatives the most suited to aquatic life, the webbed hind-feet resembling fins. Never goes far from land. Rests while in the water by floating on its back. Dark brown to brownish-black, sprinkled with white-tipped guard hairs, top of head and back of neck greyer. Total length about 4 ft., of which 1 ft. is the short, thick tail. Molar teeth with very heavy bluntly tubercled crowns adapted for crunching shellfish on which the animals feed. Formerly common round the North Pacific coasts, now rare. On the North American coasts it occurs in isolated places from Alaska to California. Round the Kuril Islands the hunting is controlled by the Japanese government who look after the stock carefully. Known in the fur trade as "Kamchatka Beaver." Enhydra (= Latax) lutris.

Sea Pig, see Porpoise, Common.

Sea-elephants, belong to the Cystophorinae and are the largest of all the Pinnipedia. The male, who has a pendulous nose capable of being inflated to form a 30 in. proboscis, reaches a length of 18 ft. and the female about 10 ft. Two species.—The southern one lives round South Georgia, Kerguelen Island, Heard Islands, the Macquarie Islands and possibly the Crozet Islands. A single young is born (after a gestation of 49–50 weeks) in

September-October.—The northern species only occurs round the Island of Guadalupe off the coast of Lower California. Mirounga leonina (southern species) and Mirounga angustirostris

(northern species).

Sea-leopard, belongs to the sub-family Monachinae (or the nearly related Lobodontinae, the special sub-family for Antarctic Seals). Next to the Sea-elephant is the largest Antarctic Seal. Up to 12 ft. long, female larger than the male (unusual in seals). Colour dark grey flecked with black and silver on the shoulders and flanks; belly sometimes washed with yellowish-brown. Lives on cuttle-fish and penguins and other sea birds. A fierce and powerful species. One night one "hauled up" at Hobart, Tasmania, and was mistaken by a policeman for an incapacitated citizen; an attempt to arrest the supposed "drunk" terminated un-

pleasantly. Hydrurga (= Stenorhynchus) leptonyx.

Seals, Eared, family of the Pinnipedia. Distinguished from other seals by their small external ears (cf. Phocidae). The back feet can be turned forwards under the belly and be used for locomotion on land. The males usually twice the size of the females. Most forms belong to the southern hemisphere and are found round the sub-antarctic islands and the southern ends of the continents (north as far as the Galapagos and Brazil). A few species in the North Pacific (south to California and Japan); none in the North Atlantic. Include: Fur Seals; Sea Lions; Southern Sea Lion. A few yield valuable fur. Eared Seals are divided into Fur Seals and Hair Seals (Sea Lions and Maned Sea Lion) according to whether the guard hairs have short, soft under-fur round their bases or not. Otariidae.

Seals, Fur, form two closely related genera of the Seals, Eared. The very fine, velvety under-coat is valuable as fur, and the most important species belong to the North Pacific genus Callorhinus.-The Alaska Fur Seal (Callorhinus alascanus) has its breedinggrounds ("rookeries") on the Pribilov Islands; there are about 1,500,000 animals and about 50,000 are killed yearly. The males are about 6 ft. long and the females about 4 ft. The former are mostly black above and red-brown below; the latter are grey above and reddish below. The sealing is carried on by the U.S. government. The fur is known as "Alaska Seal" to the trade.-There are nearly related species on the Russian Komandorski Islands (Callorhinus ursinus), whose fur is called "Copper Island Seal") and on the Japanese seal islands (Callorhinus curilensis); their total number is estimated at less than 5,000.—The other genus (Arctocephalus) occurs in the southern hemisphere. The Southern Fur Seal (Arctocephalus australis) is now found only round the coasts of the Falkland Islands; the Galapagos Fur Seal (Arctocephalus philippii) is a rare visitor to the Galapagos Islands; the Cape Fur Seal (Arctocephalus pusillus) is from South Africa; the New Zealand Fur Seal (Arctocephalus forsteri) from New Zealand and islands lying to the south of it. The Guadalupe Fur Seal (Arctocephalus townsendi), nowadays extinct, lived on Guadalupe Island off lower California.—All of them have but one at a birth.

Seal, Copper Island, see Seals, Fur.

Seal, Fur, Northern, see Alaska Fur Seal under Seals, Fur.

Seals, Hair, see Phocidae.

Seals, True, sub-family of the Phocidae, include the common, small or medium-sized Pinnipedia of northern seas. A few forms are found in land-locked seas as relics (see Ringed Seal). There are three genera. Include: Ribbon Seal; Bearded Seal; Grey Seal; Ringed Seal; Greenland Seal; Common Seal; Pacific Harbour Seal. Phocinae.

Sealyham, a short-legged terrier with a long, rough coat, usually white.

Seistan Gazelle, nearly related to the Yarkand Gazelle; a highland form from Eastern Persia and Western Afghanistan. Gazella seistanica.

Seladang, Malayan name for the Gaur.

Selvas, see Caenolestes.

Seren, see Zeren.

Serotine Bat, a Central European Bat found as far north as Denmark and England and ranging eastwards into Asia. Head and body up to $2\frac{3}{4}$ in., tail over 2 in., wing span up to 11 in. Comes out later than most bats; flight low and flapping. In gardens, lanes, etc.; does not occur in hilly regions. *Eptesicus serotinus*.

Serows, a genus of Goat-Antelopes embracing four species, distributed from the Himalayas to Japan and Sumatra. Horns in both sexes, short, almost straight and nearly parallel. Include: Serow; White-maned Serow; Japanese Serow; Formosan Serow. Capricornis.

Serow (proper), a Goat-Antelope the size of a donkey, occurs in four sub-species from the Eastern Himalayas through Assam, Burma, Siam and the Malay Peninsula to Sumatra and Western China (Yunnan and Szechwan). Hair long, coarse and shaggy, black to reddish-brown. Well developed, dirty grey mane, often



Serval

tinged with reddish. Height at shoulder 38 in.; horns up to $9\frac{1}{2}$ in. A mountain animal, lives in herds. Capricornis sumatrensis.

Serval, a long-legged African catlike animal. Yellowish buffy-brown with black spots. Head and body 30 in. long, shoulder-height up to 20 in., tail 10 in. Found nearly all over Africa, in bush country mostly near water. Hunts birds and small rodents and sometimes young antelopes. Nocturnal. In the fur trade Fishing Cats and sometimes also Asiatic Civet Cats are called "Serval." Felis (Leptailurus) serval.

Servaline Cat, closely related to the Serval, found round the forests of West Africa from Sierra Leone and Angola to Uganda. Olive-greyto olive-yellow with small black spots. Felis (Leptailurus)

brachyura (= servalina.)

Setter, a long-coated dog of hound type used in the same way as a Pointer and also for retrieving game-birds.

Sewellel, see Mountain Beaver.

Sewer Rat, see Brown Rat.

Shapo, see Urin.

Sheep, Domestic, a domestic animal of great antiquity. The Kopet-Dagh Urial seems to have been tamed in Western Asia as a long-tailed Wool Sheep and then imported into Europe and North Africa. In Western Asia the fat-tailed Sheep was later evolved from the same material. In Southern Europe the imported Sheep were crossed with the short-tailed European Mouflon or derivatives of it (modern representatives of this cross are the short-tailed breeds). Through later crossing with the long-tailed wool Sheep of the Romans long tails were bred back again. The fat-rumped Sheep seem to have arisen in Central Asia from crossings between the fat-tailed Sheep and the Argali. Ovis aries.

Sheep, Wild, genus of the family of Sheep and Goats. Horns bent backwards in a semicircular arc, also spirally wound in a few species, compressed in a fore and aft direction at the roots, ridged. Horn cores triangular in cross-section. Males have no beard or malodorous glands on the tail. Females with 2 teats. Mountain and steppe animals. From Corsica and Sardinia over Western and Central Asia to Western North America. Gestation 20–25 weeks; 1–2 young, very rarely 3 or 4. Include: Argali, Bighorns, Urials, Laristan Sheep, Mouflon. (Cf. also Arui and Bharal.) Ovis.

Sheep and Goats, sub-family of the Hollow-horned Ruminants. Their principal home is the mountains of Central Asia; in Europe there are only Ibex and Mouflon, in North-West Africa, Arui and in Western North America forms of the Bighorn. (See also Bharal and Tahr.) Ovinae or Caprinae.

Sheep Dog (Old English), about 22 in. high, coat long and shaggy and concealing the eyes. Still used as a shepherd's dog.

Shetland Pony, a very small pony, $3-3\frac{1}{2}$ ft. high, originating in the Shetland Islands.

Shield-tailed Armadillo (see also Armadillo), tip of tail covered with a horny shield made of one plate. Dasypus uroceras.



Shetland Pony

Shire Horse, the heaviest known Horse. Descended from the old English war horse. Used for draught.

Short-eared Phalanger, from the bush of New South Wales and Southern Queensland. General colour grey, tail black and bushy. Head and body 22 in., tail 15 in. *Trichosurus caninus*.

Short-eared Rock-wallaby, see Rock-wallabies.

Short-headed Flying Phalanger, the smallest species of Flying Phalanger, only reaches 15 in., half of which represents the tail. Grey above, with indistinct black stripe; tail bushy. Lives in Northern and Eastern Australia and one race of the species inhabits the Papuan Islands from Gilolo to New Britain. *Petaurus*

breviceps.

Short-maned Porcupines, far Indian and Chinese group of the genus of Short-tailed Porcupines; mane, weakly developed or lacking. Formerly separated as the genus Acanthion, which is now regarded as a sub-genus.—The following species might be mentioned: Crestless Porcupine (Hystrix (Acanthion) javanica), Java; Sumatran or Malayan Porcupine (Hystrix (Acanthion) brachyurus), Sumatra; Nepalese Porcupine (Hystrix (Acanthion) hodgsoni).

Short-nosed Fruit bats, nose short and rounded. Relatively small Fruit-bats nearly related to the genus Rousettus. From the

Indo-Malayan region. Cynopterus.

Short-nosed Vampires, a sub-family of the Leaf-nosed Bats occurring from tropical South America to Central Mexico and Southern Florida. Snout very short, mouth broad. Feed partly on fruit. Represent to a certain extent the Flying Foxes of the Old World. Stenoderminge.

Short-tailed Field Mouse, species of Vole from Central and Northern Europe; from Britain and south coast of France eastwards into Asia. Dark brown-grey above, grey-white below. Head and body $4\frac{1}{3}-5$ in., tail $1\frac{1}{5}-1\frac{3}{4}$ in. Lives amongst bushes, undergrowth, plantations, and along the edges of woods, etc., often in the neighbourhood of water. Almost exclusively vegetarian. When they become plentiful they are very harmful. 3-4 births a year of 4-7 young. *Microtus agrestis*.

Short-tailed Opossum, from tropical South America, genus of Opossum resembling Shrews in appearance. Live near streams where the ground is dampish and especially where bananas grow.

Monodelphis (= Peramys).

Short-tailed Porcupines, genus of Old World Porcupines. Short tail. Anterior half of body with hair and bristles, usually a mane.

Posterior half of body with long strong quills. Africa, tropical Asia, Southern Italy. Include: Common Porcupine; Hairynosed Porcupine; Indian Porcupine; Short-maned Porcupine. *Hystrix*.

Short-tailed Wallaby, Small Wallaby, apart from the long hind legs resembles a rat-kangaroo. Length of head and body about 23 in., of tail 10 in. Grey-brown above, slate-grey below. Western and South Australia. *Macropus brachyurus*.

Shou, representative of the Barasingha in Tibet and Northern

Bhutan. Cervus wallichii.

Shrew-mole (see also Mole), the smallest of the North American moles. Length $4\frac{1}{2}$ in. From the coastal regions of British Columbia, Washington, Oregon and California. Neurotrichus gibbsii.

Shrews, small, mouse-like Insectivores. Snout long and pointed, coat soft and silky, tail with short hairs. Divided into two well-marked groups: (1) White-toothed Shrews (*Crocidura* and allies); (2) Red-toothed Shrews, in which the tips of all the teeth are coloured (*Sorex* and allies). Occur in the Old World and in North America; a few species in Central and South America, none in Australia. One species introduced into Madagascar, probably from India. Include: (1) White-toothed Shrew; Etruscan Shrew; Musk Shrew: (2) Alpine Shrew; Pigmy Shrew; Common Shrew; Water Shrew; North American Shrews. *Soricidae*.

Shrews, North American (see also Shrews), belong to the redtoothed division, although in some the colour is little developed. There are a large number of forms, the genus Sorex alone having 46 species. This genus also occurs in the Old World but the other genera are exclusively American. The 5 species of Water-shrew (Neosorex) are northern, ranging from Alaska and Labrador south to the mountains of California, Colorado and Pennsylvania; externally they are very similar to European Water Shrews (Neomys), although not closely related. The following are chiefly eastern: the Little Shrews, Cryptotis, 19 species-there are other species of this genus in South America (they are the only Shrews found there); the Pigmy Shrews, Microsorex, of which there are 4 species, Microsorex hoyi being the best known; and the Short-tailed Shrews, Blarina, with 3 species of which Blarina brevicauda is the most important. Notiosorex, which occurs in Mexico and Central America, has a form, the Grey Shrew (Notiosorex crawfordi), in Texas and Southern California.

Siamang, a Gibbon just over 3 feet long from the forests of Malaya and Sumatra. Deep black with reddish-brown chin. Symphalangus syndactylus.

Sibbald's Rorqual, see Whale, Blue.

Siberian Pika, one of the best known Pikas of Asia, lives in the mountain chain which runs across the north of Asia. Resembles

a guinea-pig in shape and size. Brownish above, light ochreyellow with a greyish throat below. Length 10 in. Ochotona alpinus.



Siberian Reindeer

Siberian Reindeer, belongs to the Woodland Caribou group. Antlers very similar to those of the American Woodland Caribou. Rangifer tarandus sibiricus.

Siberian Roe, large species of Roe Deer, shoulder-height 28-34 in. Antlers very rugged, relatively heavy,

up to 18 in. long. Ears broad and thickly haired. From Russian Turkestan and the Altai to Siberia as far as lat. 54° N.; in winter wanders south into Manchuria and Korea. Capreolus

pygargus.

Side-striped Jackal (see also Jackals), resembles the Oriental Jackal in colour, but has a more pointed, fox-like snout and usually a white tip to the tail. Length about 47 in., of which about 13 in. are tail. Found from Zululand and Transyaal to

Abyssinia, Morocco and Senegal. Canis (Thos) adustus.

Sifakas, a genus of Lemuroids, family *Indridae*, from Madagascar. Skin black, the fur, which is more silky than woolly, is chiefly white with yellow, red or black marks. Entirely black or entirely white specimens also occur. Though principally arboreal, they do go about on the ground and are not confined to forests but occur in bush and open country. Fructivorous and diurnal. Include: Crowned Sifaka, Diademed Sifaka, and Verreaux's Sifaka—each with several races and varieties. *Propithecus*.

Sikas, sub-genus of small or medium-sized Deer, antlers 4-, rarely 5-pointed. Coat, at least in summer, yellow- or white-spotted; a pure white area bordered with black in the region of the tail. Gestation $7\frac{1}{4}$ — $7\frac{1}{2}$ months. Four species in Japan, Formosa, China and Manchuria. Include: Pekin Deer; Formosan Deer;

Manchurian Deer; Japanese Deer. Cervus (Sika).

Silky Marmoset, see Lion Marmosets.

Silver Rabbits, two varieties of Tame Rabbit, valuable as fur animals, especially the Silver-grey variety. Small Silvers $(5\frac{1}{2}-6\frac{1}{2}$ lb.) have been bred in France and England since the sixteenth century. Large Silvers $(7\frac{1}{2}-11$ lb.) apparently produced by crossing Small Silvers with Flemish Giants. (Large Silvers also known as "Argentes.")

Silver-grey Opossum, see Long-eared Opossum.

Silver-haired Bat, a North American Vespertilionid. Dark brown with silvery tips to the hairs. Total length 4 in., tail $1\frac{1}{2}$ in. Lasionycteris noctivagans.

Simplicidentata, include all Rodents save hares, rabbits and

pikas. One pair of incisors only in each jaw; enamel only on the fore side of the incisors. Cheek-teeth rooted or rootless. Worldwide distribution. Simplicidentata.

Sing-Sing Waterbuck, a sub-species of Defassa Waterbuck from West Africa, and first described from Senegal. Sandy-brown colour. Kobus defassa unctuosus.

Sirenia, see Sea Cows.

Sistan Gazelle, see Seistan Gazelle.

Sitatunga, one of the Tragelaphines. A marsh-dweller with corresponding long, spreading hooves and hairless fetlocks. Height at shoulder 43–48 in.; horns up to 35 in. in typical form. Occurs in various races from the Zambesi and Chobe Rivers to Bahr-el-Ghazal, Senegambia, Cameroons and Congo. In the typical race from Victoria Nyanza the male is self-coloured greyish-brown above and the female reddish-brown with a suggestion of light stripes. In others, e.g. the Zambesi race, the female resembles the male in colour. Tragelaphus (Limnotragus) spekei.

Sitka Rabbit, variety of Tame Rabbit originating in England. The splendid black coat is reminiscent of the colour of the silver

foxes from Sitka.

Six-banded Armadillo (see also Armadillo), has 6 broad, jointed bands. Head and body 16 in., tail 8 in. long. Guiana to Argentina. Euphractus sexcinctus.

Skunks, a sub-family of American Mustelids, most nearly related to the badgers. Have anal glands which secrete a foul-smelling liquid. Coat black with white longitudinal stripes or spots. Include: Spotted Skunk; Canadian Skunk; South American Skunk. Cf. also Striped Weasel and Teledu, which have a similar secretion and colour pattern. Mephitinae.

Skye Terrier, a breed of dog native to the Island of Skye where it originated some time ago. One form has pointed, upright ears

and another has hanging ears. Short-legged and long-haired.

Slender Loris, see Loris.

Sloths, a family of New World Edentates. Arboreal, hanging from branches by their hooked claws; sluggish. Head rounded; dentition very reduced. Hair long and coarse, and has grooves in which are blue and green algae, which give the animal a protective coloration. Tail vestigial. South and Central America. Include: Ai and Unau. Bradypodidae.



Sloth

Sloth-bear (see also Bears), has a broad forehead and a long narrow snout; the lips are very movable and can be extended to pick up objects. Body short and thickset, legs short, feet relatively large with very long, sharp, curved, white claws. Coat shaggy and black; mane-like at the neck; snout grey or dirty white. Body up to 5 ft. 9 in., tail 4–5 in., shoulder-height up to 2 ft. 9 in., weight to 320 lb. Found in hilly and forested regions in India and Ceylon. Lives on vegetable matter, small animals (including insects) and honey. Does not hibernate. Gestation said to be 7 months. The young stay with the mother for 2 or 3 months, and when they are very small are often carried on her back. Melursus ursinus.

Slow Lemurs, see Lorisidae.

Slow Loris, see Loris.

Small Indian Mongoose, closely related to the Common Indian Mongoose, but smaller. Head and body up to $14\frac{4}{5}$ in., tail to $11\frac{3}{5}$. Colour varying with the race. Coat short, usually dark brown with fine golden speckling. From Persia, through Northern India and Burma to Indo-China, Hainan, Siam, the Malay Peninsula and Java. Herpestes javanicus.

Snow Bear, see Blue Bear.

Snow-leopard, a cat-like animal resembling a leopard. Length about $6\frac{1}{2}$ ft., of which 3 ft. are tail. Hair long and thick (also on



the tail). Black spots and broken rings on a white ground slightly tinged with reddish. Lives in the mountain ranges of Central Asia, Altai and Tibet; and in British India from Kashmir to the eastern

end of the Himalayas, usually above 8,000 ft. Records of the species from Amur, North-West China, the Caucasus, Asia Minor and Persia are apparently errors based on misidentifications of Leopards. Feeds on wild sheep, ibex, etc., and in winter is said to raid the villages for sheep. Felis (Uncia) uncia.

Snub-nosed Monkey, a relative of the Langurs from Tibet and the adjacent parts of China. Distinguished by its small very retroussé nose. One of the most northerly ranging monkeys; a large part of its range includes eternal snows. Feeds on fruits

and tree shoots. Rhinopithecus roxellanae.

Soemmerring's Gazelle, most nearly related to the Dama Gazelle and Grant's Gazelle. Upper-parts more sandy-coloured than in the latter; rump-patch large, white and not bordered with black anteriorly. Height at shoulder to $35\frac{1}{2}$ in. Horns 13-17 in., in the Somali race up to 23 in. Occurs in various races from Upper Nubia east of the Nile to the Red Sea, Abyssinia and Somaliland. Gazella soemmerringi.

Solenodon, a peculiar family of Insectivores from the West Indies with only two species. The snout is long and trunk-like, the body has bristly hair and the tail, which is as long as the body, is scaly with a few hairs. Rare animals; nocturnal.—Agouta (Solenodon paradoxus), head, sides of neck and belly cinnamonyellow, the long hairs of the back silvery and black, the rest black. Total length nearly 2 ft. Haiti.—A nearly related form, the Almiqui (Solenodon cubanus) occurs in Cuba.

Solomon Islands Flying Fox, two species of Fruit-bats with very pointed tubercles to the cheek-teeth. Solomon Islands.

Pteralopex.

Somali Giraffe, see Reticulated Giraffe.

Somali Wild Ass, sub-species of the African Wild Ass, larger and greyer than the Nubian Wild Ass, dorsal stripe incomplete and no shoulder stripes, but zebra marks on the legs. From Somaliland, through Danakil and Gallaland to the Red Sea. Equus (Asinus) asinus somaliensis.

Sombre Wallaby or Brown's Wallaby, the smallest of the Wallabies, head and body 21 in. Dark brown, belly yellow. New

Guinea and New Britain. Macropus browni.

Sonoran White-tailed Deer, see Arizona White-tailed Deer.

Sooty Agouti, dark-coloured species of Agouti, the rump being black with a little silvery grey. Has crossed with Azara's Agouti in the Berlin Zoo. Brazil, Colombia and Ecuador. Dasyprocta fuliginosa.

Sooty Mangabey, a species of Mangabey from Liberia and Sierra Leone. Smoky, the naked face is yellowish-brown with

white eyelids. Cercocebus torquatus atys (= fuliginosus).

Sousliks, Old World representatives of the Ground Squirrels of North America. Include: Common Souslik; Red Souslik; Spotted Souslik; Caspian Souslik. In Pleistocene times range extended westwards through Europe as far as the south of England. Citellus.

South American Skunk (see also Skunk), black with a white band down each flank, the bands being joined together on the top of the head. Body 16 in. long, tail 11 in. Found over nearly the whole of South and Central America. One species, the Hognosed Skunk (Conepatus mesoleucus), occurs as far north as Texas and Arizona and is distinguished from other skunks by the fusion of the lateral white stripes over the back, by the naked snout and by the shorter tail. Skins for the fur trade come chiefly from the Argentine (Patagonia). Best known species, Conepatus suffocans.

South American Tapir (= Brazilian Tapir), a species of Tapir from the forests of South America from Peru, Venezuela and Guiana to Southern Brazil and Northern Argentine. Blackish-brown with a short upright mane on the neck. About 6 ft. long,

plus a tail of $3\frac{1}{2}$ in., about 3 ft. high at the shoulder. Tapirus terrestris.

Sowerby's Whale, belongs to the Beaked Whales. Head rounded with an indistinctly marked beak. In each side of the lower jaw there are 4 teeth in the young and 1 in the adult (conspicuous and triangular in males, concealed in females). Two ventral grooves. Slaty-black above, and below as far back as anus. Usually spotted with white. Up to 17 ft. long. North Atlantic. Mesoplodon bidens.

Spaniel, medium-sized dog, rather hound-like but with soft curly coat. Mostly pets but also used to retrieve game.

Spanish Horse, descended from the wild horse of Western Europe. Famed as a school horse since the end of the Middle Ages. A breed of this horse has been established at Lipizza near Trieste for over 300 years and is used by the Spanish riding school in Vienna.

Spanish Lynx (see also Lynx), occurs in Spain and Portugal. Light rufous with black stripes and rows of black spots, whitish below. Tail with black dots but no black tip as in the European Lynx. Head and body to 36½ in. long, tail to 8 in. Lynx pardellus.

Spanish Mongoose, sub-species of the North African Ichneumon. Occurs in Southern Spain and found mostly in reeds along rivers. Herpestes ichneumon widdringtoni.



Spectacled Bear

Spectacled Bear (see also Bears), a South American Bear, black with light-coloured rings round the eyes. Found in the Andes from Venezuela to Bolivia and Chile. Tremarctos ornatus.

Spectacled Hare-wallaby, see Hare-wallabies.

Speke's Gazelle, lives on the high plateau of Somaliland. Most closely

related to the Edmi Gazelle; black muzzle-spot present, but distinguished by the corrugated skin on the nose. Shoulder-height 23–24 in., horn-record 12 in. *Gazella spekei*. (Also known as "Dhero" in common with Pelzeln's Gazelle.)

Sperm Whales, sub-family of the Sperm and Beaked Whales. Head large, with rectangular profile. Upper jaw toothless, lower jaw very small with a large number of cone-shaped teeth. Chiefly in the warmer seas. Include: Sperm Whale; Pigmy Sperm Whale. Physeterinae.

Sperm Whale, belongs to the Odontoceti or Toothed Whales. One of the largest whales, 55–60 ft. long (females only one-half or one-third as big). Head about one-third total length, rectangular-shaped, lower jaw small with 20–30 cone-shaped teeth on each side;

upper jaw with sockets into which the tips of the lower teeth fit when the mouth is closed and possessing from 1 to 7 or more rudimentary teeth on each side, more or less completely concealed in the gum. Dorsal fin a mere bump. General colour slate-grey or dark bluishgrey all over the body, sometimes lighter below and usually with white splashes of variable extent on the lower surface. Its true home is in the warmer seas, where most of the young are born and where the species is plentiful at all times of the year; as spring advances in both the northern and the southern hemispheres (that is from March onwards in north and from September onwards in south) part of the equatorial stock migrates to higher latitudes breeding en route; the females do not usually go much beyond warm temperate waters; but many of the males proceed much further and reach Arctic or Antarctic latitudes before they turn, at the end of summer, for the homeward journey to rejoin the females and main herds in the tropics for the winter. Much hunted, now rare in many regions. The head contains up to 10 tons of an oil known as spermaceti. The valuable ambergris is sometimes secreted by the gut when diseased. Feed chiefly on cuttle-fish, but also on crustacea and some species of fish. Physeter catodon (or macrocephalus.)

Sperm and Beaked (Bottle-nosed) Whales, family of the Whales, Toothed. Upper jaw without functional teeth, lower jaw with many or single teeth. 2–4 ventral grooves. Include: Sperm Whales; Beaked (Bottle-nosed) Whales. *Physeteridae*.

Spider Monkeys, strikingly built New World Monkeys with

a slim body, long thin limbs (fore longer than hind) and a long prehensile tail. No thumbs. Fur not woolly, chin and throat naked. Most of the hair on the head laid forward save on the forehead thus giving a "crowned" effect. Distributed from Uruguay to Mexico but most numerous in the Amazon basin. Roam in troops or in pairs through the forests. Include: Variegated Spider Monkey; Red-faced Spider Monkey; Long-haired Spider Monkey. Ateles.—The Brown Woolly Spider Monkey



Spider Monkey

with woolly hair forms a nearly related genus. Brachyteles. Ateles and Brachyteles form with the Woolly Monkeys, Lagothrix, the sub-family Atelinae.

Spider Monkey, Black-faced, resembles the Red-faced Spider Monkey, but is totally black including the face. From Panama and Guiana to Eastern Peru. Ateles ater.

Spiny Ant-eaters, see Echidnas.

Spiny Mice, from Syria, North and East Africa. Have flat fluted spines on the back instead of hairs. Desert and steppe animals. Acomys.—Best known species: Cairo Spiny Mouse (Acomys

cahirinus) from Egypt.

Spiny Rats, genus of Octodonts, with peculiar flattened, grooved, lancet-shaped, spiny bristles. A few of the 65 species reach Paraguay on the one hand and Panama on the other, but they are mostly to be found in the forest regions of the Amazon basin. Rat-sized. Feed on fruit or roots. Proechimys.

Sportive Lemurs, slender Lemuroids from Madagascar. Belong

to the genus Lepilemur.

Spotted Bat, a blackish-brown Vespertilionid with a few large white spots on the shoulders and back. Ears very large and united at their bases. Head and body 21 in., tail 2 in. South-Western U.S.A., very rare. Euderma maculata.

Spotted Cuscus, see Cuscus. Spotted Deer, see Chital.

Spotted Hyena, the largest Hyena. Found in Africa from Zululand and Transvaal to Egypt and Senegal. Yellowish-buff with brown spots. Head and body about 50in., tail 14in., shoulderheight 31 in. Differs from the Striped Hyena and others in the shorter, more rounded ears and the absence of a mane. Gregarious, eats carrion and more especially that left by lions. Also attacks goats and donkeys and occasionally cattle. Usually 1 or 2 at a birth. Crocuta crocuta.

Spotted Skunk or Little Skunk, about the size of a half-grown cat, from the U.S.A. and Mexico, more weasel-like than the Canadian Skunk. Coat long-haired and black with white spots and stripes. Length to 22½ in., of which 8½ in. are tail. Found chiefly in flat and desert-like districts, but also occurs in woods and mountains. Nocturnal; lives chiefly on insects. 2-6, usually 4 or 5, young at a birth. Spilogale putorius. 13 other related species including Spilogale pygmaea from Mexico, the smallest known Skunk, live in North America.—The pelt, which is sometimes called "lyra skunk," makes a warm and light fur lining.

Spotted Souslik, a South-East European Souslik reaching its northern limit in the highlands of Central Poland. Smaller and with a shorter tail than the Common Souslik and distinguished from it by the light-coloured spots which are closely dotted all over the back. Used in the fur trade: 1,000,000-2,000,000 pelts

a vear. Citellus suslica.

Spring Hare, see Jumping Hare.

Springbuck or Springbok, a South African Antelope (True) with lyrate horns in both sexes. General colour bright rufous fawn with a broad blackish band dividing this from the white belly.

A large evertible dorsal gland, lined with long white erectile hairs, extends from the middle of the back to the rump. Length about 5 ft., of which 8 in. are tail, shoulder-height to about 32 in., horns 15-163 in. long (the latter is the record save for a malformed specimen of 19 in.). Up to the middle of the nineteenth century existed in countless numbers on the dry treeless plains of South and South-West Africa, but were easily shot down during their migrations in search of food. Now exterminated (in the wild) in the south, but still fairly numerous in Bechuanaland. Renowned as a jumper (can clear 10 ft.); jumping, or "pronking" as it is called in South Africa, is a quickly repeated action warning the rest of the herd of the approach of danger; after 8-10 nearly vertical leaps in rapid succession, during which the dorsal gland is everted as a signal, the buck runs off at full speed. Antidorcas marsupialis.—Along the coast of Angola occurs the larger Angolan Springbuck (Antidorcas angolensis).

Square-lipped Rhinoceros, see White Rhinoceros.

Squirrel Flying Phalanger, from Eastern Australia. Often referred to as "Sugar Squirrel." The thick fur is ashy-grey above with a chestnut dorsal band, and yellowish-white below. Upper surface of parachute brown fringed with white. Length 20 in., of which the tail makes up half. Lives in eucalyptus trees. Glides as far as 165 ft. with the help of its parachute. Petaurus sciureus.

Squirrel Monkeys, four species of small, delicate South American Monkeys about the size of a squirrel. Tail scarcely prehensile. They form a genus of the Cebinae. Include: Squirrel Monkey;

Red-backed Squirrel Monkey. Saimiri.

Squirrel Monkey, one of the most beautiful South American Monkeys, about the size of a squirrel. Yellowish olive-green, in old age a bright orange-yellow; limbs rufous; white below. Face light with a black snout. Head and body 12 in., tail 20 in. Guiana, Venezuela and Colombia to Peru. Lives in large colonies, not only in the forests but also in the brushwood round the edges of forested area. Feeds on fruits, leaf-buds and small animals. Saimiri sciurea.

Squirrels, family of small to medium-sized Rodents. Pretty animals with long, bushy tails. Arboreal and diurnal. Cosmopolitan with the exception of Madagascar and the Australian region. Many species. Include: Red European Squirrels North American Society.



Squirrel

Squirrel; North American Squirrel; Prevost's Squirrel; Giant Squirrel. Sciuridae.

Squirrels, North American, occur in the wooded regions of

North America. More than 30 species: North American Red Squirrel; Grey Squirrel; Tuft-eared Squirrel; Fox Squirrel.

Stag, male of Red Deer or of other large kinds of Deer.

Stairs's Guenon, a race of the White-throated Guenon with a strong reddish tinge. From the Lower Zambesi and Mozambique. Cercopithecus mitis erythrarchus (= albogularis stairsi).

Star-nosed Mole, a Mole from South-East Canada and North-East U.S.A. Has a star-shaped process on the tip of the nose. Condylura cristata.

St. Bernard Dog, a large watch-dog, still trained by the monks

of St. Bernard Hospice to rescue travellers in winter.

Steinbok, a South African Neotragine Antelope, nearly related to the Grysbok but no white sprinkling; reddish-brown to sandyred or silver-grey, white below with a slight yellowish tinge. Height at shoulder from 21 to 22 in.; horns up to $7\frac{1}{2}$ in. Lives in open woods and on grassy plains in South and East Africa. Raphicerus campestris.—The smaller Sharpe's Steinbok (Raphicerus sharpei), sprinkled with white above, occurs from Nyasaland to Northern Transvaal.

Stejneger's Beaked Whale, beak rounded, lower jaw jutting out. Up to 16 ft. long. North Pacific from Bering Straits to Oregon. *Mesoplodon stejnegeri*.

Stejneger's Seal, resembles the Pacific Harbour Seal, but is considerably larger. Lives round Bering Island and the east coast

of Kamchatka. Phoca stejnegeri.

Steller's Sea Cow, the largest of the Sea Cows; 20–25 ft. long. Discovered in 1741 living in large herds off Bering Island. Was killed off for food by sailors in large numbers and by 1770 was almost completely exterminated; they are said to have survived, however, till 1854. *Rhytina stelleri*.

Stinkard, see Teledu.

Stoat, belongs to the Mustelids. Head and body in males to $11\frac{1}{2}$ in., tail to 4 in.; females smaller. Summer dress brownish-red



Stoat

above, yellowish-white below, tail (cf. that of Weasel) longer than the head and brownish-red with a black tip. Winter dress entirely white save the black tip of the tail; the Stoats on Ben Nevis are always white but as a rule Stoats in Great Britain do not go white or else go only partly white; it depends on local temperature. Found from the Pyrenees and Alps to the Arctic Sea, and from

Great Britain to Asia. Lives round woods, in fields, etc. Chiefly nocturnal. Bloodthirsty, feeds on small mammals, birds, reptiles

and eggs. 4–8, sometimes 10, young are born at the end of May or the beginning of June. *Mustela erminea*.—In Ireland there is a closely related, though slightly smaller, species (*Mustela hibernica*) which does not turn white in winter.

Stone's Bighorn, a Bighorn Sheep occurring from Northern British Columbia to Yukon. Dark grey to blackish-brown. Ovis

dalli stonei (or Ovis canadensis stonei).

Stone's Caribou, see under Barren Ground Caribou (American).

Stone-marten, see Beech-marten. Strand Wolf, see Brown Hyena.

Strand-rat = Sand-mole, see Mole-rats. Striped Dolphin, see White-sided Dolphin.

Striped Field Mouse, related to the wood mouse, it is the size of a house mouse but the tail considerably shorter. Head and body to $4\frac{1}{2}$ in., tail to $3\frac{1}{3}$ in. Brown-red above, with a clearly marked black stripe down the back, white below. From Northern Italy to Denmark and Western Siberia; western boundary apparently the Rhine. Does not occur in Scandinavia or in Great Britain. Found in fields, light undergrowth, etc. Lives in holes in the ground. Eats corn, insects, worms, etc. Bears 4-8 young 3-4 times a year. Apodemus agrarius.

Striped Hyenas (see also Hyena), occurs in India, South-West Asia and North and Central Africa. Dark stripes on a dirty-grey ground. A mane on the nape of the neck and along the back. Head and body about 40 in. long, tail 16 in. Solitary or in pairs. Gestation 90–91 days. Hyaena hyaena.



Striped Hyena

Striped Mice, rat-like African Rodents with haired ears and bright stripes and spots. Arvicanthis, Rhabdomys and Lemniscomys.

—Best known species: Barbary Striped Mouse (Lemniscomys barbarus) from the Atlas regions. Head and body 4 in., tail $4\frac{3}{4}$ in.; Nile Rat (Arvicanthis niloticus) from Egypt; Striped Mouse

(Rhabdomys pumilio), South Africa.

Striped Weasels or Muishonds, African Mustelids. Resemble skunks in their colour (black with white stripes) and in their habit of ejecting a stinking secretion in defence. Prefer rocky regions where they can hide in holes and in cracks in the rocks. Live on small mammals, birds, eggs, etc. *Ictonyx*.—The best known form is *Ictonyx striatus*, black with four white stripes down the back, a white spot on each cheek and on the bridge of the nose, and the tail mostly white. Head and body 14 in. long, tail 10 in.

Sudan Ground Squirrel, an East African Ground Squirrel.



Striped Weasel (Ictonyx striatus)

Reddish-yellow above, flanks and under-parts almost whitish. Tip of tail white. 20 in. long, of which $8\frac{1}{2}$ in. are tail. Abyssinia and Southern Sudan to Kilimanjaro. *Xerus rutilus*.

Sugar Squirrel, see Squirrel Flying Phalangers.

Sulphur-bottom Whale, see Whale, Blue.

Sumatran Porcupine, see Short-maned Porcupines.

Sumatran Rhinoceros, has two horns, one behind the other, on the snout. Skin folds less well developed than in the Indian and Javan Rhinoceroses. Smallest and hairiest species of Rhinoceros, head and body up to 8 ft. long and height at shoulder up to $4\frac{2}{3}$ ft. Record length of front horn $32\frac{1}{2}$ in. Lives in hill forests from Assam, Burma and Tenasserim to Siam, Malay Peninsula, Sumatra and Borneo. *Rhinoceros* (*Dicerorhinus*) sumatrensis.—The Chittagong Rhinoceros is a sub-species of this.

Sumatran Wild Boar, a race of the Bornean Wild Boar from

Sumatra. Sus barbatus oi.

Sunbear, see Malay Bear.

Suni, a pretty Antelope of the Neotragine group, 13–14 in. high at the shoulder. General colour finely grizzled fawn-grey with a rufous tinge, throat pale rufous, belly white. Facial glands produce a musky secretion. Occurs in East Africa from Kenya to Mozambique and in Zanzibar. Found in low bush, feeds on leaves. Nesotragus moschatus.—The slightly larger, redder Livingstone's Suni (Nesotragus livingstonianus) occurs southwards as far as Zululand.

Suricate, see Meerkat.

Surilho, see South American Skunk.

Susu, see Gangetic Dolphin. Swamp Beaver, see Coypu.

Swamp Deer (= Barasingha), bright reddish-brown above in summer, yellowish-brown in winter; on each side of the dark spinal stripe is a row of white spots. Belly whitish. Calves fully spotted. Antlers with 4–8 or more points on each; record length 41 in. Shoulder-height up to 46 in. India. Cervus (Rucervus) duvauceli.

Swamp Rabbits, two species of rabbits from swampy regions of the south-eastern U.S.A. Sylvilagus palustris and Sylvilagus aquaticus.

"Swordfish," see Grampus.

Sykes's Monkey, see White-throated Guenon.

Syrian Bear, a very light brown race of the Brown Bear. Found in scattered mountainous districts from Asia Minor and Syria to Persia. *Ursus arctos syriacus*.

Syrian Hyrax, a Hyrax occurring in Syria, Arabia and the Sinai Peninsula. The "coney" of the Bible. *Procavia syriaca*.

Szechwan Goral, a Goral from Western China (Szechwan and Yunnan) and Burma. Colour ash-grey to yellowish-brown. Tail longer (about 5 in. long) and horns shorter than in the Himalayan Gorals. Nemorhaedus griseus.

Szechwan Takin, a species of Takin from Szechwan (Western China). Dorsal stripe extends forwards only to the withers. Lives at about 10,000 ft. amongst rhododendrons and bamboos. In winter comes down to the belt directly above the forest line. Budorcas tibetana.

Taguan, see Indian Flying Squirrel.

Tahr, resemble goats but differ in the very short horns, the lack of a beard and a totally different smell in the male. Head and body 70 in. long; about 40 in. high at the shoulder. Hair long and smooth, mane-like on the neck and fore-part of the body in the male. General colour reddish- or dark brown, darkest in old males, legs almost black. Horns nearly in contact at the base, compressed, flattened on each side, with the front inner edge forming a sharp keel; bent backwards; record length 15½ in. Four teats. Live in the steep, wooded slopes of the Himalayas from Pir Panjal to Sikkim. Usually one kid in June or July. Hemitragus jemlahicus.—Nilgiri Tahr (Hemitragus hylocrinus), somewhat larger, with shorter hair, two teats, from the mountains of Southern India. Horns up to 17½ in. Usually on steep slopes above the tree-line, between 4,000 and 6,000 ft. Often two kids. Protected.—Arabian Tahr (Hemitragus jayakari), smaller, shoulder-height

about $24\frac{1}{2}$ in.; horns to $11\frac{5}{8}$ in. From the mountains of Oman, South-East Arabia.

Takins, large, heavily built Goat-Antelopes from the Eastern Himalayas and the mountains of Western China. Hair relatively short, unkempt and harsh; horns powerful, gnu-like, in both sexes. Live in pairs or in small troops, in midsummer in large herds. Come



down to lower altitudes in winter. Three species: Takin; Golden Takin; Szechwan Takin. Budorcas.

Takin, the best known species of the Takins, lives in the Eastern Himalayas in Bhutan and northernmost Assam (Mishmi Hills). Colour from reddish-brown with a light saddle-patch to golden-yellow dorsally, face and legs darker. Shoulderheight about 42 in. Budorcas taxicolor.

Talapoin, a small yellowish-green Guenon from the Cameroons and the Congo east to Ruwenzori and south to Angola. About 32 in. long, of which 14 in. are tail. *Cercopithecus* (*Miopithecus*) talapoin.

Tamandua, an arboreal Ant-eater. Smaller than the Great Ant-



Tamandua Ant-eater (Tamandua tetradactyla)

eater with a softer coat, and a long tail with the tip scaly and prehensile. Whitish-yellow with the flanks and shoulders black.

About 40 in. long, of which 16 in. are tail. From Mexico to Paraguay, Northern Argentine and Peru. Best known species Tamandua tetradactyla.

Tamarins, a genus of Marmosets from the forest regions of South America. In contrast with the Marmosets (sensu stricto) have no ear-tufts or tail rings. Include: Negro Tamarin; Moustached Tamarin; Deville's Tamarin. Leontocebus (= Mystax).

Tamaru, small but thickset species of Buffalo from the Philippines; about 42 in. high at the shoulder. Horns short, powerful, erect and bent inwards at the tips, irregularly ridged on the front surface. Sparsely haired, black to brown; isolated white marks. Bubalus mindorensis.

Tame Rabbit, domestic form of the European Rabbit (q.v.). Domesticated apparently by the Romans in Spain, distributed during the early Middle Ages. Differ from the wild rabbit chiefly in colour; the large varieties are almost double the size, however, and the coat is sometimes of a different texture, e.g. in the Angora Rabbit. Many different varieties bred for fur and meat.

Tana, see Tree-shrews.

Tangalunga, a Civet-cat ranging eastwards from the Malay Peninsula. Relatively small, brownish-grey, closely spotted with black, tail ringed with black. *Viverra tangalunga*.

Tantalus Guenon, closely related to the Green Monkey but with a broad white forehead band. The western part of Central Africa north of the Equator, and Nigeria. Cercopithecus aethiops tantalus.

Tapirs, short-haired Odd-toed Ungulates, heavily built, between 3ft. and 4½ ft. at the shoulder. Nose elongated to a movable, stumpy trunk. Toes (4 on fore-feet, 3 on hind-feet) with oval hooves. Tail very short. Somewhat resemble a pig in outer shape. Adults dark self-coloured or dark with the middle part of the body white; young ones spotted or striped. Nocturnal, harmless, herbivores living in dense jungle; solitary. Found in South-East Asia and in tropical America. Five species: Baird's Tapir; Roulin's Tapir; Dow's Tapir; Malayan Tapir; South American Tapir. Tapirus.

Tarpan, a Wild Horse widely distributed in Europe in prehistoric times, lived in herds in the South Russian steppes up till the middle of the nineteenth century, the last were shot in 1880. A small horse standing about 4 ft. high at the withers with a stiff mane. Dun-coloured. Forms part of the stock of domestic horses. Equus caballus gmelini.

Tarsier, peculiar, arboreal, nocturnal Lemuroid. Eyes round, very large and occupying most of the face. Limbs long, with broad pads, which serve as adhesion discs, on the tips of the fingers and toes. Tail very long and thinly haired, with a bushy



Tarsier (Tarsius tarsier)

terminal tuft. Total length about 16 in., of which $9\frac{1}{2}$ in. are tail. East Indies, represented by races in Philippines, Sumatra, Borneo, Banka and Billiton. Not in Java. Tarsius tarsier (= spectrum).

Tartarin, see Sacred Baboon.

Tasmanian Devil, sturdily built Dasyurid the size of a badger but with a proportionately larger head. Head and body about 28 in., tail about 12 in. Black with a white throat band and usually two white lateral spots. Very bloodthirsty Carnivore, even takes sheep. Lives in Tasmania, exterminated or rare in cultivated regions. Sarcophilus ursinus.

Tatouay (see also Armadillos), armour plates of the tail few

or lacking. South America. Cabassous unicinctus.

Tayra, a Mustelid occurring in several sub-species in Mexico, Central America and South America. The thick coat and long-haired tail are brownish-black, the head grey and a spot under the neck yellow. Length 43 in., of which 18 in. are tail. Lives in high grass and in woods. Very bloodthirsty; attacks poultry. Tayra barbara.

Tcheli Monkey, a species of Macaque from Northern China (Province of Tcheli). The northernmost monkey of the mainland

of Asia. Macaca tcheliensis.

Teledu or Stinkard, a few species in the larger islands of the East Indies and in the Philippines. Has large anal glands which secrete a very evil-smelling liquid. Head elongated, with a long snout and short ears, body compact, tail stumpy, fore-feet longer than the hind-feet; fossorial claws. Length 15 in., of which $\frac{3}{4}$ in.



Teledu (Mydaus javanensis)

is tail. Dark brown with a white stripe from the nape of the neck to the tip of the tail. Nocturnal; digs its own burrow between the roots of trees. Lives chiefly on insect larvæ and worms. 3-4 young at a birth. Best known species *Mydaus javanensis* from Sumatra and Java.

Temminck's Pangolin (see also Pangolin), occurs in South Africa from Natal northwards and in East Africa to the Somali Peninsula and Kordofan. Length to 5 ft., of which half is tail. Colour pale yellowish-brown. Lives in grass country in holes in the ground and feeds on termites and ants at night. Manis (Smutsia) temminckii.

Tenrecs, a sub-family of hedgehog-like Insectivores from Madagascar. Bristly or partly covered with spines; cannot roll up like

a hedgehog. There are three genera: (1) Centetes. Body with hair and bristles and a few spines. Top of the head and neck (and in young ones also along the spine) with flexible spines, a centimetre long. No apparent tail. Best known species is Centetes ecaudatus, which is the largest Insectivore, with a body length of 12–16 in. Inhabits moun-



Tenrec (Centetes ecaudatus)

tainous parts of Madagascar where there are bush, ferns and mosses; has been introduced into Mayotte, Reunion and Mauritius. Digs burrows; nocturnal. There are 12-16 or more young at a birth; (2) Hemicentetes, in which genus the spines along

the middle of the back persist throughout life. Two well-known forms are the Banded Tenrec (Hemicentetes semispinosus) which is the size of a mole and banded yellow and black, and the Blackheaded Tenrec (Hemicentetes nigriceps); (3) Ericulus, in which the whole of the back and the short tail are covered with spines. Ericulus setosus is the well-known form and is one-third the size of a hedgehog.

Tenrecs, Rice-, mole-like Insectivores related to the Tenrecs. Sometimes do damage as they burrow amongst the roots of crops

in their search for insects. Madagascar. Oryzoryctes.

Thameng, see Thamin.



Three-banded Armadillo (Tolypeutes mataca)

Thamin, a Brow-antlered Deer from Burma and Tenasserim, closely related to Eld's Deer. Fetlocks haired. Antlers to 42 in. long. Cervus (Rucervus) thamin.

Thamin, Siamese, a Brow-antlered Deer from Siam to Cambodia, Annam, Hainan and Formosa. Colour reddish-brown throughout the year, sometimes with light spots along the spine. Cervus (Rucervus) platyceros.

Thick-footed Bat, a Vespertilionid Bat from India and Burma to the Philippines. Thumbs and soles of the feet fleshy, an adaptation for clinging to smooth surfaces. Tylonycteris pachypus.

Thick-tailed Opossum, from tropical South America. Has strongly thickened root to its tail. Metachirus crassicaudatus.

Thomson's Gazelle, widely distributed in the inland parts of Tanganyika Territory and Kenya. Upper-parts and flanks reddish

sandy-brown, under-parts white, the two colours separated by a distinct broad, black band. Forehead reddish-brown, black muzzle spot present. Shoulder height about 25 in. Nearly related to the Korin Gazelle, but the horns longer (record 163 in.) and with less bent tips. Gazella thomsoni.

Thorold's Deer, a deer from Eastern Tibet. Muzzle and cheeks white. Hair on the withers directed forwards. Cervus albirostris.

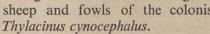
Three-banded Armadillo (see also Armadillo). Three species occurring from Guiana to Patagonia. The back is very arched and the animal walks on the tips of two of the front toes. Can roll itself up in a ball. 2-4 bands. Head and body 15 in., tail 23 in. long. Tolypeutes tricinctus, mataca (= conurus), and muriei.

Three-banded Douroucouli, see Night Ape.

Three-toed Sloth, see Ai.

Thylacine, dog-like Dasyurid from Tasmania; largest "carnivore"

of the Australian region, being a good 5 ft. in length (of which one-third is tail). Coat grey-brown with black bands over the back. Now almost exterminated; formerly wrought much havoc amongst the sheep and fowls of the colonists.





Thylacine

Tiang, East African race of the Korrigum, redder than the typical form from West Africa. From the Blue Nile and Bahr el Ghazal to Lakes Rudolf, Stefani and Albert. Damaliscus korrigum tiang.

Tibetan Antelope, see Chiru.

Tibetan Argali, a little smaller than the Argali, which is the largest wild sheep; reaches a shoulder-height of about 47 in. Horns powerful but shorter than in the Pamir Argali, record length 551 in. From Tibet. Ovis ammon hodgsoni.

Tibetan Gazelle, see Goa. Tibetan Stag, see Shou.

Tigers, belong to the cat-like animals and next to the polar



Tiger

bear are, with lions, the largest Carnivores. Dark stripes on a rustyyellow background: the colour and pattern of the stripes varies according to race. Occur from the Caucasus through Northern Persia and India to the Dutch East Indies, China, Manchuria, Korea and Amur. Lacking in Ceylon. Occur in the Himalayas up

to 7,000 ft. The Bengal Tiger (which occurs all over India) is one of the largest; total length up to 10 ft., of which about 3 ft. are

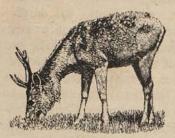
tail; weight up to about 500 lb. The Siberian Tiger from Eastern Siberia is said to reach a total length of 13 ft.; it has a long thick coat. The Persian Tiger, from the Caspian provinces of Persia and from the Caucasus, is small and has shaggy hair. The Tiger found in Sumatra, Java and Bali is also a small form. Tigers like damp places such as river-banks overgrown with reeds, and jungle with much bamboo and grass. They are nocturnal and are fearless predators, even attacking young elephants. An occasional specimen (usually a female) develops a taste for human flesh and becomes a "man-eater." Tigers are usually solitary, only going about in pairs in the breeding season. Gestation 98-110 days; 2-3 and often 4 at a birth, but up to 6 have been recorded. Tigerskins are valuable as rugs, especially the Siberian ones. Felis (Panthera) tigris.—The Bengal Tiger is the typical form of the species; those from Mongolia (mongolica), Manchuria (longipilis), China (styani), Persia (septentrionalis), Sumatra (sumatrae), Java (sondaica) and Bali (balica) are treated as sub-species. Hybrids (lion and tiger) occur in captivity, and these are known as tigons where the father is a tiger, and ligers where the father is a lion.

Tiger-cat, African, the same shape as a domestic cat but larger. Interesting because of its varying colour. An individual can go through several different colour-phases, e.g. from brownish-red to grey. Spots may be present or absent. Central African forest

regions. Felis (Profelis) aurata (or celidogaster).

Tiger-cat, American, related to the Ocelot and to Wied's Tiger-cat. Yellowish-buff with dark spots and stripes, belly white. Head and body 20 in. long, tail 12 in. Same habits as the ocelot. Cayenne to Eastern Venezuela and Northern Brazil. Felis (Margay) tigrina. Represented in Mexico by an allied species, Felis (Margay) glaucula.

Tiger-cat, Wied's, closely related to the Ocelot. Reaches the size of a large cat. Dark spots on a reddish-brownish-grey ground. Found in the forests of Southern Brazil. Felis (Margay) tigrina wiedi.



Timor Deer

Tiger-wolf, the Boer name for Spotted Hyena.

Timor Deer, a relative of the Sambar, inhabiting Java, Sumatra, Celebes, Timor and the Moluccas; introduced into Mauritius and Rodriguez Island. Antlers up to $37\frac{1}{2}$ in. in Sumatran race. Cervus (Rusa) timoriensis (= hippelaphus).

Titi Monkeys, genus of the family

Cebidae, most closely related to the Douroucoulis. Slender

monkeys with a long, thin, supple tail. Head round with a short snout and large ears; no beard. Live in troops in the forests of South America. Next to the Howling Monkeys they are the loudest-voiced monkeys of South America. Callicebus.

Titi Monkey, Masked, a Titi Monkey from the upper reaches of the Amazon. Brownish, reddish below; hands, feet and most of the head black. About 30 in. long, of which 18-20 in. are tail.

Callicebus personatus.

Titi Monkey, White-collared, a Titi Monkey from Northern Brazil to Eastern Ecuador and Peru. Glossy black with the face, the back of the hands and a band across the throat whitish. About 3 ft. long, of which 20 in. are tail. *Callicebus torquatus*.

Titi Monkey, Yellow-handed, see Titi Monkey, White-collared.

Toddy-cat, see Palm-civet.

Togo Pony, a small, pure-bred pony restricted to a small region in Northern Nigeria. Probably originated from Arab stock.

Tomb-bats, cave-dwelling members of the Free-tailed Bats, Rhinopomidae, from Egypt, through Southern Asia to Burma and Sumatra. With a long slender tail, equal to the head and body in length. The most primitive member of the insectivorous bats.

Common in tombs in Egypt. Rhinopoma.

Topi or Jimela, East African race of the Korrigum. Distribution: from Lake Edward round the south of Lake Victoria to Mount Elgon and thence north almost to the Sudan border, and also in Central Tanganyika. Also along the north coast of Kenya. Darker than the Korrigum and the Tiang. Horns relatively short, about 15 in. long. Damaliscus korrigum jimela. (The coastal form has been given the name of Damaliscus korrigum topi.)

Toque Monkey, reddish-brown relative of the Bonnet Monkey from Ceylon. There is a crest or whorl of long hairs radiating

from a central point on the top of the head. Macaca sinica.

Tora, one of the Hartebeests. Bright yellowish-brown with a black tail-tuft. Shoulder-height 48-54 in. Horn record 22½ in. From the Blue Nile through Abyssinia to Somaliland. Lives in

grass country. Bubalis (or Alcelaphus) tora.

Tragelaphines, occur in Africa and India, form a sub-family of the Antelopes. Large to medium-sized, often living in forests or marshes. Horns usually only in the male (in female also in the Bongo and Eland). African species often marked with stripes. In Africa south of the Sahara: Bongo; Bushbucks; Eland; Nyala; Kudu; Sitatunga; in India: Nilgai; Four-horned Antelope. Tragelaphinae.

Tree-hyraxes, arboreal, long-haired species of Hyraxes, have

only 2 nipples. Dendrohyrax.

Tree-kangaroos, genus of tree-living, leaf-eating Kangaroos from Northern Australia and New Guinea. Body compact, no



Tree-kangaroo

striking difference in size between the fore and hind legs. Tail not prehensile, very clumsy climbers. Dendrolagus. The genus contains, amongst others, the Black, or Ursine, Tree-kangaroo (Dendrolagus ursinus), clumsy, black with the ventral surface and the face a lighter colour; 4 ft. long, half of which is tail; from New Guinea.—Bennett's Tree-kangaroo (Dendrolagus bennettianus), dark mouse-grey with ears, tail and ventral surface blackish. Northern Queensland.

Tree-mice, mouse-like Rodents from tropical Africa, living in low bushes, with long scantily haired scaly tails, very large ears, and slender limbs, whose three middle

toes are elongated. The species are often called Climbing Mice. *Dendromus*. The arboreal genus *Dendromus* forms, with some other non-arboreal genera, of which *Steatomys*, the Fat Mice, and *Malacothrix*, the Mouse Gerbils, are the best known, a subfamily of the Muridae, characterized by a peculiar simplification of the molar teeth. *Dendromyinae*.

Tree Mice (North American), see Phenacomys.

Tree-Porcupines, Central and South American Porcupines with a long prehensile tail. Claws long, pointed and curved. Quills short but dense. Arboreal, nocturnal, eating fruits and other

vegetables. About 25 species. Coendou.

Tree-Shrews, a family of Insectivores resembling squirrels in shape, but having long, pointed snouts. Tail bushy. Diurnal. Live in trees and feed on insects and fruit. Occur from Nepal and Assam to the Malay Peninsula, the Philippines and Southern China. *Tupaiidae*. There are three well-known forms: (1) occurring from Nepal (where it is found up to 6,500 ft.), Assam and Burma to the Malay Peninsula, *Tupaia ferruginea*; (2) the Tana, from Borneo, *Tupaia tana*; (3) the Pen-tail, which has a long tail which is naked except for a row of stiff hairs along each side of the end half. From Borneo, Sumatra, Banka and the southern Malay Peninsula. *Ptilocercus lowii*.

Tricuspid Pangolin, a small-scaled West African species of Pangolin, the margin of the scales having three points. *Manis tricuspis*.

True's Beaked Whale, only a few specimens known, two from the coast of Ireland, one from New England and one from North Carolina. Length about 16 ft. *Mesoplodon mirus*.



Tree-Shrew (Tupaia tana)

Tsaine, Burmese name for the Bantin.

Tsesebe, see Sassaby.

Tuco-tucos, burrowing Octodonts, whose numerous species are distributed from Brazil to Patagonia and up the Andes to the limits of the life zone. True fossorial creatures with small eyes, concealed ears, short, stumpy tail and short legs with large scraper claws. The name tuco-tuco is an imitation of the voice of the creature. Best known species: Magellan Tuco-tuco. Ctenomys.

Tuft-eared Squirrel, like a large grey equirrel but differs from all other North American squirrels in having long tufts of hair on the ears. Two species from the coniferous forests of the Rockies in Arizona, Colorado, New Mexico and Mexico. Sciurus aberti and Sciurus kaibabensis.

Tufted Deer, a near relative of the Muntjacs from China, unbranched spike-like antlers which scarcely protrude beyond the tuft of hair which grows between their bases. Dark brown, white below. Shoulder height to 23 in. *Elaphodus cephalophus*.

Tulu, a hybrid, the result of crossing a male Bactrian Camel with a female Dromedary. Common in Asia Minor and Syria. A powerful, heavy beast; the rear hump only is fully developed. The males at any rate are sterile.

Tur, nearly related to the Ibex. Horns round or pear-shaped in cross-section, with poorly developed cross-ridges, tips bent inwards and upwards. Three species: (1) Pyrenean Ibex (Capra pyrenaica), now apparently extinct in the Pyrenees but still to be found in the Sierra de Gredos and Sierra Nevada and elsewhere.

Shoulder-height 27–32 in. Horns pear-shaped in cross-section; good horns up to 31 in. long. (2) East Caucasian Tur (Capra caucasica) from the eastern and central Caucasus. Reddish-brown with a dark stripe along the back and dark on the chest and front surfaces of the legs; greyish in summer. Under-parts dirty white. Shoulder-height 36 in., good horns 36–46 in. long. (3) Western Tur (Capra severtzowi) from the Western Caucasus and Rhaetian Alps. Reddish-brown, often without dorsal stripe, under-parts white. Shoulder-height to 42 in., horns to 40 in. long.

Turkestan Deer, a race of Wapiti from Russian Turkestan.

Chiefly light grey. Cervus canadensis bactrianus.

Two-toed Ant-eater, see Little Ant-eater.

Two-toed Sloth, see Unau.

Uakari Monkeys, a genus of the sub-family Pitheciinae. Distinguished from all the other New World monkeys by the short tail (not longer than the thigh) with a bushy end. Hair of the crown short and smooth. Northern South America. Include: Black-headed Uakari; Bald Uakari; Red Uakari. Cacajao (= Brachyurus.)

Udad, see Arui.

Uganda Buffalo, sub-species of Black Buffalo from North-East Rhodesia to Northern Uganda and west to between the eastern shores of Lake Albert Nyanza and Lake Kivu. Base of the horns not rugose as in the Cape Buffalo, which it resembles in size and colour. Record horn span 55 in. Bubalus (Syncerus) caffer radcliffei.

Unau, or 2-toed Sloth, a Sloth with two long, hooked claws on the fore-feet and three on the hind-feet. About 27 in. long. Choloepus didactylus from tropical South America is the true Unau, but Choloepus hoffmanni from Costa Rica and Panama

is closely related.

Ungulates, group of five phylogenetically related orders of mammals with a large number of species. Most of them are herbivorous. The largest living land mammals and those most important to agriculture belong to this group. Indigenous to all parts of the world save Australia where they are present as coastal marine animals. Include: Odd-toed Ungulates; Even-toed Ungulates; Hyraxes; Elephants; Sea-cows. Ungulata.

Urials, Asiatic Wild Sheep, related to the Red Sheep (Ovis orientalis) but larger; shoulder-height about 32–36 in. Horns in both sexes, those of the ram strongly wrinkled, curling round by sides of face and usually forming more than one complete turn, those of the ewe short and straight. Upper-parts rufous-grey or fawn in summer, greyish-brown in winter; under-parts, legs and tail white; females and young uniformly greyish-brown above, paler beneath. Ram with a large ruff on the throat, usually black

and white mixed, sometimes self-coloured. Mountain and steppe animals. Occur in four races from the Caspian to Tibet and Punjab: Kopet-Dagh Urial; Afghan Urial; Punjab Urial; and the typical form from Astor. Urin and Sha are other vernacular names for these sheep. The Kopet-Dag Urial is one of the origins of domestic sheep. Ovis vignei.

Urin or Shapo, a large race of Urial, shoulder-height about 36 in. Ram's ruff white with a strong admixture of black. Occurs in Central Asia from Astor to Ladak and into Tibet. Ovis vignei vignei. (The names Urial, Urin, Shapo and several others are general names for these wild sheep in various native languages;

they have no real systematic connotation at all.)

Ursine Guereza, a species of Colobus from Sierra Leone and Liberia. Black with white forehead band, whiskers and tail. Shoulder mantle not pronounced. *Colobus polykomos*.—A race from the Gold Coast with white thighs is known as the White-thighed Guereza (*Colobus polykomos vellerosus*).—A third race, *Colobus polykomos dollmani*, inhabits the Ivory Coast.

Ursine Tree-kangaroo, see Tree-kangaroos.

Vaal Rhebok, see Grey Rhebok.

Vampire, one of the American Leaf-nosed Bats, has been known for a long time but was falsely supposed to be a blood-sucker (for the latter bats see Blood-sucking Bats); feeds on insects. Length $6\frac{1}{3}$ in.; wing span 28 in. From Guiana and Northern Brazil. Vampyrus spectrum.

Vampire Bats, name applied to the Leaf-nosed Bats of America under the false assumption that they are blood-suckers. For

vampires in this sense see Blood-sucking Bats.

Variable Hare, see Blue Hare.

Variegated Spider Monkey, a beautiful species of Spider Monkey. Coat long and soft, black above and on the flanks, belly and tail brownish-yellow, naked face brownish-black, whiskers white and forehead with a yellow band. Venezuela, North-West Brazil, Eastern Ecuador and North-East Peru. Ateles variegatus.

Varying Hares (also called "White Rabbits" and "Snowshoe Rabbits"), 3 species of North American Hare, chiefly from Canada and the northernmost states of the U.S.A., coming down as far as Central New Mexico in the mountain ranges. Coat brownish in summer, white in winter (except Lepus washingtoni). Distinguished from the cottontails by their larger size. 3–4 at a birth (up to 8–10 in a good year). The most widely distributed is Lepus americanus.

Veldt Rats, see Vley Rats.

Verreaux's Sifaka, a species of the Malagasy Sifakas, usually

white with a black face and ears. Head and body 18 in., tail 22 in. *Propithecus verreauxi*.

Vervet Monkey, like the Malbrook Monkey but more slender and with a smaller head. South and East Africa, nearly related forms up to Southern Sudan. Cercopithecus aethiops pygerythrus.

Vespertilionids, a family of Insectivorous Bats. Nose and lips without processes. About 300 species, world-wide distribution, mostly in the Old World. Most European bats belong to this family. Vespertilionidae.

Vicugna, a wild Llama from Bolivia and Peru and Southern Ecuador. Smaller and with finer wool than the Huanaco. Chiefly reddish-yellow, neck light yellow below, breast and belly white. Shoulder height about 33 in. Lama vicugna.

Virginia Opossum, see Opossum, North American.

Virginia Otter, see Otter, North American.

Virginian Deer (= White-tailed Deer), the best known Deer of North America, distributed over southernmost Canada and the U.S.A. (not on the Pacific coast or in the south-west) as far as Northern Brazil and Central Peru. Many races. Reddish-brown to yellowish-brown above, in winter greyish-brown; belly whitish; tail white. Fawns reddish-brown, spotted white. Shoulder-height 35–40 in. Antlers with beams bent back and normally 5–6 points. Prefer open woods with clearings; also found in agricultural regions. Gestation about 7 months, 2 or 3 fawns between the end of May and the beginning of July. Odocoileus virginianus.

Viscacha, a species of the *Chinchillidae* (see Chinchillas), lives in colonies in the Argentine pampas. Dark greyish above; white below. Head and body 20 in., tail 7 in. The fur has recently come into the trade; the guard hairs are fairly soft, but the under-coat

is thin and poor. Lagostomus (= Vizcacia) maximus.

Viverrids, a family of the Carnivores. In general appearance intermediate between a cat and a marten. Snout pointed, tail long. Walk on their toes or on the balls of the feet, claws retractile or non-retractile. Agile animals, usually nocturnal. Many species: southern parts of the Old World from South-West Europe over Africa, Madagascar and Southern Asia. Include: Binturong; Fossa; Genets; Mongooses; Civet-cats. Viverridae.

Vley Rats, genus of African Rats with broad ears, the lower part of whose anterior surfaces are covered by the long fur. Tail half as long as body, with bristles and scales. From the Cape to Angola and Ethiopia. Otomys.—Otomys irroratus is widely distributed for the control of the control o

tributed from the Cape to Somaliland.

Voles and Lemmings, sub-family of the Muridae. Usually chubbily built, with ears more or less hidden in the fur and a short tail. A large number of forms in the northern parts of the Old and New World. Herbivorous and sometimes a nuisance

agriculturally. Include amongst others: Bank Vole; Short-tailed Field Mouse; Continental Field Vole; Water Rat; Muskrat; Lemmings. *Microtinae*.

Vole, Alpine, see Vole, Snow. Vole, Red-backed, see Bank Vole.

Vole, Grey-sided, relative of the Bank Vole, red-brown mixed with black above, dark blue-grey on the sides, and lead-grey to dirty white below. From northernmost Europe and Asia. Evotomys rufocanus.

Vole, Northern, northern relative of the Snow Vole (q.v.). Dark blackish grey-brown above, grey-white below, tail bicoloured. Head and body up to 5 in., tail to $2\frac{1}{2}$ in. Northern Europe and Northern Asia; scattered localities in Northern Germany. Microtus ratticeps (in Asia Microtus oeconomus).

Vole, Short-tailed, see Short-tailed Field Mouse.

Vole, Snow, relative of the Northern Vole occurring in the Alps usually over 4,000 ft., in some stations living under the snow for 10 months in the year. Light brownish-grey above, with the sides lighter—a yellowish ashy-grey, dirty white below. Tail all one colour. Head and body up to $5\frac{1}{2}$ in., tail to 3 in. *Microtus* (*Chionomys*) nivalis. During the Pleistocene period the species was widely distributed in the plains of Western Europe, including Britain. One race still survives in the hot dry plains of South-Central France (*Microtus lebrunii lebrunii*) and there are closely related lowland forms in Syria.

Wahlberg's Zebra, sub-species of the Bontequagga from Zululand. Equus (Hippotigris) quagga wahlbergi.

Wali, another name for the Abyssinian Ibex, see Ibex.

"Wallaby," as a fur-trade name includes several species of Large and Small Wallabies and Rock-



Wahlberg's Zebra

wallabies, amongst others: "Swamp Wallaby" = Black-tailed Wallaby, "Bush Wallaby" = Red-necked Wallaby and Bennett's Wallaby, "Rock-wallaby," see Rock-wallabies. In all there are about 800,000–1,000,000 skins in the trade yearly, about one-third for fur and two-thirds for leather.—In a restricted sense the word applies to the Kangaroos, of which about 20,000–30,000 skins come into the fur trade yearly and about 100,000 into the leather trade: chiefly the skins of the females of the Great Grey Kangaroo, the Red Kangaroo and the Wallaroo.

Wallaby, see Kangaroos, True, and Wallabies.

Wallaroo, large Kangaroo with many races, widely distributed

over Australia. Found chiefly in mountainous regions. Male dark blackish-brown changing to dark red on the upper surfaces, female paler, usually more greyish. Hind-feet with long hairs. The skin of the female has some value in the fur trade. Head and body about 60 in., tail about 36 in. *Macropus robustus*.

Waller's Gazelle, see Gerenuk. Wallich's Deer, see Shou.

Walrus, very large Pinnipede from the Arctic. Upper canines greatly enlarged to form strong down-curved tusks. Coarse white bristles on the snout; skin otherwise almost naked. The hind-feet can be bent forwards under the belly. Live in large herds and can be dangerous if attacked. Live on molluscs, crustacea, etc., which they scrape and dig for with their tusks. Gestation about 12 months, a single young. Two species.—The Atlantic Walrus (Odobenus rosmarus), inhabits Arctic waters all the way from Yenisei Bay via Novaya Zemlya, Spitzbergen and Greenland to Hudson Bay and Labrador. Males 10–11 ft. long and up to 3,000 lb., females smaller.—The Pacific Walrus (Odobenus divergens), with longer tusks, Bering Sea and the adjoining waters of the Arctic Ocean.

Waltzing Mouse, usually a black and white variety of the house mouse, which on account of a reduction of parts of the inner ear shows faulty powers of balancing. This causes the "waltzing." A product of fancy breeding from Eastern Asia.

Wanderoo, see Purple-faced Langur.

Wapiti, large species of Deer with many races in Central and North-East Asia and North America. Generally yellowish-brown with a darker mane, chestnut-brown legs and an extensive, light-coloured buttock patch. Antlers large, each with at least 5 points. Include: Altai Deer; Arizona Wapiti; Isubra; Manitoba Wapiti; Turkestan Deer; American Wapiti; Californian Wapiti; Western Wapiti. Cervus canadensis.

Wari, see White-lipped Peccary.

Wart-hog, large, ugly wild pig with several races in tropical Africa north of the Orange River to Senegal, Sudan and Abyssinia. Head with large warts and powerful tushes. Except for the long mane, very little hair, brownish grey. Young ones not striped. About 5 ft. long plus a tail of 1 ft. 6 in. and 28 in. high at the shoulder. Old boars usually solitary, 2 or 3 sows with young often together. Inhabit open country, bush and thin woods with clearings. Live in holes in the ground or in old termite hills. 3-4 at a birth. *Phacochoerus aethiopicus*.

Warty Pigs, a group of species of the True Pigs, with at least one pair of warts with tufts of bristles on them between the eyes and nostrils. Large, narrowly built, long-legged pigs with a long head. Numerous forms in further India, Java, Borneo, Sumatra,

Celebes, the Moluccas and Philippines. Include: Javan Wild Pig; Bornean Wild Boar; Celebes Wild Pig. Took no part in the origin of domestic pigs; this proved by structure of the lower canine teeth which have the outer surface much wider than the posterior surface instead of the converse found in all domestic pigs, the European Wild Boar and its Asiatic relatives. Sus verrucosus and allies.

Water-bat, see Daubenton's Bat.

Water-buffalo, see Buffalo, Domestic.

Water-Chevrotain, the only representative of the Chevrotains

in Africa and the largest, with a shoulder-height of 14 in. Dark brown, spotted and striped white, whitish to yellowish below. Distribution: from Gambia and Sierra Leone over the Central African forests of the Cameroons and the Congo. Likes to be near rivers and is a good diver and swimmer. Apparently only 1 young at a



Water-Chevrotain

birth. Hyemoschus (Dorcatherium) aquaticus. Water-rat, Australian, see Beaver Rats.

in Northern and Central Spain. Neomys anomalus.

Water-shrew, a large Shrew, total length up to $6\frac{3}{4}$ in., of which $2\frac{1}{2}$ -3 in. are tail. Tips of teeth red. Feet fringed with stiff hairs, and a "keel" of stiff hairs along the ventral surface of the tail. Upperparts dark brown to black, belly whitish, a small white spot behind the eye. Occurs from England, Pyrenees and Italy, north to Northern Scandinavia and east to the Caucasus and Asia Minor; from Western Siberia to the Altai. Lives near water and swims well. Less nocturnal than other shrews. Neomys fodiens.—A smaller species ($5\frac{1}{4}$ in.), which lacks the "keel" on the tail lives in the Alps and is less aquatic. Neomys milleri.—A longer-tailed representative of Neomys fodiens, similarly lacking a keel, occurs

Water Opossum, the only Marsupial adapted to aquatic life, belongs to the *Didelphyidae*. Occurs along water-courses from Guatemala to Southern Brazil. Lives on small aquatic animals, especially fish. Hind-feet webbed. Total length about 30 in., the prehensile tail slightly longer than the body, root of tail closely furred, rest naked and scaled. Pouch present; usually 5 young, carried for a short time during which the mother does not enter the water. Ash-grey above with six broad black cross-bands,

white below. Chironectes minimus. Water Rat, see Water Vole.

Water Vole (often called Water Rat), a large species of Vole. Nearly as large as an average Brown Rat, head and body up to 8 in., tail about two-thirds of the same length. Broad, short head with ears scarcely protruding beyond the fur. Dark brown to deep black, belly sometimes brownish. Inhabits nearly all Europe and a large part of Asia. As much at home in the water as on dry land. Omnivorous. Often a severe nuisance. 4–7 young. Arvicola amphibius. Smaller races, the Scherman group, are more terrestrial and lead lives like moles in Central Europe ascending into the Alps, the Mountains of the Vosges, and the Pyrenees.

Waterbuck, Common, a large Antelope, $4-4\frac{1}{4}$ ft. high at the shoulder. Coat long and coarse with long hair on the neck. Colour chiefly grey; a white elliptical ring on the rump. Tail long with terminal tuft. Horns only in the male; record $36\frac{1}{2}$ in. Occurs in several races from Portuguese East Africa to Somaliland. *Kobus*

ellipsiprymnus.

Waterbuck, Defassa, about the same size as the Waterbuck (Common); distinguished from it by the presence of a large white patch on the buttocks instead of the white ring. Colour reddishbrown to smoke-brown and black mixed. Horns only in male. Tail long and tufted. Various local races found from East Africa north of the Zambesi as far as Somaliland, Abyssinia, Angola and Gambia. Kobus defassa.

Weasel, a small, long-bodied Mustelid. Brownish-red above,



Weasel

white below. Tail the same length as the head and uniform brownishred. Head and body up to $8\frac{1}{2}$ in. long (and more in some races), tail to $2\frac{3}{4}$ in. Females much smaller than males. Turns white in winter but not so readily as the stoat. White Weasels are seen in winter in Scandinavia, Finland and the Alps

but not in Great Britain. The distribution is from the Mediterranean to high latitudes and from Great Britain to Western Asia. Habits similar to those of the stoat; bloodthirsty, even attacking hares. No particular breeding season. *Mustela nivalis*.

Weasels, American, under this heading come many species of weasels and stoats distributed over the whole of North America. Winter coats are assumed save in the southern states. The Arctic Weasel (Mustela arctica) is closely related to the Old World stoat. It should be noted that stoats (the larger forms with black-tipped tails) are called weasels in North America.

Weasel-headed Armadillo, see Six-banded Armadillo.

Weddell's Seal (sub-family Monachinae or Lobodontinae), commonest seal of the south polar seas. Colour black, flecked with grey and silver. Up to 10 ft. long, males and females pretty nearly the same size. A single, grey and black pup is born towards

the end of October or the beginning of November. Leptonychotes weddelli.

West Highland Terrier, a small, white terrier with a long, rough coat.

Western Hartebeest, most nearly related to the Bubal Hartebeest, but larger. Shoulder-height 46-54 in., record length of horns $27\frac{1}{2}$ in. Dull chestnut colour, tail-tuft black. From Senegal to Nigeria; chiefly in open bush country between the coastal forests and the Sahara. *Bubalis* (or *Alcelaphus*) *major*.

Western Mole (see also Mole), resembles the Eastern Mole (q.v.) but has a thicker tail and no webbing to the feet. From the western parts of Washington, Oregon and California. Scapanus

townsendi (and related forms).

Western Wapiti, a large and very dark race of the Wapiti from Vancouver Island, the Olympic Mountains of Washington and in parts of Western Oregon and California. Cervus canadensis occidentalis.

Whales, an order of aquatic Mammals with a stream-lined, almost hairless body, the fore-feet modified to flippers and a horizontal tail-fin; the hind legs are lacking. (A few hairs or bristles occur on the heads and chins of many species and in some, as in the Humpback Whale, they are regularly present and numerous-memorials of the coat of terrestrial ancestors.) Whales are cosmopolitan and, except for the river dolphins, are marine. In spite of their fish-like form they are warm-blooded, breathe air and produce live young which they suckle. Mostly gregarious. The Whalebone Whales feed mainly on small marine animals not more than an inch or so in length, though several Rorquals feed on fishes too; the Toothed Whales live on fish and squids. Some, like the Killers (Orca), devour seals and dolphins and attack even the largest whales. The gestation period of the smaller Toothed Whales is about 10 months, that of the larger ones and the Whalebone Whales about a year. One young at a birth (rarely two in the smaller species). Two sub-orders: Whales; Whalebone; Whales, Toothed. Cetacea.

Whales, Baleen, see Whales, Whalebone.

Whale, Blue, also called Sulphur-bottom Whale or Sibbald's Rorqual. A Rorqual; reaches a length of 103 ft. and is the largest animal in the world. Body slender, slaty-grey to mottled bluishgrey above, white or yellowish or greyish and marked with irregular white patches below. Whalebone black. Small dorsal fin. About 60 ventral grooves. Occurs in the Atlantic and in the Pacific. Extensively hunted in Antarctic and sub-Antarctic waters. Plankton feeder. Sibbaldus musculus.

Whale, False Killer, belongs to the Dolphins and Porpoises and is related to the Grampus. Head small and rounded. Wide

gape, corners of the mouth below the eyes. 8 teeth in each side of the upper jaw, 10 in each side of the lower. Dorsal fin smallish, half-way along the back. Flippers small, crescentic. Black. Length 13-20 ft. Widely distributed, rare, lives in schools. Has been found stranded on the coasts of Europe and on the Atlantic coast of North America. The species has a curious history. First discovered as a fossil in the Fens about 100 years ago; then stranded in considerable numbers on the coast of Denmark near Kiel in 1861; then followed a few sporadic strandings in various parts of the world; in 1927, 150 entered the Dornoch Firth and were there stranded and collected for the British Museum; in subsequent years several smaller strandings took place on the British, Dutch and South African coasts. Pseudorca crassidens.

Whale, Killer, see Grampus.

Whale, Piked, see Lesser Rorqual. Whale, Sei, see Rudolphi's Rorqual.

Whales, Fin, see Rorquals.

Whales, Right, form a family of the Whales, Whalebone. No dorsal fin and no ventral grooves. Long baleen plates. Include: Greenland Right Whale; North Atlantic Right Whale; Pacific Right Whale; Southern Right Whale; Pigmy Right Whale. Balaenidae.

Whales, Toothed, sub-order of Whales. Teeth present, at least in lower jaw. No whalebone. Includes the families: Dolphins and Porpoise; Dolphins, Freshwater; Sperm and Beaked (Bottle-

nosed) Whales; Delphinapteridae. Odontoceti.

Whales, Whalebone, sub-order of Whales. No teeth, but baleen, or whalebone, which is a horny substance hanging in plates from the gums of the upper jaw. The whale takes a mouthful of sea water and filters it out through the whalebone, leaving the food in its mouth. The food is mostly small crustacea swimming about near the surface. Several of the species, particularly among the Rorquals, carry out great annual migrations from equatorial to polar waters, in both hemispheres, and back again-toward the poles to feed, to the tropics to breed. Large whales. Include: Whales, Right; Californian Grev Whale; Rorquals. Mystacoceti.

Whippet, a small edition of a greyhound, about 18½ in. high,

used in England for hunting rabbits.

Whiskered Bat, resembles a pipistrelle in size and flight. Dark brown above, blackish-grey to greyish-white below, ears and wings blackish. Europe west as far as Ireland; Siberia. Commonly in the neighbourhood of water. Myotis mystacinus.

White Bats, a genus of Central and South America. Freetailed Bat. Body yellowish-white, wings pure white. Diclidurus.

White Gazelle, see Marica Gazelle.

White Oryx or Scimitar Oryx, differs from the other species

in the scimitar-like horns whose record length is 45\mathbb{3}\mathbb{1} in. Somewhat smaller though more heavily built than the beisa. Shoulder-height to 40 in. Colour whitish; face, neck, shoulders, flanks and upperparts of the hind legs with chestnut markings. More of a desert animal than the beisa and gemsbok. Found from Senegal to Dongola and Kordofan. Oryx algazel.

White Rhinoceros, next to the elephant is the largest living land mammal, reaching a length of about 14½ ft. plus a tail of 2 ft.

and a shoulder-height of $5\frac{2}{3}$ ft. Upper lip bluntly truncate. Two horns, the record length for the anterior one being $62\frac{1}{4}$ in. in the southern race and $45\frac{3}{4}$ in. in the northern race. Skin naked and grey, rather lighter than in the black rhinoceros. Two races, a southern one, *Rhinoceros* (*Diceros*) simus simus, formerly com-



White Rhinoceros

moner and more widely distributed in South Africa and now restricted to about 200 in a reserve in Zululand, and some in a northern one.—Nile White Rhinoceros, *Rhinoceros* (*Diceros*) simus cottoni from a not very clearly defined region from the Upper Nile to the Uele district of the Belgian Congo. Live in pairs or in families in grassy country, chiefly nocturnal, seem to feed exclusively on grasses.

"White Sheep," a Bighorn occurring from Alaska and Yukon to the Mackenzie Mountains. Colour almost pure white. Ovis canadensis dalli.

White Whale or Beluga, closely related to the narwhal, reaches a length of 14 ft. and even 18 ft. Short head, rounded in front. No dorsal fin. Upper and lower jaws have 9 teeth on each side. Dark coloured when young; white when adult. Arctic seas, but sometimes wanders down as far south as New Jersey and the Kattegat. Delphinapterus leucas.

White Wolf, occurs in Northern and North-East Greenland and the barren grounds of Arctic North America. This wolf is yellowish-white with a faint sprinkling of dusky on the back and tail and some brown on the muzzle. Canis tundrarum. (N.B.—Light-coloured, though not white, varieties of the European Wolf occur in Northern Siberia.)

White-beaked Dolphin, closely related to the White-sided Dolphin. Black above; "beak," belly and round the lips white. Lives in large schools in the North Atlantic off Greenland and in Davis Strait. Often stranded on the east coast of Britain. Lagenorhynchus albirostris.

White-bearded Gnu, a race of the Brindled Gnu, but lighter than the latter and with a white fringe round the throat. From



White-bearded Gnu

the Athi savanna to north of Kilimanjaro and to west side of the Victoria Nyanza. Connochaetes (Gorgon) taurinus albojubatus.

White-bellied Pangolin, see

Tricuspid Pangolin.

White-cheeked Flying Squirrel (see also Flying Squirrel), upperparts brownish-grey, the hairs having silver tips, under-parts yellowish-grey. The coat is silky and has been used in the fur

trade for some years now. Japan. Petaurista leucogenys.

White-crowned Mangabey, a dark brown sub-species of Collared Mangabey with a lighter or white belly, a red face and a white spot on the crown of the head. From the Gold Coast. Cercocebus torquatus lunulatus.

White-eared Marmoset, see Common Marmoset.

White-footed Mice, next to voles the commonest small Rodents of North America. Belong to the Cricetines. Mouselike, $4\frac{3}{4}-10\frac{1}{2}$ in. long, of which $1\frac{3}{4}-6$ in. are tail. Up to 4 litters a year, of 4–5 young.

The whole of North America south of the Arctic Circle, 15 species. *Peromyscus*.

White-headed Saki Monkey, a Saki from Northern Brazil and Guiana. Old males black with a white face, females and young brownish above, rufous below. Tail very bushy. Live more in thickets than in high trees. Feed on berries, fruit and honey. The female carries her single young on her back for a long time. Pithecia pithecia.



White-headed Saki Monkey

White-lipped Peccary, is found in local races from Paraguay to Mexico. Greyish-black, upper lip and belly white (northern races: cheeks white, belly black and yellow mixed); 3 ft. 8 in. long, of which 2 in. are tail, up to 18 in. high at the shoulder. Tayassu pecari.

White-maned Serow, larger than the Serow proper, shoulder-height about 44 in. Colour grey and reddish-brown mixed, legs reddish-brown, heavy white mane. From Western China in the mountains of Kansu and Szechwan provinces. *Capricornis argyrochaetes*.

White-nosed Monkey, Black-cheeked, a Guenon from the Congo and Angola. Dark sprinkled with yellow above, greyish below.

Extremities blackish. Face bluish with the tip of the nose white and the lips red. Black whiskers; a yellowish-white whorl of hair in front of each ear. Tail dark. Cercopithecus nictitans ascanius.

White-nosed Monkey, Gold Coast, a West African Guenon. Blackish-brown mixed with yellowish, crown of the head with a broad black cross-band. Tip of nose white. Cercopithecus nictitans petaurista. The cross-band is lacking in Buttikofer's White-nosed Monkey (Cercopithecus nictitans buttikoferi) from Liberia and Sierra Leone.

White-nosed Monkey, Schmidt's, a race of the Black-cheeked White-nosed Monkey from the Upper Congo and Uganda. Resembles the latter but has white whiskers and a red tail. Cercopithecus nictitans schmidti.

White-nosed Saki Monkey, a Saki from the Amazon basin. Black; the flesh-coloured nose has a few white hairs on it. Chiro-

potes albinasa.

White-sided Dolphin, a species of Dolphin, short-beaked, $8\frac{1}{2}$ – $9\frac{1}{4}$ ft. long. Dorsal surface, flippers and tail black, snout and belly white, and white and grey oblique patches on the flanks. Teeth very small, 35 in each half of the upper jaw, 37 in each half of the lower. Often stranded on north coast of Scotland (Orkneys and Shetlands). North Atlantic. Lagenorhynchus acutus.—There is a very similar animal in the North Pacific, the Pacific White-sided Dolphin (Lagenorhynchus obliquidens).

White-sided Jack Rabbit, large, long-eared hare with long hind legs and a white tail. Differs from the White-tailed Jack Rabbit with a white patch behind the shoulders. Desert and steppe dwelling chiefly in Mexico; two species encroach into the U.S.A.: the Antelope Jack Rabbit (Lepus alleni), in Southern Arizona Gaillard Jack Rabbit (Lepus gaillardi) in South-West New Mexico.

White-tailed Deer, see Virginian Deer.

White-tailed Gnu or Black Wildebeest, one of the Gnus, formerly very common from the Cape to Transvaal but now only in a few reserves. Smaller than the related Brindled Gnu, dark brown or blackish with a white tail. Face black, mane erect and whitish. Shoulder-height up to 46 in.; record horn $26\frac{3}{4}$ in. Connochaetes gnu.

White-tailed Jack Rabbit, large, long-eared hare with long hind legs and a white tail. North America west of the Mississippi. In the colder regions assumes a white winter coat. Lives in prairies,

fields and in the Rockies. Lepus townsendii.

White-tailed Mongoose, a Mongoose widely distributed in tropical Africa. Blackish-grey with a white tip to the tail. *Ichneumia albicauda*.

White-tailed Prairie-dog, smaller than the Black-tailed Prairie-dog (q.v.) and more like a Ground Squirrel than the latter.

Colour above, buffy streaked with blackish, tail tipped with white. Total length $13\frac{1}{2}-14\frac{1}{2}$ in. More of a mountain animal than the Black-tailed Prairie-dog and occurring further west. Wyoming to Arizona and New Mexico. Cynomys leucurus.

White-thighed Guereza, see Ursine Guereza.

White-throated Guenon, many races in Eastern Africa from Jubaland to the Zambesi and west to the Eastern Belgian Congo. Dark with a greenish-grey mixture and a reddish wash on the back, legs and tail blackish, throat white. Cercopithecus mitis albogularis.

White-throated Guereza, another name for White-thighed

Guereza.

White-toothed Shrews (sometimes called Musk-shrews), have the tips of the teeth white and not red as in the common shrew of Europe. Three well-known European forms: (1) Crocidura russula. Brownish-grey above, lighter below, no sharp demarcation between the two. Feet brownish-white. About 41 in. long, of which 11 in. are tail. Central and Southern Europe, North Africa and Central Asia to North-East Siberia. Does not occur in Great Britain or in Northern Europe. A related species (Crocidura cassiteridum) occurs in Scilly Islands; probably owes its presence there to some chance introduction from the Continent. Found in fields, gardens and buildings and lives happily in human dwellings; (2) Crocidura leucodon. Slate-grey to blackish-brown above with a metallic sheen, yellowish-white below, the two areas being sharply demarcated. Feet dirty white. About 4 in. long, of which 1½ in. are tail. Southern and Central Europe; not in Great Britain or Northern Europe. Lives in fields and gardens; occasionally found in buildings; (3) Pachyura etrusca. From the Mediterranean coasts including Southern France, Italy and the Crimea. With a head and body length of 13 in. and a tail length of 1 in., the smallest European mammal.

White-whiskered Swine; belongs to the Oriental Wild Pigs. Blackish-brown with a white belly and a white band from the corners of the mouth on to the lower jaw. Ears thickly haired. Three races in Japan, Formosa and China, the Chinese one being the origin of the Chinese domestic pig which is an important

stock in modern pig breeds. Sus leucomystax.

Whitecoats, the skins of newly born young of the Hooded Seal and the Greenland Seal.

Wilcox Wallaby, see Red-legged Wallaby.

Wild Boar, occurs in Europe from North Sea and Baltic coasts to the Mediterranean, also in North Africa (Morocco, Algeria, Sennaar, Kordofan and Eastern Sudan) and South-West and Central Asia at least as far as Tian Shan. The bristly hairs usually blackish-brown. Young ones brownish-grey with two longitudinal

yellow stripes on each side of the body, and the throat spotted. Head and body about 4 ft. long, tail $6\frac{1}{2}$ in., 3 ft. high at the shoulder; females smaller. Lower canine teeth with outer surfaces narrower than the hinder surface. Lives in forests, especially in marshy parts; in the south and eastern parts of its range lives in thick reeds and amongst sugar canes, etc. Omnivorous. Gestation 16–20 weeks, 6–12 young at a birth, rarely more. Has a share in the origin of the Pig, Domestic. Sus scrofa.

Wild Cat, the shape and size of a large domestic cat, but the tail thicker and not tapering towards the end. Light yellowish-grey with indistinct black stripes, tail ringed and with a black tip. Head and body up to 2 ft. and tail to 1 ft. long. Lives in the forested highlands of Scotland and France, Central and Eastern Europe and as far as Turkestan and Central Siberia. In prehistoric times in Southern Sweden (Schonen). Feeds on all sorts of mammals from a mouse to a young roe deer, and on all sorts of birds. Gestation 9 weeks, 4-6 young. The domestic cat is not a tame variety of the wild cat, but the two interbreed easily. Felis silvestris.

Wild Dog, Indian, see Dhole.

Wild Dog, Malayan, smaller and slenderer than the Dhole. Yellowish to deep rufous, tip of the tail black. Found in Southern Burma, Malacca, Sumatra and Java. Cuon javanicus (= rutilans).

Wild Dog, Siberian, related to the Dhole and the Wild Dog, Malayan, but not to the wolf. Looks like a shaggy Alsatian, buffy rufous above, isabelline yellow below. About 3 ft. long, tail 14 in. Central Asia. Cuon alpinus. (The Indian and Burmese forms are now regarded as sub-species of Cuon alpinus.)

Wild Goat, one of the chief sources of the Goat, Domestic. Horns simple, curved backwards. Coat reddish-brown in summer, greyish-brown in winter, male with black marks; belly and inner side of the limbs white. Distribution: from Sind over Iran, the Caucasus and Asia Minor as far as Crete and Antimilo (in the Cyclades). Capra hircus (or aegagrus).

Wild Ox, European, see Aurochs.

Wildcat (American sense) see Bobcat.

Wildebeest, Black, see White-tailed Gnu.

Wildebeest, Blue, see Brindled Gnu.

Wisent, see European Bison.

Wolf, a dog-like Carnivore resembling a large Alsatian. Many forms in the northern hemisphere both in the New and Old Worlds. The boundaries between the races are often very indistinct. Nowadays extinct or becoming so in inhabited regions. Canis. See European Wolf; Indian Wolf; American Wolf; White Wolf.

Wolf, Abyssinian, a fox-like wild dog. Head and body about 40 in. long, tail 12 in. Reddish-brown with a yellowish tinge,

white below. Said to be solitary and to feed chiefly on mice and other small animals. Simenia simensis.

Wolf, Maned, the largest dog-like animal of South America, head and body to 51 in., tail to 16 in. There is a mane on the nape of the neck and on the back. Cinnamon-brown above, more yellow below. Southern Brazil, Paraguay and the Argentine. A long-legged, swiftly running animal with little-known habits. Chrysocyon brachyurus (or Chrysocyon jubatus).



Wolf-like Jackal

Wolf-like Jackal, a Jackal found from Assuan to the Mediterranean. Dark buffy-brown. Smaller than a wolf, total length 50 in., shoulder-height 16 in. Usually has only a small range where it hunts all sorts of animals such as small antelopes, hares, mice and ground birds; also attacks sheep, goats and poultry. Closely related to the Oriental Jackal. Canis (Thos) lupaster.

Wolf's Monkey, relative of the

Mona Monkey with orange-red hind legs. French Congo. Cercopithecus mona wolfi.

Wolfhound, Irish, like a deerhound but still larger, about

2 ft. 6 in. high at the shoulder.

Wolfhound, Russian, see Borzoi.

Wolverine or Glutton, a powerfully built Mustelid with a short



Wolverine (Gulo gulo)

bushy tail and a long coat. Dark-brown with a broad, yellowish-brown band along each flank. Head and body 30–32½ in. long, tail 7–8½ in., shoulder-height 16–18 in., weight 22–35 lb. Two nearly related species: the Old World form (*Gulo gulo*) found from the highlands of Scandinavia to Kamchatka, and the New World form (*Gulo luscus*) which occurs in three races in North America from the Arctic Sea to Northern U.S.A. and in the west as far south as the Sierra Nevada range in California. They are bloodthirsty predators and in Lapland attack reindeer and cattle. Food usually consists of wood-mice, lemmings, hares and young birds, frogs, fish and berries. Climbs and swims well. Gestation about 9 weeks, 3–4, rarely 5 (in America usually 2–3), young at a birth in March and April (Scandinavia) or in June and July (North America). About 6,000 pelts used yearly in the fur trade. In the Pleistocene period the Glutton came as far south as England and France.

Wombats, about 3 ft. long, three species of terrestrial *Phas-colarctidae* (now placed in a special family, *Phascolomidae*). Heavy

body, slow, large head, short legs, five toes on front feet with digging claws. Stumpy tails. Rootless teeth. Two upper and two lower incisors strong gnawing teeth. Nocturnal, gnaws roots. Phascolomys.—Tasmanian Wombat (Phascolomys ursinus), from Tasmania; Hairynosed Wombat (Phascolomys latifrons), from South Australia; a



Wombat

third species, the Common Wombat (*Phascolomys mitchelli*), from South and Eastern Australia.—Coarse, felt-like coat known, together with the Koala, as "Australian Bear" to the trade. Protected now by long close season.

Wood Bison, a race of the North American Bison. Larger and darker than the latter. One herd in a part of Mackenzie, Canada.

Bos (Bison) bison athabascae.

Wood Mouse, resembles the house mouse, but more elegantly built with somewhat larger ears, larger eyes and much larger hind-feet. Yellowish-rust above, mixed with grey, and whitish below, often tinged with yellow. Head and body $3\frac{2}{3}-4\frac{1}{4}$ in., tail $3\frac{1}{2}-4\frac{1}{4}$ in. Central Europe to Scandinavia; from Ireland and Great Britain eastwards across Asia. The most abundant and generally distributed mammal in Europe. Lives in woods and gardens; in winter often in buildings. Several births a year, up to 7 young at a time. Apodemus sylvaticus.

Wood Rats, genus of Cricetines from Central and North America. 10 species in the Western U.S.A., the Gulf states,

Florida, and a small region from south New York to Tennessee. Some resemble the brown rat, others have a bushy tail. Neotoma.



Woodchuck

Woodchuck, a North American Marmot found from the mountain chains of Yukon over Southern Canada to the eastern U.S.A. In contrast to other marmots it is solitary. The pelt is sometimes called "groundhog" in the fur trade. Marmota monax.

Woodland Caribou, a group of Caribou forms, chiefly inhabitants of the high-latitude woodlands of the Old and New Worlds. Also known as Mountain Caribou in America. Antlers of medium size, palmated; colour often dark. Include: Mountain Caribou; Woodland Caribou (American); Newfoundland Caribou; Osborn Caribou; Finnish Reindeer; Siberian Reindeer; all being sub-species of Rangifer tarandus.

Woodland Caribou (American), typical form of the North American Woodland Caribou, occurs in the forests of Canada and the north-eastern parts of the U.S.A. Up to 4 ft. high at the shoulder and 300 lb. in weight. Rangifer tarandus caribou.

Woodland Jumping Mouse (see also Jumping Mouse), has long hind legs on which it hops, tail longer than the head and body, tipped with white. Eastern Canada to North Carolina and Wisconsin. Napaeozapus insignis.

Woolly Flying Squirrel, a Flying Squirrel from Kashmir with dark, grey-brown, woolly hair. Possibly more of a rock than a tree animal, very rare and little known. Eupetaurus cinereus.

Woolly Lemur, see Avahi.

Woolly Monkeys, genus of the Atelinae, distinguished by their thick woolly hair. Thumbs present, tail prehensile but not so completely as in the Spider Monkeys. Good natured, gregarious animals from the forests of the Amazon and Orinoco basins. Fructivorous. Lagothrix.

Woolly Monkey, Brown, from Eastern Ecuador and North-East Peru. Lagothrix infumatus.

Woolly Monkey, Humboldt's, a species of Woolly Monkey from Colombia, North-West Brazil and North-East Peru. Chiefly grey with a black face. One of the largest American monkeys, head and body reported up to $27\frac{1}{2}$ in., tail almost as long. Lagothrix humboldtii (or lagothrix).

Woolly Opossums, distinguished from the rest of the opossums by their woolly coat. South America. Form a genus of their own.

Philander.

Yak, Central Asiatic Wild Cattle, with long, soft hair which hangs down to the hooves. Colour brownish with a black tinge, a silvery dorsal streak and a greyish border to the muzzle. The tail has long hairs, the "horse-tail" standard of a Turkish pasha. Shoulder-height about 63 in. Ranges higher than any other cattle, between 13,000 and 20,000 ft. in Tibet. Bos (Poëphagus) grunniens mutus.—Its derivative, the tame yak, is smaller, with a shorter skull. Horns shorter, hornless individuals not uncommon. Colour variable, almost black, also reddish-brown, bluish-grey, piebald and albino. Hybrids with oxen and zebus commonly bred in some



Yak (Bos (Poëphāgus) grunniens)

places, tractable animals but the males sterile. Indispensable domestic animal in Central Asia: used for riding, as a beast of burden and as a milk producer. Distribution: from Bukhara to Mongolia and the Sajan Mountains (Siberia). It is not known when they were first domesticated. Bos (Poëphagus) grunniens.

Yarkand Gazelle, resembles the Goitred Gazelle, but reaches a shoulder-height of 29 in. Males with a "goitre." Horns up to 17 in. in length. Females hornless. From the Chinese-Turkestan steppes from Yarkand to Lob Nor. Gazella yarkandensis.

Yarkand Stag, a species of deer from Eastern Turkestan. Antlers with at most 6 points on each—usually 5. Cervus yarkanaensis.

Yellow Baboon, a species of Baboon with several races living in East and East Central Africa as far south as Mashonaland. Colour light, more or less yellowish, face blackish. No mane. Papio cynocephalus.

Yellow Bat, a Vespertilionid occurring in the southern U.S.A. from Texas eastwards. Dasypterus intermedius.

Yellow Meerkat, see Bushy-tailed Meerkat.

Yellow-bellied Flying Phalanger, largish Flying Phalanger from the coastal ranges of New South Wales and Victoria. Head and body 12 in., tail 18 in. Petaurus australis.

Yellow-bellied Marmot (see Marmot), inhabits the mountainous regions of North America from British Columbia to California

and New Mexico. Marmota flaviventris.

Yellow-footed Rock-wallaby, see Rock-wallabies.

Yellow-necked Field Mouse, closely related to the wood mouse and has similar distribution. Distinguished by its rather larger size and its cinnamon or orange spot on the throat. Apodemus flavicollis.

Zanzibar Colobus, see Kirk's Colobus. Zebra-mongoose, see Mongoose, Banded.

Zebras, wild horses with black or dark brown stripes on a white or cream ground. Live in herds on the plains of Africa south of the Sahara. Three species: Mountain Zebra; Grevy's Zebra; Bontequagga (which includes all the remaining Zebras including the extinct Quagga). Usually referred to as Dolichohippus and Hippotigris—sub-genera of Equus.

Zebu, long-legged form of Domestic Cattle, in Southern and Eastern Asia and in Africa. Suited to life in deserts and steppes. Often with a fatty hump (Humped Cattle). Renowned for its endurance, used for riding and draught in India. Not much good

for milk or meat.

Zeren or Mongolian Gazelle, a large gazelle with a shoulder-height of at least 30 in. Coat long-haired throughout the year, isabelline yellow, lighter in winter; under-parts white. Goitre-like swelling on the neck of males during breeding season. Horns only in males, up to 15³/₄ in. From the steppes between China and Tibet, as well as Eastern Siberia, especially in the Gobi region. Gazella gutturosa.

Zorille, see Striped Weasel.

Zwart-wit-pens, see Sable Antelope.

GESTATION PERIODS AND NUMBERS OF YOUNG AT A BIRTH

Except in the cases of well-known animals these figures must be regarded as provisional and it should be borne in mind that captivity may affect the number of offspring. Further, in some Mammals gestation may not begin until some time after mating. The most striking instances of this are found in various genera and species of European insectivorous bats. In these copulation takes place in autumn; the spermatozoa are stored in the female throughout the winter sleep and fertilize the ova when they descend five or six months later in the following spring.

The following abbreviations are used: m = months, w = weeks, d = days, s = sometimes, r = rarely, u = usually.

The second second	Gestation		Young
Aardvark	?		1
Agouti	104 d.	200	?
Ant-eater, Great	190 d.		1
Antelope	6-9 m.		1 (s. 2)
Armadillo	2-2½ m.		1-12
Badger	*4-6 m.		2-4 (to 6)
Bat, Insectivorous	5–12 w.	1 30	1 (r. to 4)
Bear, American Blac	k 7½ m.	E SOU DERNY	1-4
Bear, Brown	7 m.		2-3 (s. 1 or 4)
Bear, Polar	8 m.		2 (
Bear, Sloth	7 m.		2 (r. 3)
Beaver	$3\frac{1}{4}-3\frac{1}{2}$ m.		1-2 (r. 3)
Bison, European	9½ m.		1-2
Buffalo, Indian	10-m.		1-2
Bush-pig	?		6-8
Camel, Bactrian	343-390 d.		1
Caracal	9 w.		?
Cat	55-63 d.		4-6 (s. to 9)
Cattle	40 w.		u. 1., s. 2, r. to 4
Chamois	6 m.		1 (s. 2)
Chimpanzee	240-271 d.		1
Chital	7½-8½ m.		?
Civet-cat	?		2-5
Coati	10-11 w.		5
Coyote	61-63 d.		4 (r. 5-8)
Deer, Fallow	225-233 d.		1 (s. 2-3)
Deer, Japanese	218-230 d.		1-2
Deer, Red	230-241 d.		1-2
Deer, Roe	41 w.		2-3

^{*} Can be suspended to 12-15 m.

(Gestation	Young
Deer, Virginian	7 m.	2–3
	62-68 d.	4-6 (r. 2-12)
	12 m.	1
	3-4 w.	2-7
	13–13½ m.	1
Elephant, Indian	18-24 m.	1
	42-45 d.	6–9
Fox, Arctic	50-57 d.	6-8 (r. to 13)
Fox, Red	50-63 d.	3-9 (u. 6)
Gayal	8–9 m.	1
Genet, European	?	1-3
Gibbon	270 d.	1
Giraffe	400-481 d.	1
Goat	21–23 w.	1-2 (r. to 5)
Goral	6 m.	1 1
Ground-squirrel	?	5 (s. to 14)
Guinea-pig	63–75 d.	u. 6-8 (s. 2-10, r. to 12)
Hamster, Golden	15–17 d.	4-15
Hare	30 d.	2-4 (s. to 8)
Hedgehog	28 d.	3-6 (r. to 8)
Hippopotamus	8 m.	1
Horse	11 m.	1 (s. 2)
Hyena	3 m.	3-7 (u. 4)
Hyrax	?	2-3
Ichneumon	?	2-4
Jackal, Oriental	9 w.	5–8
Jaguar Jaguar	99–120 d.	2–4
Kangaroo (Large)	39 d. + 180 d. in pouch	
Koala	?	1
Lemur	84–144 d.	1-3
Leopard	87–99 d.	2-5
Lion	102–120 d.	2-3 (s. 1-6)
Llama	11 m.	1
Lynx	10 w.	2-3 (r. 4)
Macaque	7 m.	1
Marmoset	75–150 d.	2–3
Marmot	6 w.	2-4
	-30-60 d.	3-4 (r. 2-7)
Monkey, Old World		u. 1
Monkey, New World		1-2
Moose	35–36 w.	2 (s. 1)
Mouse	19–21 d.	5-7 (r. to 12)
Mule-deer	?	2 (s. 1-3)
Musk-deer	5½ m.	1-2
Musk-ox	9 m.	1
Musk-rat	21–30 d.	4-9
Native Cat	?	4-6
Okapi	?	1
Opossum	?	6-8
Orang Utan	218–240 d.	1
Orang Oran	230	THE STATE OF STREET

	Gestation	Varma
Otter	9 w.	Young
Panda	? w.	1-3 (s. 4-5)
Pangolin	?	2
Pig	16 w.	1 10 12 (2 6 22)
Pine-marten	$8\frac{1}{2}$ 9 w.	u. 10–12 (s. 6–22)
Polecat	6–7 w.	3-4 (r. 2-7)
Porcupine	60–70 d.	3–5 (r. to 7) 2–4
Pronghorn	6 m.	2 (s. 3)
Puma	3 m.	2 (s. 1–5)
Rabbit	28-30 d.	3-5 (r. to 10)
Raccoon	9–10 w.	3–6 (u. 4)
Rat	20-24 d.	1–20 (u. 8)
Reindeer	204–213 d.	1-20 (u. 6)
Rhinoceros	†17–18 m.	1
Sea-cows	12 m.	1-2
Sea-elephant	49–50 w.	1
Sea-lion	11½-12 m.	1
Seal, Grey	11½ m.	1 (r. 2)
Seals	9–12 m.	1 (r. 2)
Sheep	146-161 d. (u. 152)	1-2 (r. to 5)
Shrew, Common	3 w. (?)	4–10
Skunk	6-9 w.	4-6 (r. to 10)
Sloth	?	1
Souslik	?	3–8
Squirrel, Red	4–5 w.	2-5
Stoat	5-6 w.	4-8 (r. 2-13)
Tapir, Indian	13 m.	1
Tapir, S. American	11 m.	1
Tasmanian Devil	?	3–4
Tenrec	?	12-16
Thylacine	?	4.
Tiger	98–110 d.	2-3 (s. 4, r. 5-6)
Walrus	11 m.	1
Wapiti	34-35 w.	1 (s. 2-3)
Wart-hog	125 d.	3-4
Weasel	5 w.	4-7
Whale	10–12 m.	1 (s. 2)
Wolf	9 w.	5–9 (r. to 12)
Wolverine	9 w.	3-4 (s. 2-5)
Wombat	?	3-4
Yak	8½-9 m.	1
Zebra	346–395 d. (u. 365)	1

† 240 d. recorded.

CLASSIFICATION OF MAMMALS

Primates

(Include Orders 1-2)

Order 1

Apes and Monkeys

SUB-ORDER

Old World Monkeys

Families

Apes Gibbons Remainder of Old World Monkeys

SUB-ORDER

New World Monkeys

Families

New World Monkeys

Marmosets

Order 2

Lemuroids

Families

Lemurs Slow Lemurs Tarsier

Ungulates

(Include Orders 3-7)

Order 3

Odd-toed Ungulates

Families Tapirs

Horses

Rhinoceroses

Order 4

Even-toed Ungulates

SUB-ORDER

Non-ruminants

Families

Pigs

Hippopotamuses

SUB-ORDER Ruminants

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Order 4—continued

Families

Camels

Chevrotains Deer

Giraffes

Hollow-horned Ruminants

Sub-families of Hollow-horned -

Ruminants:

Buffaloes, Cattle, etc.

Musk-ox Pronghorn

Sheep and Goats

Sub-families of Hollow-horned

Ruminants-contd.

Goat-antelopes Tragelaphines

Saiga

Antelopes (true)

Reedbuck and Waterbuck

Klipspringer Neotragines Dik-diks

Duikers Orygine antelopes Bubaline antelopes

Order 5

Hyraxes

Order 6

Elephants

Order 7

Sea-cows

Families

Manatees

Dugongs

Order 8

Whales

SUB-ORDER Whalebone Whales

Families

Right Whales

Californian Grey Whale Rorquals

SUB-ORDER Toothed Whales

Families

Dolphins, Freshwater Sperm and Beaked Whales Dolphins and Porpoises

White Whale and Narwhal

Order 9

Carnivores

Families

Cats

Dogs Bears

Viverrids Hyenas

Procyonids

Mustelids

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Antelopes

Order 10

Pinnipedes

Families

Eared Seals

Earless Seals Walrus

Order 11

Rodents

SUB-ORDER

Duplicidentate Rodents

Families

Pikas

Hares and Rabbits

SUB-ORDER

Simplicidentate Rodents

Families

Mountain Beaver

Jerboas and Jumping Mice

Squirrels

Mole-rats

Flying Squirrels

Madagascar Rats

Ground-squirrels (African) Chipmunks and Sousliks

Murids Strand-rats

Marmots Beavers Pocket-mice Pocket-gophers Porcupines (Old World) Porcupines (New World) Guinea-pigs, Agoutis, etc.

Scaly-tails

Chinchillas Hutias and Nutria

Jumping Hare Dormice Birch-mouse

Cane-rats Gundis Octodonts.

Order 12 Aardvarks

Edentates

(Include Orders 13-14)

Order 13

Scaly Ant-eaters

Order 14

New World Edentates

Families

Sloths

Ant-eaters Armadillos

Order 15

Bats

SUB-ORDER Fruit-bats

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Order 15-continued

SUB-ORDER

Insectivorous Bats

Families

Horseshoe Bats

American Leaf-nosed Bats

Blood-sucking Bats Long-tailed Bats Free-tailed Bats Hare-lipped Bats

Mastiff Bats Vespertilionid Bats

And other lesser-known families

Order 16

Insectivores

Families

Tree-shrews

Elephant-shrews Tenrecs and Otter-shrew Solenodons Golden Moles

Hedgehogs and Gym ura

Shrews

Moles and Desmans.

Order 17 Colugo

Order 18

Marsupials

SUB-ORDER
Diprotodonts

Families

Koala and Wombats

Phalangerids

Sub-families of Phalangerids:

Phalangers

Musk Rat-kangaroo Kangaroos and Wallabies

SUB-ORDER Polyprotodonts

Families

Opossums Bandicoots Banded Ant-eater Dasyurids Sub-families of Dasyurids:

Native Cats, Tasmanian Devil

and Phascogales

Thylacine

Marsupial Mole

SUB-ORDER

Selvas

Order 19

Monotremes

Families

Echidna

Duck-billed Platypus

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LATIN INDEX

N.B.—The English names opposing the Latin names in the following Index indicate the headings under which information concerning the creatures bearing those Latin names may be found; they are not necessarily the English names for those special creatures. Such names, where they exist, are given in the appropriate paragraphs of the main work.

Acanthion Acinonyx jubatus Acinonyx rex Acinonyx venaticus Acomys Acomys cahirinus Acrobates pulchelius Acrobates pygmaeus Addax nasomaculatus Adenota kob Adenota vardoni Aeprymnus rufescens Aepyceros melampus Ailurus fulgens Ailurus fulgens styani Ailuropoda melanoleuca Allactaga Allactaga sibirica Alcelaphinae Alcelaphus Alcelaphus buselaphus Alcelaphus caama Alcelaphus cokei Alcelaphus lelwel Alcelaphus lichtensteini Alcelaphus major Alcelaphus tora Alces alces Alces americana Alces gigas Alopex corsac Alopex lagopus Alouatta Alouatta caraya Alouatta seniculus Alouatta villosus Amblonyx cinerea Ammodorcas clarkei Ammotragus lervia Anoa Anoa depressicornis Anomalurus Anomaluridae Antechinomys laniger

See under: Short-maned Porcupines Cheetah Cheetah Cheetah Spiny Mice Spiny Mice Pigmy Flying Phalanger Pigmy Flying Phalanger Addax Kob Puku Rufous Rat-Kangaroo Panda Panda Panda, Giant Jerboa, Five-toed Jerboa, Five-toed **Bubaline Antelopes** Hartebeests **Bubal Hartebeest** Cape Hartebeest Coke's Hartebeest Lelwel Lichtenstein's Hartebeest Western Hartebeest Tora Flk Moose Alaskan Moose Corsac Fox. Arctic Howling Monkeys Howling Monkey, Black Howling Monkey, Red Howling Monkey, Guatemalan Otter, Indian Small-clawed Dibatag or Clarke's Gazelle Arui Buffaloes, Asiatic Anoa Scaly-tails Scalv-tails Jerboa-like Pouched Mouse

See under: Flower-nosed Bat Anthops ornatus Anthropopithecus troglodytes (= Pan satyrus) Chimpanzee Chimpanzee, Bald-headed Anthropopithecus (= Pan calvus) Springbuck Antidorcas angolensis Antidorcas marsupialis Springbuck Pronghorn Antilocapra americana Blackbuck Antilope cervicapra Antelopes Antilopinae Fish-eating Rats Anotomys Pale Bat Antrozous pallidus Aotinae Aotinae Douroucoulis Aotus Douroucouli, Red-footed Aotus rufipes Night Ape Aotus trivirgatus Apodemus agrarius Striped Field Mouse Yellow-necked Field Mouse Apodemus flavicollis Wood Mouse Apodemus sylvaticus Mountain Beaver Aplodontia rufa Binturong Arctictis binturong Arctocebus calabarensis Angwantibo Hog-badger Arctonyx collaris Even-toed Ungulates: Ruminants Artiodactyla Seals, Fur Arctocephalus Seals, Fur Arctocephalus australis Arctocephalus forsteri Seals, Fur Seals, Fur Arctocephalus philippii Seals, Fur Arctocephalus pusillus Seals, Fur Arctocephalus townsendi Striped Mice Arvicanthis Striped Mice Arvicanthis niloticus Water Vole Arvicola amphibius Ass, African wild Asinus asinus Nubian Wild Ass Asinus asinus africanus Somali Wild Ass Asinus asinus somaliensis Spider Monkeys Ateles Spider Monkey, Black-faced Ateles ater Long-haired Spider-Monkey Ateles belzebuth Geoffroy's Spider Monkey Ateles geoffroyi Red-faced Spider Monkey Ateles panicus Variegated Spider Monkey Ateles variegatus Atelinae Atelinae Brush-tailed Porcupines Atherurus Brush-tailed Porcupines Atherurus africanus Brush-tailed Porcupines Atherurus macrourus Marsh Mongoose Atilax paludinosus Barbary Ground Squirrel Atlantoxerus getulus Avahi Avahis laniger Chital Axis axis

Babirussa babyrussa babyrussa
Babirusa babyrussa celebensis
Balaena mysticetus
Balaenidae
Balaenoptera
Balaenoptera acutorostrata
Balaenoptera borealis
Babirusa
Babirusa
Babirusa
Babirusa
Babirusa
Greenland Right Whale
Whales, Right
Rorquals
Rorquals
Rudolphi's Rorqual

Balaenoptera brydei Balaenoptera physalus Balaenopteridae Bandicota (Nesokia) bengalensis Barbastella barbastellus Bassariscus astutus Bathvergus maritimus Berardius arnuxi Berardius bairdii Bettongia penicillata Bibos Bibos banteng Bison bonasus Bibos frontalis Bibos frontalis gaurus Bison Bison bison Bison bison athabascae Blarina brevicauda Blastocerus bezoarticus Blastocerus dichotomus Boöcercus euryceros Bos Bos (Bibos) banteng Bos (Bison) bison Bos (Bison) athabascae Bos (Bison) bonasus Bos (Bibos) frontalis Bos (Bibos) frontalis gaurus Bos primigenius Bos (Poëphagus) grunniens Bos (Poëphagus) grunniens mutus Boselaphus tragocamelus Bovinae Brachylagus idahoensis Brachyteles arachnoides Bradypodidae Bradypus tridactylus Bubalis Bubalis (or Alcelaphus) buselaphus Bubalis (Alcelaphus) caama Bubalis (or Alcelaphus) cokei Bubalis (or Alcelaphus) lelwel Bubalis (or Alcelaphus) lichtensteini Bubalis (or Alcelaphus) major Bubalis (or Alcelaphus) tora Bubalinae (or Alcelaphinae) Bubalus bubalis Bubalus Bubalus (Syncerus) caffer Bubalus (Syncerus) eaffer aequinoctialis Bubalus (Syncerus) caffer caffer Bubalus (Syncerus) caffer radcliffei Bubalus (Anoa) depressicornis Bubalus mindorensis Bubalus nanus

See under: Bryde's Whale Common Rorqual Rorquals Indian Mole Rat Barbastelle Bat Cacomistle Mole-rats Baird's Whale Baird's Whale Brush-tailed Rat-Kangaroo Oriental Wild Cattle Bantin European Bison Gargal Gaur Bison North American Bison Wood Bison Shrews, North American Pampas Deer Marsh Deer Bongo Cattle, Wild Bantin North American Bison Wood Bison European Bison Gayal Gaur Aurochs Yak Yak Nilgai Bovinae Idaho Pigmy Rabbit Brown Woolly Spider Monkey Sloths Ai Hartebeests **Bubal Hartebeest** Cape Hartebeest Coke's Hartebeest Lelwel Lichtenstein's Hartebeest Western Hartebeest Tora **Bubaline Antelopes** Arna Buffaloes, African Black Buffaloes Nile Buffalo Cape Buffalo Uganda Buffalo Anoa

> Tamaru Forest Buffalo

Bubalus (Syncerus) nanus brachyceros Bubalus (Syncerus) nanus planticeros Budorcas Budorcas bedfordi Budorcas taxicolor

Budorcas tibetana Cacajao (= Brachyurus) Cacajao calvus Cacajao melanocephalus Cacajao rubicundus Cabassous unicinctus Caenolestoidea Callicebus Callicebus personatus Callicebus torquatus Callimico goeldii

Callorhinus alascanus Callorhinus curilensis Callorhinus ursinus Caloprymnus campestris Camelidae Camelus bactrianus

Camelus dromedarius Canidae Canis

Callorhinus

Canis (Thos) adustus Canis (Thos) aureus Canis familiaris dingo Canis indicus

Canis (Lyciscus) latrans Canis (Thos) lupaster

Canis lupus Canis lupus chanco Canis (Lupuella) mesomelas

Canis lupus pallipes

Canis tundrarum Capra

Capra aegagrus Capra caucasica Capra falconeri Capra hircus (or aegagrus) Capra ibex

Capra nubiana

Capra prisca Capra pyrenaica Capra severtzowi Capra sibirica Capra walie Capreolus Capreolus bedfordi

Capreolus capreolus Capreolus pygargus

Capricornis

Capricornis crispus

See under: Lake Chad Buffalo Gambia Buffalo Takins Golden Takin Takin Szechwan Takin

Uakari Monkeys Bald Uakari Monkey Black-headed Uakari Monkey Red Uakari Monkey Tatouay Marsupials Titi Monkeys Titi Monkey, Masked Titi Monkey, White-collared Goeldi's Monkey Seals, Fur Seals, Fur

> Seals, Fur Seals, Fur Plain Rat-Kangaroo Camel-like Animals

Bactrian Camel Dromedary Canids Wolf

Side-striped Jackal Oriental Jackal Dingo Oriental Jackal Covote

Wolf-like Jackal European Wolf Indian Wolf, Woolly Black-backed Jackal Indian Wolf

White Wolf Goats, Wild Wild Goat Tur

> Markhor Wild Goat Ibex Ibex

Goat, Domestic

Tur Ibex Ibex Roe Deer Manchurian Roe

Tur

European Roe Siberian Roe

Serows Japanese Serow

See under: White-maned Serow Capricornis argyrochaetes Serow Capricornis sumatrensis Formosan Serow Capricornis swinhoei Sheep and Goats Caprinae Coypu Capromyidae Hutias Capromys Hutia-Conga Capromys pilorides Caracal Caracal caracal Carnivores Carnivora Long-tongued Fruit Bats Carponycterinae Beaver Castor canadensis Beaver Castor fiber Old World Monkeys Catarrhini Aperea Cavia aperea Peruvian Cavy Cavia cutleri Guinea-Pig Cavia cobaya (= C. porcellus) Guinea-Pig Cavia porcellus Cavia tschudii (= C. cutleri) Peruvian Cavy Caviidae Caviidae Cavies Caviinae Cebidae Cebidae Cebinae Cebinae Pygmy Marmoset Cebuella pygmaea Capuchin Monkeys Cebus Capuchin, Weeping Cebus apella Capuchin, Azara's Cebus azarae Capuchin, White-throated Cebus capucina (= hypoleucus) Capuchin, Tufted Cebus cirrifer Capuchin, Brown Cebus fatuellus Tenrecs Centetes Centetes ecaudatus Tenrecs Duikers Cephalophinae Duikers Cephalophus Mangabeys Cercocebus Agile Mangabey Cercocebus agilis Grev-cheeked Mangabey Cercocebus albigena Black Mangabey Cercocebus aterrimus Sooty Mangabey Cercocebus torquatus atys (= fuliginosus) Crested Mangabey Cercocebus galeritus White-crowned Mangabey Cercocebus torquatus lunulatus Collared Mangabey Cercocebus torquatus Cercopithecidae Cercopithecidae Cercopithecinae Cercopithecinae Guenons Cercopithecus Grivet Monkey Cercopithecus aethiops Vervet Monkey Cercopithecus aethiops pygerythrus Tantalus Guenon Cercopithecus aethiops tantalus Brazza's Monkey Cercopithecus brazzae Campbell's Monkey Cercopithecus campbelli Moustached Monkey Cercopithecus cephus Malbrouck Monkey Cercopithecus cynosurus Diana Monkey Cercopithecus diana Roloway Monkey Cercopithecus diana roloway Red-eared Monkey Cercopithecus erythrotis Grav's Monkey Cercopithecus grayi L'Hoest's Monkey Cercopithecus l'hoesti

Cercopithecus (Miopithecus) ta	dapoin See under: Talapoin
Cercopithecus mitis albogularis	
Cercopithecus mitis erythrarchi	us (= albogularis) stairsi Stair's Guenon
Cercopithecus mitis kandti	Kandt's Golden Monkey
Cercopithecus mitis (= albogi	ularis) labiatus Samango Guenon
Cercopithecus mitis mitis (= 1	leucampyx pluto) Pluto Monkey
Cercopithecus mitis moloneyi	Moloney's Guenon
Cercopithecus mona	Mona Monkey
Cercopithecus mona wolfi	Wolf's Monkey
Cercopithecus nictitans	Putty-nosed Monkey
Cercopithecus nictitans ascaniu	White-nosed Monkey, Blackcheeked
Cercopithecus nictitans buttiko	
Cercopithecus nictitans petauri	sta White-nosed Monkey, Gold Coast
Cercopithecus nictitans schmidi	
Cercopithecus preussi	Preuss's Monkey
Cercopithecus sabaeus	Green Monkey
Cerdocyon azarae	Fox, Azara's
Cerdocyon magellanicus	
Cerdocyon thous	Fox, Cordillera
Cervidae	Fox, Crab-eating
Cervus albirostris	Deer Thorold's Dave
Cervus canadensis	Thorold's Deer
Cervus canadensis bactrianus	American Wapiti
Cervus canadensis manitobensis	Turkestan Deer
Cervus (canadensis) merriami	Manitoba Wapiti
Cervus (canadensis) nannodes	Arizona Wapiti
Cervus canadensis occidentalis	Californian Wapiti
Cervus canadensis songaricus	Western Wapiti Altai Deer
Cervus canadensis xanthopygus	Isubra
Cervus elaphus	Red Deer
Cervus elaphus barbarus	Barbary Stag
Cervus elaphus maral	Maral
Cervus eldii	Brow-antlered Deer
Cervus hanglu	Hangul Barasingh
Cervus macneilli	Macneill's Deer
Cervus yarkandensis	Yarkand Stag
Cervus wallichii	Shou
Cetacea	Whales
Cheirogaleus	Mouse Lemurs
Chinchilla chinchilla (= laniger	Peruvian Chinchilla
Chinchilla boliviana	Mountain Chinchilla
Chinchilla velligera (= laniger)	
Chinchillidae	Chinchillas
Chionomys nivalis	Vole, Snow
Chiromys madagascariensis	Aye-Aye
Chironectes	Opossums (New World)
Chironectes minimus	Water Opossum
Chiroptera	Bats
Chiropotes	Saki Monkeys
Chiropotes satanas	Black Saki Monkey
Chiropotes albinasa	White-nosed Saki Monkey
Chlamydophorinae	Armadillos
Chlamydophorus retusus	Fairy Armadillo
Chlamydophorus truncatus	Fairy Armadillo
Choeromys	Cane-rats
Choeropsis liberiensis	Pigmy Hippopotamus
	041
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See under: Pig-footed Bandicoot Choeropus castanotis **Bush-pigs** Choiropotamus Unau Choloepus didactylus Unau Choloepus hoffmanni Golden Moles Chrysochloris aurea Golden Moles Chrysochloris hottentottus Golden Moles Chrysochloris obtusirostris Golden Moles Chrysochloris trevelyani Wolf, Maned Chrysocyon brachyurus (or Chrysocyon jubatus) Wolf, Maned Chrysocyon jubatus Ground Squirrels, North American and Old World Citellus Common Souslik Citellus citellus Caspian Souslik Citellus fulvus Red Souslik Citellus rufescens Spotted Souslik Citellus suslica African Civet Civettictis civetta Bank Vole Clethrionomys glareolus Paca Coelogenys (= Cuniculus) paca Mountain Paca Coelogenys taczanowskii Tree-Porcupines Coendou Colobinae Colobinae Colobus Monkeys Colobus Guereza Colobus abyssinicus Kirb's Colobus Colobus kirki Mantled Colobus Colobus palliatus Ursine Guereza Colobus polykomos Ursine Guereza Colobus polykomos dollmani Ursine Guereza Colobus polykomos vellerosus Black Colobus Colobus satanas Star-nosed Mole Condylura cristata South American Skunk Conepatus mesoleucus South American Skunk Conepatus suffocans Jerboa-rats Conilurus Gnus Connochaetes White-tailed Gnu Connochaetes gnu Brindled Gnu Connochaetes (Gorgon) taurinus Nyasa Gnu Connochaetes (Gorgon) taurinus johnstoni White-bearded Gnu Connochaetes (Gorgon) taurinus albojubatus Lump-nosed Bat Corynorhinus macrotis Lump-nosed Bat Corvnorhinus phyllotis Lump-nosed Bat Corynorhinus rafinesquii Schadenberg's Giant Rat Crateromys schadenbergi Gambian Pouched Rat Cricetomys gambianus Hamsters Cricetus Common Hamster Cricetus cricetus Grey-backed Hamster Cricetus cricetus canescens Grey Hamsters Cricetulus Cricetines Cricetinae White-toothed Shrews Crocidura cassiteridum White-toothed Shrews Crocidura leucodon White-toothed Shrews Crocidura russula Spotted Hyena Crocuta crocuta Mongoose, Banded Crossarchus fasciatus Kusimanse Crossarchus obscurus Fossa Cryptoprocta ferox Shrews, North American Cryptotis

Ctenodactylidae Ctenodactylus gundi Ctenomys Ctenomys magellanicus Cyclopes didactylus Cynictis penicillata Cynocephalus Cynogale bennetti Cynomys Cynomys leucurus Cynomys ludovicianus Cynopethicus niger Cynopterus Cystophora cristata Cystophorinae Cuniculus paca Cuon alpinus Cuon dukhunensis Cuon javanicus (= rutilans)

Dama dama Dama mesopotamica Damaliscus Damaliscus albifrons Damaliscus hunteri Damaliscus korrigum Damaliscus korrigum jimela Damaliscus korrigum tiang Damaliscus korrigum topi Damaliscus lunatus Damaliscus pygargus Daptomys Dasypodidae Dasypodinae Dasyprocta Dasyprocta aguti Dasyprocta azarae Dasyprocta fuliginosa Dasyprocta mexicana Dasyprocta prymnolopha Dasyproctidae Dasypterus intermedius Dasypus hybridus Dasypus novemcinctus Dasypus uroceras Dasyuridae Dasyurus Dasyurus maugei Dasyurus viverrinus Daubentonia (= Chiromys) madagascariensis Delphinus Delphinus delphis Delphinapterus leucas Delphinapteridae

Delphinidae

Dendrohyrax

See under: Gundis Gundis Tuco-tucos Magellan Tuco-tuco Little Ant-eater Bushy-tailed Meerkat Colugo Otter-civet Prairie-dogs White-tailed Prairie-dog Black-tailed Prairie-dog Black Ape Short-nosed Fruit-bats Hooded Seal Cystophorinae Paca Wild Dog, Siberian Dhole Wild Dog, Malayan

Fallow Deer Fallow Deer, Persian Hartebeests, Bastard Blesbok Hunter's Hartebeest Korrigum Topi Tiang Topi Sassaby Bontebok Fish-eating Rats Armadillos Armadillos Agoutis Golden Agouti Azara's Agouti Sooty Agouti Mexican Agouti Hairy-rumped Agouti Dasyproctinae Yellow Bat Mulita Armadillo Nine-banded Armadillo Shield-tailed Armadillo Dasyurids Australian Cat "Native Cats" "Native Cats" Aye-Aye Dolphins, True Common Dolphin White Whale Delphinapteridae Dolphins and Porpoises Hyraxes

Dendrolagus Dendrolagus bennettianus Dendrolagus ursinus Dendromyinae Dermoptera Desmana moschata Desmana pyrenaica Desmodillus auricularis Desmodontidae Desmodus rotundus Diaemus Diceros Diceros bicornis Diceros simus cottoni Diceros simus simus Dicerorhinus sumatrensis Dicerorhinus sumatrensis lasiotis Diclidurus Dicotvlinae Dicrostonyx Dicrostonyx hudsonius Dicrostonyx groenlandicus Dicrostonyx rubricatus Dicrostonyx torquatus Didelphys Didelphys marsupialis Didelphys virginiana Didelphyidae Dinomys branickii Dinomvinae Diphylla ecaudata Dipus Dipus sagitta Dipodomys Diprotodontia Distoechurus pennatus Dobsonia Dolichohippus Dolichohippus grevyi Dolichotis patagona Dolichotis salinicola Dorcatherium aquaticus Dorcotragus megalotis Dromicia Dromicia nana Duplicidentata Dyromys nitedula

Echidna
Echidna aculeata
Edentata
Eidolon helyum
Elaphodus cephalophus
Elaphurus davidianus
Elephantulus rozeti
Elephas

See under: Tree-Kangaroos Tree-Kangaroos Tree-Kangaroos Tree-Mice Colugo Desmans Desmans Fat-talied Gerbils Blood-sucking Bats Blood-sucking Bats Blood-sucking Bats Rhinoceroses, African Black Rhinoceros White Rhinoceros White Rhinoceros Sumatran Rhinoceros Chittagong Rhinoceros White Bats Peccaries Lemmings, Collared Lemmings, North American Lemming, Greenland Lemming, Greenland Lemming, Banded Opossums (New World) Common Opossum Opossum, North American Opossums (New World) Pacarana Caviidae Blood-sucking Bats Jerboa Jerboa Kangaroo Rats Marsupials Feather-tailed Phalanger Mantled Fruit-bats Zebras Grevy's Zebra Patagonian Cavy Dwarf Patagonian Cavy Water-Chevrotain Beira Dormouse-phalangers Dormouse-phalangers Duplicidentata Russian Dormouse

Echidnas Echidnas Edentates African Fruit-Bat Tufted Deer Père David's Deer Elephant-Shrews Elephants

Elephas (Loxodonta) africanus Elephas (Loxodonta) africanus cyclotis Elephas maximus Elephas primigenius Eliomys quercinus Ellobius talpinus Emballonuridae Enhydra (= Latax) lutris Eosaccomys **Epomophorus** Eptesicus fuscus Eptesicus nilssoni Eptesicus serotinus Equidae Equus (Asinus) asinus Eauus (Asinus) asinus africanus Equus (Asinus) asinus somaliensis Equus caballus Equus caballus gmelini Equus caballus przewalskii Equus hemionus Eauus kiang Equus onager Equus (Dolichohippus) grevyi Equus (Hippotigris) quagga Equus (Hippotigris) quagga boehmi Equus (Hippotigris) quagga burchelli Equus (Hippotigris) quagga chapmani Equus (Hippotigris) quagga granti Equus (Hippotigris) quagga quagga Equus (Hippotigris) quagga wahlbergi Equus (Hippotigris) zebra Equus (Hippotigris) zebra hartmannae Erethizon dorsatum Erethizon epixanthum Erethizontidae Ericulus Ericulus setosus Erinaceus europaeus Erinaceus roumanicus Erignathus barbatus Erythrocebus Erythrocebus patas Erythrocebus pyrrhonotus Euarctos americanus Euarctos kermodei Eubalaena australis Eubalaena glacialis Eubalaena sieboldii Fuderma maculata Eumetopias jubata Eumops californicus Eupetaurus cinereus Euphractinae Euphractus sexcinctus Euphractus villosus

See under: African Elephant African Forest Elephant Indian Elephant Mammoth Garden Dormouse Mole Vole Free-tailed Bats Sea-otter Pouched Rats **Epauletted Bats** Brown Bat Northern Serotine Serotine Bat Equidae Ass, African Wild Nubian Wild Ass Somali Wild Ass Horse Tarpan Mongolian Wild Horse Kulan or Chigetai Kiang Onager Grevy's Zebra Bontequagga Boehm's Zebra Burchell's Zebra Chapman's Zebra Grant's Zebra Ouagga Wahlberg's Zebra Mountain Zebra Hartmann's Zebra North American Porcupines North American Porcupines New-World Porcupines Tenrecs Tenrecs Hedgehog Hedgehog Bearded Seal Patas Monkeys Patas Monkeys Patas Monkeys American Black Bear Kermode Bear Right Whale, Southern Right Whale, North Atlantic Right Whale, Pacific Spotted Bat Sea Lions Californian Mastiff-bat Woolly Flying Squirrel Armadillos Six-banded Armadillo Hairy Armadillo

Eutamias

Eutamias asiaticus

Euxerus erythropus

Evotomys gapperi

Evotomys (= Clethrionomys) glareolus

Evotomys rufocanus

Evotomys rufocanus

Evotomys rutilus

See under: Chipmunk

Asiatic Chipmunk

Red-footed Ground Squirrel

Red-backed Mouse

Bank Vole

Vole, Grey-sided

Bank Vole, Northern

Felidae Cat-like animals Felis (Profelis) aurata Tiger-cat, African Felis (Prionailurus) bengalensis Leopard-cat Felis (Leptailurus) brachyura (= servalina) Servaline Cat Felis (Profelis) celidogaster (or aurata) Tiger-cat, African Felis chaus Jungle Cat Felis (Puma) concolor Puma Felis constantina Caffer Cat Felis hernandesii Jaguar Felis (Panthera) leo Lions Felis leo asiatica Lions Felis leo capensis Lions Felis leo guzeratensis Lions Felis leo (= barbara) Lions Felis leo massaica Lions Felis leo melanochaitus (= capensis) Lions Felis leo persica Lions Felis leo senegalensis Lions Felis leo somaliensis Lions Felis lybica Caffer Cat Felis (Otocolobus) manul Pallas' Cat Felis (Pardofelis) marmorata Marbled Cat Felis (Neofelis) nebulosa Clouded Leopard Felis ocreata catus Domestic Cat Felis ocreata (= lybica and constantina) Caffer Cat Felis (Panthera) onca Jaguar Felis ornata Desert Cat, Indian Felis (Lychailurus) pajeros Pampas Cat Felis (Leopardus) pardalis Ocelot Felis pardalis griffithii Ocelot Felis (Panthera) pardus Leopard Felis (Leptailurus) serval Serval Felis silvestris Wild Cat Felis (Profelis) temminckii Golden Cat Felis (Margay) tigrina Tiger-cat, American Felis (Panthera) tigris Tigers Felis (Panthera) tigris mongolica **Tigers** Felis (Uncia) uncia Snow-leopard Felis (Prionailurus) viverrina Fishing Cat Felis (Leopardus) wiedi Tiger-cat, Wied's Felis (Herpailurus) yaguarondi Jaguarondi Fennecus zerda Fennec Fiber zibethicus Muskrat Fissipedia Carnivores, Land

Galago Galago alleni Galago (Otolemur) crassicaudatus

Galagos Galago, Allen's Galago, Bush-tailed

Galago (Hemigalago) demidoffi Galago garnetti Galago moholi Galago senegalensis Galago zanzibaricus Galea Galeopithecus Galeopterus Galictis vittatus Gazella Gazella arabica Gazella albonotata Gazella bennetti Gazella cuvieri Gazella dama Gazella dama mhorr Gazella dama permista Gazella dama ruficollis Gazella dorcas Gazella dorcas isabella Gazella fuscifrons Gazella gazella Gazella granti Gazella gutturosa Gazella leptoceros Gazella littoralis Gazella marica Gazella muscatensis Gazella pelzelni Gazella picticaudata Gazella przewalskii Gazella rufina Gazella rufifrons Gazella seistanica Gazella soemmerringi Gazella spekei Gazella subgutturosa Gazella thomsoni Gazella tilonura Gazelia yarkandensis Genetta Genetta genetta Geocapromys Geomvidae Georychus capensis Geosciurus capensis Gerbillinae Gerbillus pyramidum Giraffa camelopardalis Giraffa reticulata Giraffidae Glaucomys sabrinus Glaucomys volans Gliridae Glirulus japonicus Glis glis

See under: Galago, Demidoff's Galago, Garnett's Galago, Moholi Galago, Senegal Galago, Zanzibar Dwarf Kerodons Colugo Colugo Grison Gazelles Arabian Gazelle Mongalla Gazelle Chinkara Edmi Gazelle Dama Gazelle Dama Gazelle Dama Gazelle Dama Gazelle Dorcas Gazelle Dorcas Gazelle Kennion's Gazelle Palestine Gazelle Grant's Gazelle Zeren Rhim Gazelle Eritrean Gazelle Marica Gazelle Muscat Gazelle Pelzeln's Gazelle Goa Przewalski's Gazelle Red Gazelle Korin Gazelle Seistan Gazelle Soemmerring's Gazelle Speke's Gazelle Goitred Gazelle Thomson's Gazelle Heuglin's Gazelle Yarkand Gazelle Genets European Genet Hutias **Pocket Gophers** Mole-rats Cape Ground Squirrel Gerbils Greater Egyptian Gerbil Giraffe Reticulated Giraffe Giraffidae North American Flying Squirrels North American Flying Squirrels Dormice Japanese Dormouse Fat Dormouse

Globicephala brachyptera Globicephala melaena Globicephala scammoni Glossophaginae Gorgon taurinus Gorgon taurinus albojubatus Gorgon taurinus johnstoni Gorilla gorilla beringei Gorilla gorilla Grampus griseus Graphiurus nanus Graphiurus murinus Graphiurus ocularis Gulo gulo Gulo luscus Gymnura gymnura

Halichoerus grypus Halicoridae Halicore australe Halicore dugong Halicore hemprichi (= Halicore tabernaculi) Halicore tabernaculi Hapale Hapale argentata Hapale jacchus Hapale (Cebuella) pygmaea Hapalemur Hapalemur griseus Hapalemur olivaceus Hapalemur simus Hapalidae Helarctos malayanus Helictis Helictis moschata Heliophobius argenteo-cinereus Hemicentetes Hemicentetes nigriceps Hemicentetes semispinosus Hemigalago demidoffi Hemitragus hylocrinus Hemitragus jayakari Hemitragus jemlahicus Herpailurus yaguarondi Herpestes Herpestes (Ichneumia) albicauda Herpestes edwardsii Herpestes griseus Herpestes ichneumon Herpestes ichneumon widdringtoni Herpestes javanicus Herpestes mungo Herpestes (Atilax) paludinosus Herpestes urva . Heterocephalus

Heterohyrax

See under: Pilot Whale Pilot Whale Pilot Whale Long-tongued Vampires Brindled Gnu White-bearded Gnu Nyasa Gnu Mountain Gorilla Gorilla Dolphin, Risso's **Dwarf Dormouse** Lesser Cape Dormouse Large Cape Dormouse Wolverine Wolverine Gymnuras

Grey Seal Dugongs Dugongs Dugongs Dugongs Dugongs Marmosets Black-tailed Marmoset Common Marmoset Pygmy Marmoset Gentle Lemurs Gentle Lemurs Gentle Lemurs Gentle Lemurs Marmosets Malay Bear Ferret-badger Ferret-badger Mole-rats Tenrecs Tenrecs Tenrecs Galago, Demidoff's Tahr Tahr Tahr Jaguarondi Mongooses White-tailed Mongoose Common Indian Mongoose Common Indian Mongoose

Ichneumon

Spanish Mongoose

Hippocamelus Hippocamelus antisensis Hippocamelus bisulcus Hippopotamus amphibius Hippopotamidae Hippotigris Hippotigris quagga Hippotigris quagga chapmani Hippotigris quagga boehmi Hippotigris quagga burchelli Hippotigris quagga granti Hippotigris quagga quagga Hippotigris quagga wahlbergi Hippotigris zebra Hippotigris zebra hartmannae Hippotraginae (or Oryginae) Hippotragus equinus Hippotragus leucophaeus Hippotragus niger Hyaena brunnea Hyaena hyaena Hyaenidae Hydrochoerinae Hydrochoerus capybara Hydromyinae Hydromys Hydropotes inermis Hydrurga (= Stenorhynchus) leptonyx Hyelaphus calamianensis Hyelaphus porcinus Hyemoschus (Dorcatherium) aquaticus Hylarnus batesi Hylarnus harrisoni Hylobates hoolock Hylobates lar Hylobatidae Hylochoerus meinertzhageni Hylomys suilla Hylopetes spadiceus Hyperoodon rostratus Hypsignathus monstrosus Hypsiprymnodon moschatus Hypoleucus Hyracoidea Hystrix Hystrix africae-australis Hystrix (Acanthion) brachyurus Hystrix (Acanthion) hodgsoni Hystrix cristata Hystrix hirsutirostris Hystrix (Acanthion) javanica Hystrix leucura Hystrix (Acanthion) brachyurus longicauda Hystricidae

See under: Guemals Peruvian Guemal Chilean Guemal Hippopotamus Hippopotamuses Zebras Bontequagga Chapman's Zebra Boehm's Zebra Burchell's Zebra Grant's Zebra Quagga Wahlberg's Zebra Mountain Zebra Hartmann's Zebra Orygine Antelopes Roan Antelope Blaauwbok Sable Antelope Brown Hyena Striped Hyena Hyaenas Caviidae Capybara Beaver Rats Beaver Rats Chinese Water-deer Sea-leopard Hog-deer Hog-deer Water-Chevrotain Dwarf Antelopes Dwarf Antelopes Hoolock Gibbon Lar Gibbon Gibbons Forest-hog Gymnuras Pigmy Flying Squirrel Bottle-nosed Whale Hammer-headed Bat Musk Rat-Kangaroo Capuchin, White-throated Hyraxes Short-tailed Porcupines Common Porcupine Short-maned Porcupine Short-maned Porcupine Common Porcupine Hairy-nosed Porcupine Short-maned Porcupines Indian Porcupine Short-maned Porcupines Old World Porcupines

Jchneumia albicauda

White-tailed Mongoose

Ichthyomys
Ictonyx
Ictonyx striatus
Idiurus
Indris indris
Indrisidae
Inia geoffroyensis
Insectivora
Inuus

See under: Fish-eating Rats
Striped Weasels
Striped Weasels
Scaly-tails
Indri
Indrisidae
Amazonian Dolphin
Insectivores
Barbary Ape

Jaculus Jaculus jaculus Jerboa Jerboa

Kasi (= Pithecus) senex (= Kephalopterus)
Kasi senex monticola
Kerodon
Kerodon musteloides (= boliviensis)
Kerodon rupestris
Kerodon spixi
Kogia breviceps
Kobus defassa
Kobus defassa unctuosus
Kobus ellipsiprymnus
Kobus (Adenota) kob
Kobus (Onotragus) leche
Kobus (Onotragus) megaceros (or maria)
Kobus (Adenota) vardoni

Purple-faced Langur
Bear-monkey
Kerodons
Kerodons
Kerodons
Kerodons
Pigmy Sperm Whale
Waterbuck, Defassa
Sing-Sing Waterbuck
Kob
Lechwe
Lechwe, Nile
Lechwe, Black
Puku

Lagenorhynchus Lagenorhynchus acutus Lagenorhynchus albirostris Lagenorhynchus obliquidens Lagidium peruanum Lagorchestes Lagorchestes conspicillatus Lagorchestes hirsutus Lagorchestes leichardti Lagorchestes leporides Lagostomus (= Vizcacia) maximus Lagostrophus fasciatus Lagothrix Lagothrix humboldtii (or lagothrix) Lagothrix infumatus Lama glama Lama glama huanacus Lama pacos Lama vicugna Laniger Lasionycteris noctivagans Lasiurus borealis Lasiurus cinerea Latax (= Enhydra) lutris Lemmus lemmus Lemmus obensis Lemmus trimucronatus

Dolphins, Short-beaked White-sided Dolphin White-beaked Dolphin White-sided Dolphin Mountain Chinchilla Hare-wallabies Hare-wallabies Hare-wallabies Hare-wallabies Hare-wallabies Viscacha Banded Wallaby Woolly Monkeys Woolly Monkey, Humboldt's Woolly Monkey, Brown Llama Huanaco Alpaca Vicugna Chile Chinchilla Silver-haired Bat Red Bat Hoary Bat Sea Otter Norway Lemming Lemming, Siberian Lemming, North American

Lemniscomys Lemniscomys barbarus Lemur . Lemur catta Lemur coronatus Lemur macaco Lemur mongoz Lemur variegatus Lemur variegatus ruber Lemuridae Leontocebus (= Mystax) Leontocebus chrysomelas Leontocebus leoninus Leontocebus rosalia Leontocebus ursulus Leontocebus weddelli Leopardus pardalis Lepilemur Leporidae Leptailurus serval Leptailurus servalina Leptonychotes weddelli Lepus Lepus alleni Lepus americanus Lepus arcticus Lepus californicus Lepus europaeus Lepus europaeus occidentalis Lepus gaillardi Lepus groenlandicus Lepus mediterraneus Lepus medius Lepus medius hybridus Lepus timidus Lepus timidus hibernicus Lepus timidus varronis Lepus townsendii Lepus variabilis Lepus washingtoni Limnotragus spekei Linsanga linsang Linsanga pardicolor Lipotes vexillifer Lissodelphis borealis Lithocranius walleri Lobodon carcinophagus Lophiomys Loris tardigradus Lorisidae Loxodonta africanus Loxodonta africanus cyclotis Lupuella mesomelas Lutra canadensis Lutra cinerea Lutra lutra

See under: Striped Mice Striped Mice Lemurs Ring-tailed Lemur Crowned Lemur Black Lemur Mongoose Lemur Ruffed Lemur Red-ruffed Lemur Lemurids Tamarins Golden-headed Marmoset Lion Marmosets Lion Marmosets Negro Tamarin Deville's Tamarin Ocelot Sportive Lemurs Hares and Rabbits Serval Servaline Cat Weddell's Seal European Hares White-sided Jack Rabbit Varying Hares Arctic Hares Black-tailed Jack Rabbit Brown Hare Brown Hare, English White-sided Jack Rabbit Greenland Hare Mediterranean Hare Medium Hare North-eastern Hare Blue Hare Irish Hare Alpine Hare White-tailed Jack Rabbit Blue Hare Varying Hare Sitatunga Linsang, Asiatic Linsang, Asiatic Chinese River Dolphin Dolphin, Right Whale Gerenuk Crab-eating Seal Crested Rats Loris Lorisidae African Elephant African Elephant Black-backed Jackal Otter, North American Otter, Indian Small-clawed Otter, Old World

Lutreola lutreola
Lutreola sibirica
Lutreola vison
Lycaon pictus
Lychailurus pajeros
Lyciscus latrans
Lynx
Lynx canadensis
Lynx caracal
Lynx fasciatus
Lynx lynx
Lynx pardellus
Lynx rufus
Lynx rufus eremicus

Macaca Macaca andamanensis Macaca arctoides Macaca assamensis Macaca cyclopis Macaca fuscata Macaca irus Macaca lasiotis Macaca maurus Macaca mulatta (= rhesus) Macaca nemestrina Macaca nemestrina leonina Macaca nemestrina blythi Macaca radiata Macaca (= Vetulus) silenus Macaca sinica Macaca sylvana (= inuus) Macaca tcheliensis Macaca rhesus Macroglossus minimus Macropus Macropus agilis Macropus antilopinus Macropus bedfordi Macropus bennetti Macropus billardieri Macropus brachyurus Macropus browni Macropus brunii Macropus coxeni Macropus dorsalis Macropus eugenii Macropus giganteus Macropus irma Macropus parma Macropus parryi Macropus robustus Macropus robustus isabellinus Macropus ruficollis Macropus rufogriseus (or bennetti) Macropus rufus

See under: Mink, Old World
Kolinsky
Mink, American
Cape Hunting-dog
Pampas Cat
Coyote
Lynx
Canadian Lynx
Caracal
Barred Bobcat
European Lynx
Spanish Lynx
Bobcat
Bobcat

Macaques Pig-tailed Macaque, Burmese Macaque, Brown Macaque, Himalayan Monkey, Round-faced Japanese Monkey Crab-eating Macaque Macaque, Hairy-eared Moor Monkey Rhesus Monkey Macaque, Pig-tailed Pig-tailed Macaque, Burmese Macaque, Pig-tailed Bonnet Monkey Macaque, Lion-tailed Toque Monkey Barbary Ape Tcheli Monkey Rhesus Monkey Long-tongued Fruit Bats Kangaroos, True Agile Wallaby Antilopine Kangaroo Bedford's Wallaby Bennett's Wallaby Rufous-bellied Wallaby Short-tailed Wallaby Sombre Wallaby Aru Island Wallaby Cape York Wallaby Black-striped Wallaby Dama Wallaby Great Grey Kangaroo Black-gloved Wallaby Parma Wallaby Parry's Wallaby Wallaroo Isabelline Kangaroo Red-necked Wallaby Bennett's Wallaby Red Kangaroo

Macropus stigmaticus Macropus thetidis Macropus ualabatus Macropus wilcoxi Macroscelidae Macroscelides Macroscelides proboscideus Macroscelides (Elephantulus) rozeti Macrotus californicus Madoqua saltiana Madoquinae Mallomys rothschildi Manatidae Manatus manatus Mandrillus Mandrillus leucophaeus Mandrillus sphinx Manis aurita Manis crassicaudata Manis gigantea Manis javanica Manis (Uromanis) longicaudata Manis pentadactyla Manis (Smutsia) temminckii Manis tricuspis Marmosa Marmosa murina Marmota Marmota bobak Marmota caligata Marmota flaviventris Marmota marmota Marmota monax Martes americana Martes caurina Martes flavigula Martes foina Martes martes Martes pennanti Martes zibellina Mastodon americanus Mazama Mazama americana Mazama rufina Mazama simplicicornis Mazama tema Megachiroptera Magaptera nodosa Meles meles Meles anakuma Mellivora ratel Melursus ursinus Mephitinae Mephitis Mephitis mephitis Meriones

See under: Branded Wallaby Pademelon Wallaby Black-tailed Wallaby Red-legged Wallaby Elephant-shrews Elephant-shrews Elephant-shrews Elephant-shrews Californian Leaf-nosed Bat Salt's Dik-dik Dik-diks New Guinea Giant Rat Manatees Lamantin Mandrills Drill Mandrill Chinese Pangolin Indian Pangolin Giant Pangolin Malayan Pangolin Long-tailed Pangolin Indian Pangolin Temminck's Pangolin Tricuspid Pangolin Opossum (New World) Murine Opossum Marmots Bobac Hoary Marmot Yellow-bellied Marmot Alpine Marmot Woodchuck Marten, American Marten, American Marten, Indian Beech-marten Pine-marten Fisher Sable Mastodon Brockets Red Brocket Black-faced Brocket Brown Wood-brocket Central American Brocket Fruit-bats Humpback Whale Badger Badger, Japanese Ratel Sloth-bear Skunks Canadian Skunk Canadian Skunk **Jirds**

Meriones tamaricinus Mesocricetus Mesocricetus auratus Mesocricetus newtoni Mesoplodon bidens Mesoplodon densirostris Mesoplodon europaeus Mesoplodon mirum Mesoplodon stejnegeri Metachirus Metachirus crassicaudatus Metachirus opossum Microcebus Microcebus coquereli Mirocebus furcifer Microcebus murinus Microchiroptera Micromys minutus Microsorex hovi Microtinae Microtus Microtus agrestis Microtus arvalis Microtus lebrunii Microtus (Chionomys) nivalis Microtus oeconomus Microtus pennsylvanicus Microtus ratticeps Miniopterus schreibersii Miopithecus talapoin Mirounga angustirostris Mirounga leonina Mixocebus caniceps Molossidae Monachinae Monachus albiventer Monachus schauinslandi Monachus tropicalis Monodelphis (= Peramys) Monodon monoceros Monotremata Moschiola meminna Moschus moschiferus Mungos mungo Muntiacus muntiak Muridae Murinae Mus musculus Mus spicilegus Muscardinus avellanarius Mustela arctica Mustela davidiana Mustela erminea Mustela erminea hibernica Mustela itatsi Mustela (Lutreola) lutreola

See under: Jirds Hamsters Golden Hamster Dobrudscha Hamster Sowerby's Whale Blainville's Beaked Whale Gervais's Beaked Whale True's Beaked Whale Steineger's Beaked Whale Opossum (New World) Thick-tailed Opossum Chichica Dwarf Lemurs Coquerel's Dwarf Lemur Fork-marked Dwarf Lemur Lesser Mouse Lemur Insectivorous Bats Harvest Mouse Shrews, North American Voles and Lemmings Meadow Mice Short-tailed Field Mouse Continental Field Vole Vole, Snow Vole, Snow Vole, Northern Meadow Mice Vole, Northern Schreiber's Long-winged Bat Talapoin Sea-elephants Sea-elephants Hattock Mastiff-bats Monachinae Monk Seal Monk Seal Monk Seal Short-tailed Opossum Narwhal Monotremes Indian Chevrotain Musk-deer Mongoose, Banded Muntiacs Muridae Mice, True House Mouse Gleaner Mouse Dormouse Weasels, American Mink, Old World Stoat Stoat Mink, Old World Mink, Old World

Mustela nivalis Mustela (Putorius) putorius Mustela (Lutreola) sibirica Mustela stegmanni Mustela (Lutreola) vison Mustelidae Mydaus javanensis Myocastor covpus Myoprocta acouchy Myoscalops (= Heliophobius) argenteo-cinereus Myopus schisticolor Myotis Myotis bechsteini Myotis (Leuconoë) capaccinii Myotis dasycneme Myotis daubentonii Myotis emarginatus Myotis lucifugus Myotis myotis Myotis mystacinus Myotis nattereri Myotis oxygnathus Myoxidae Myrmecobius fasciatus Myrmecophaga jubata Myrmecophaga tridactyla (= jubata) Myrmecophagidae Mystacoceti Mystacops tuberculata Mystax Mystax mystax Mystax ursulus Mystax weddelli Mystromys

See under: Weasel Polecat Kolinsky Mink, Old World Mink, American Mustelids Teledu Coypu Acouchy Mole-rats Lemming, Wood Mouse-eared Bats Bechstein's Bat Long-footed Bat Rough-legged Water-bat Daubenton's Bat Notch-eared Bat Little Brown Bat Mouse-eared Bat Whiskered Bat Natterer's Bat Mouse-eared Bat Dormice Banded Ant-eater Great Ant-eater Great Ant-eater Ant-Eaters Whales, Whalebone New Zealand Bat **Tamarins** Moustached Tamarin Negro Tamarin Deville's Tamarin Rats, White-tailed

Nandinia binotata Napaeozapus insignis Nasalis larvatus Nasilio brachyrhynchus Nasua nasua Nasua narica Nemorhaedus Nemorhaedus caudatus Nemorhaedus goral Nemorhaedus griseus Nemorhaedus hodgsoni Nemorhaedus raddeanus Neobalaena marginata Neobunodontia Neofelis nebulosa Neofiber alleni Neomys fodiens Neomys milleri Neosorex Neotamias Neotoma

Palm-civet, African Woodland Jumping Mouse Proboscis Monkey Elephant-shrews Long-tailed Goral Grey Himaiayan Goral Szechwan Goral Brown Himalayan Goral Korean Goral Pigmy Right Whale Non-ruminants Clouded Leopard Muskrat, Round-tailed

Water-shrew Shrews, North American Chipmunks Wood Rats

Water-shrew

Coatis

Coatis

Gorals

Neotraginae Neotragus pygmaeus Nesomyidae Nesokia bengalensis Nesotragus livingstonianus Nesotragus moschatus Neiirotrichus gibbsii Neusticomys Noctilionidae Notiosorex Notiosorex crawfordi Notoryctes typhlops Nototragus melanotis Nyctalus maximus Nyctalus noctula Nyctalus leisleri Nyctereutes procyonides Nycticebus coucang Nycticeius humeralis Nyctinomus teniotis

See under: Neotragines Royal Antelope Madagascar Rats Indian Mole-Rat Suni Suni Shrew-mole Fish-eating Rats Hare-lipped Bats Shrews, North American Shrews, North American Marsupial Mole Grysbok Noctule Noctule Leisler's Bat Raccoon-like Dog Loris Rafinesque's Bat Rafinesque's Wrinkled-lipped Bat

Ochotona alpinus Ochotona dauricus Ochotona princeps Ochotona pusilla Ochotonidae Octodon Octodon degus Octodontidae Odobenus divergens Odobenus rosmarus Odocoileus columbianus Odocoileus couesi Odocoileus hemionus Odocoileus virginianus Odontoceti Oedipomidas geoffroyi Oedipomidas oedipus Okapia johnstoni Ommatophoca rossi Ondatra zibethica (= Fiber zibethicus) Onotragus leche Onotragus maria Onotragus megaceros (or maria) Onotragus smithemani Onychogale Onychogale frenata Onychogale lunata Onychogale unguifera Onychomys leucogaster Onychomys torridus **Opolemur** Orcinus orca Orcinus rectipinna Oreamnos americanus Oreolestes

Siberian Pika Ochodona North American Pika Dwarf Pika Pikas **Bush Rats** Degu Octodonts Walrus Walrus Columbian Black-tailed Deer Arizona White-tailed Deer Mule-deer Virginian Deer Whales, Toothed Geoffroy's Marmoset Pinché Marmoset Okapi Ross's Seal Muskrat Lechwe Lechwe, Nile Lechwe, Nile Lechwe, Black Nail-tailed Wallabies Nail-tailed Wallabies Nail-tailed Wallabies Nail-tailed Wallabies Grasshopper Mouse Grasshopper Mouse Fat-tailed Lemurs Grampus Grampus Rocky Mountain Goat

Caenolestes

Oreotragus oreotragus Ornithorhynchus anatinus Orycteropus afer Oryctolagus cuniculus Oryginae Orvx Oryx algazel Orvx beisa Oryx gazella Orvx leucorvx Oryzomys Oryzomys couesi Oryzomys palustris Oryzoryctes Otaria byronia Otariidae Otocyon megalotis Otolemur crassicaudatus Otomvs Otomys irroratus Ourebia Ourebia ourebi Ovibos moschatus Ovinae Ovis Ovis ammon Ovis ammon hodgsoni Ovis ammon poli Ovis canadensis Ovis canadensis borealis Ovis canadensis dalli Ovis canadensis nivicola Ovis canadensis stonei Ovis dalli Ovis dalli Ovis dalli dalli Ovis dalli stonei Ovis laristanica Ovis musimon Ovis orientalis Ovis vignei Ovis vignei arkar Ovis vignei cycloceros Ovis vignei punjabensis Ovis vignei vignei

Pachyura etrusca
Pachyuromys_duprasi
Paguma larvata
Paguma lanigera
Pan calvus
Pan satyrus
Panthera onca
Panthera pardus
Panthera tigris
Panthera tigris mongolica

See under: Klipspringer Duck-billed Platypus Aardvarks European Rabbit Orygine Antelopes Orvx White Oryx Beisa Gemsbock Arabian Oryx Rice Rats Rice Rats Rice Rats Tenrecs, Rice Sea Lion, Southern Seals, Eared Fox. Delalande's Galago, Bush-tailed Vley Rats Vley Rats Oribi Oribi Musk Ox Sheep and Goats Sheep, Wild Argali Tibetan Argali Pamir Argali North American Bighorns North-East Siberian Bighorn "White Sheep" Kamchatka Bighorn Stone's Bighorn North American Bighorns North-East Siberian Bighorn North American Bighorns Stone's Bighorn Laristan Sheep Mouflon Red Sheep Urials Kopet-Dagh Urial Afghan Urial Salt-Range Urial Urin

White-toothed Shrews
Fat-tailed Gerbils
Palm-civet, Masked
Palm-civet, Masked
Chimpanzee, Bald-headed
Chimpanzee
Jaguar
Leopard
Tigers
Tigers

Pantholops hodgsoni Papio Papio anubis Papio cynocephalus Papio hamadryas Papio papio Papio porcarius Paradoxurus hermaphroditus Paradoxurus hermaphroditus niger Paradoxurus zeylonensis Paradoxurus jerdoni Pardofelis marmorata Pecari angulatus Pecari angulatus Pecari tajacu Pedetes caffer Pedetes surdaster Pelea capreolus Peragale Perameles Perameles nasuta Peramelidae Peramys Perissodactyla Perodicticus potto Perognathus Peromyscus Petaurista leucogenys Petaurista philippensis Petauroides volans Petaurus Petaurus australis Petaurus breviceps Petaurus sciureus Petrodromus Petrogale Petrogale brachyotis Petrogale concinna Petrogale inornata Petrogale penicillata Petrogale xanthopus Phacochoerus aethiopicus Phalanger Phalanger maculatus Phalangerinae Phascogale Phascogale penicillata **Phascolarctidae** Phascolarctidae Phascolarctus cinereus Phascolomys Phascolomys latifrons Phascolomys mitchelli Phascolomys ursinus Phenacomys Philander

See under: Chiru Baboons Olive Baboon Yellow Baboon Sacred Baboon Guinea Baboon Chacma Baboon Palm-civet Palm-civet Palm-civet Palm-civet Marbled Cat Collared Peccaries Javeline Collared Peccaries Jumping Hare Jumping Hare Grev Rhebok Bandicoots, Australian Rat-bandicoots Rat-bandicoots Bandicoots, Australian Opossum (New World) Odd-toed Ungulates Potto Pocket Mice White-footed Mice White-cheeked Flying Squirrel Indian Flying Squirrel Greater Flying Phalanger Lesser Flying Phalanger Yellow-bellied Flying Phalanger Short-headed Flying Phalanger Squirrel Flying Phalanger Elephant-shrews Rock-wallabies Rock-wallabies Rock-wallabies Rock-wallabies Rock-wallabies Rock-wallabies Wart-hog Cuscus Cuscus Phalangerinae Phascogales Brush-tailed Phascogale Phascolarctidae Wombats Koala or Native Bear Wombats Wombats Wombats Wombats Phenacomys Opossums (New World)

Philander	See under: Woolly Opossums
Phoca fasciata	Ribbon Seal
Phoca groenlandica	Greenland Seal
Phoca hispida	Ringed Seal
Phoca hispida baikalensis	Baikal Seal
Phoca hispida caspica	* Caspian Seal
Phoca hispida ladogensis	Ladoga Seal
Phoca hispida saimensis	Ringed Seal
Phoca hispida sibirica	Ringed Seal
Phoca stejnegeri	Stejneger's Seal
Phoca richardii	Pacific Harbour Seal
Phoca vitulina	Common Seal
Phocaena phocaena	Porpoise, Common
Phocaena relicta	Porpoise, Common
Phocaenoides dalli	Porpoise, Dall's Harbour
Phocarctos hookeri	Sea Lions
Phocidae	Phocidae
Phocinae	Seals, True
Pholidota	Pangolins
Phyllostoma	Javelin Vampires
Phyllostomatidae	Leaf-nosed Bats, American
Physeter catodon (or macrocephalus	
Physeter macrocephalus	Sperm Whale
Physeteridae	Sperm and Beaked Whales
Physeterinae	Sperm Whales
Pinnipedia	Pinnipedia; also Carnivores, Aquatic
Pipistrellus	Pipistrelles
Pipistrellus hesperus	Pipistrelles, North American
Pipistrellus kuhlii	Kuhl's Pipistrelle
Pipistrellus nathusii	Rough-skinned Pipistrelle
Pipistrellus pipistrellus	Common Pipistrelle
Pipistrellus savii	Alpine Pipistrelle
Pipistrellus subflavus	Pipistrelles, North American
Pithecia	Saki Monkeys
Pithecia pithecia Pithecia monachus	White-headed Saki Monkey
Pitheciinae	Humboldt's Saki Monkey
Pithecus	Pitheciinae
Pithecus auratus	Langurs Moor Langur
Pitheçus aygula	Moor Langur Capped Langur
Pithecus cephalopterus	Purple-faced Langur
Pithecus entellus	Hanuman Langur
Pithecus (= Kasi) johni	Nilgiri Langur
Pithecus melanolophus	Black-crested Langur
Pithecus (= Trachypithecus or Sem	
Pithecus pileatus	Capped Langur
Pithecus pyrrhus (= auratus)	Moor Langur
Pithecus schistaceus	Himalayan Langur
Pithecus senex (= cephalopterus)	Purple-faced Langur
Pithecus ursinus	Bear Monkey
Pitymys pinetorum	Pine Mouse
Pitymys subterraneus	Burrowing Vole
Platacanthomyidae	Dormouse, Spiny
Platacanthomys lasiurus	Dormouse, Spiny
Platanista gangetica	Gangetic Dolphin
Platanistidae	Dolphins, Freshwater
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See under: New World Monkeys Platyrrhini Long-eared Bat Plecotus auritus Poëphagus grunniens Yak Yak Poëphagus grunniens mutus Linsang, African Poiana richardsoni Polyprotodontia Marsupials Anthropoids Pongidae Orang-Utan Pongo pygmaeus Pontoporia (or Stenodelphis) blainvillei La Plata Dolphin Pigmy Hog Porcula salvanius Potamochoerus (or Choiropotamus) Bush-pigs Abyssinian Bush-pig Potamochoerus hassama African Bush-pig Potamochoerus koiropotamus Malagasy Wild Pig Potamochoerus larvatus Red River-hog Potamochoerus porcus Potamogale velox Otter-shrews Potorous tridactylus Rat-Kangaroos, True Kinkajou Potos flavus Giant Armadillo Priodontes giganteus Prionailurus bengalensis Leopard-cat Linsang, Asiatic Prionodon linsang Linsang, Asiatic Prionodon pardicolor Proboscidea Proboscidea Procapromys Hutias Procavia Hyraxes Procavia capensis Cape Hyrax Procavia habessinica Abyssinian Hyrax Syrian Hyrax Procavia syriaca Procyon cancrivorus Raccoons Procyon lotor Raccoons Procyon pallidus Raccoons Procyonidae Procyonids; also Raccoons Prodelphinus euphrosyne Dolphin, Spotted Prodelphinus plagiodon Dolphin, Spotted Proechimys Spiny Rats Profelis aurata Tiger-cat, African Profelis celidogaster (or aurata) Tiger-cat, African Golden Cat Profelis temminckii Mole Vole Prometheomys Propithecus Sifakas Crowned Sifaka Propithecus diadema Propithecus verreauxi Verreaux's Sifaka Lemuroids Prosimiae Aardwolf Proteles cristata Protelinae Hyenas Fat Sand Rat Psammomys obesus Psedois nahoor Bharal Pseudalopex azarica Azara's Fox Pseudalopex culpaeus Fox, Cordillera Pseudochirus Ring-tail Phalangers Pseudochirus archeri Ring-tail Phalangers Ring-tail Phalangers Pseudochirus peregrinus Whale, False Killer Pseudorca crassidens Solomon Islands Flying Fox Pteralopex Pteromyidae Flying Squirrels European Flying Squirrels Pteromys volans

Pteronura brasiliensis Pteropodidae Pteropus Pteropus giganteus Pteropus papuanus Pteropus pselaphon Pteropus vampyrus Ptilocercus Jowii Pudu Pudu pudu Pudu mephistopheles Puma concolor Putorius eversmanni Putorius furo Putorius nigripes

Putorius putorius Rangifer Rangifer tarandus arcticus Rangifer tarandus caribou Rangifer tarandus fennicus Rangifer tarandus fortidens Rangifer tarandus groenlandicus Rangifer tarandus montanus Rangifer tarandus osborni Rangifer tarandus pearsoni Rangifer tarandus pearyi Rangifer tarandus sibiricus Rangifer tarandus stonei Rangifer tarandus tarandus Rangifer tarandus terraenovae Raphicerus campestris Raphicerus sharpei Raphicerus (Nototragus) melanotis Ratufa Ratufa indica Rattus rattus Rattus rattus alexandrinus Rattus rattus frugivorus Rattus norvegicus Redunca arundinum Redunca fulvorufula

Redunca redunca Reduncinae Reithrodon Reithrodontomys

Rhabdomys Rhabdomys pumilio Rhachianectes glaucus

Rheomys Rhinoceros

Rhinoceros (Diceros) bicornis Rhinoceros (Diceros) simus simus Rhinoceros (Diceros) simus cottoni

Rhinoceros sondaicus

Rhinoceros (Dicerorhinus) sumatrensis

See under: Otter, South American Fruit-bats Flying Foxes Indian Flying Fox Naked-backed Fruit-bat Bonin Island Bat Kalong Tree-Shrews Pudu Pudu Pudu Puma Polecat, Russian Polecat, Black-footed

Polecat Caribou Barren Ground Caribou Woodland Caribou Finnish Reindeer Rocky Mountain Caribou Greenland Caribou Mountain Caribou Osborn Caribou Polar Island Caribou Polar Island Caribou Siberian Reindeer Barren Ground Caribou Skandinavian Reindeer Newfoundland Caribou Steinbok Steinbok Grysbok Giant Squirrel Giant Squirrel House Rat Alexandrine Rat Alexandrine Rat Brown Rat Reedbuck Reedbuck, Mountain Reedbuck, Bohor Reduncines Rabbit-eared Mice Harvest Mouse (American) Striped Mice Striped Mice Grey Whale, Californian Fish-eating Rats Rhinoceroses Black Rhinoceros White Rhinoceros White Rhinoceros

Javan Rhinoceros

Sumatran Rhinoceros

Rhinoceros (Dicerorhinus) sumatrensis lasiotis Rhinoceros unicornis Rhinolophidae Rhinolophus blasii Rhinolophus euryale Rhinolophus ferrum-equinum Rhinolophus ferrum-equinum insulanus Rhinolophus hipposideros Rhinopithecus roxellanae Rhinopomatidae Rhinopoma microphyllum Rhizomys sumatrensis Rhynchocyon Rhynchotragus damarensis Rhytina stelleri Rodentia Rousettus aegyptiacus Rousettus leachi Rucervus duvauceli Rucervus eldii Rucervus platyceros Rucervus schomburgki Rucervus thamin Rusa alfredi Rusa hippelaphus Rusa kuhli Rusa timoriensis (= hippelaphus)

Rusa unicolor
Rupicapra rupicapra
Rupicaprinae
Saccopteryx
Saccostomus (Eosaccomys)

Saccostomus campestris Saiga tatarica Saimiri Saimiri oerstedii Saimiri sciurea Sarcophilus satanicus Scalopus aquaticus Scapanus townsendi Sciuropterus russicus Sciuridae Sciurus aberti Sciurus carolinensis Sciurus douglasii Sciurus fremonti Sciurus griseus Sciurus hudsonicus

Sciurus kaibabensis

Sciurus niger

Sciurus prevosti

Sciurus vulgaris Selenarctos thibetanus japonicus Selenarctos thibetanus

Indian Rhinoceros Horseshoe Bats Blasius Bat Euryale Bat Greater Horseshoe Bat English Greater Horseshoe Bat Lesser Horseshoe Bat Snub-nosed Monkey Long-tailed Bats Long-tailed Bats Bamboo-Rats Elephant-shrews Damara Dik-dik Steller's Sea Cow Rodents Egyptian Fruit-bat Collared Fruit-bat Swamp Deer Eld's Deer Thamin, Siamese Schomburgk's Deer Thamin Prince Alfred's Deer Timor Deer Kuhl's Deer Timor Deer Sambar Chamois

Goat-Antelopes

See under: Chittagong Rhinoceros

Pouch-winged Bats Pouched Rats Pouched Rats Saiga Squirrel Monkeys Red-backed Squirrel Monkey Squirrel Monkey Tasmanian Devil Eastern Mole Western Mole European Flying Squirrel Squirrels Tuft-eared Squirrel Grey Squirrel Red Squirrel, North American Red Squirrel, North American Grey Squirrel Red Squirrel, North American Tuft-eared Squirrel Fox Squirrel Prevost's Squirrel Red Squirrel, European Japanese Bear

Himalayan Black Bear

Semnopithecus See under: Langurs Semnopithecus nemaeus Douc Langur Sibbaldus musculus Whale, Blue Sicista subtilis Birch Mouse Sicistinae Jumping Mice Sigmodon Cotton Rats Sigmodon hispidus Cotton Rats Simenia simensis Wolf, Abyssinian Simia satyrus (= Pongo pygmaeus) Orang-Utan Simiae Apes and Monkeys Simias concolor Pagi Snub-nosed Monkey Simiidae (= Pongidae) Anthropoids Sika Sikas Sika hortulorum Pekin Deer Sika mantschuricus (or Sika nippon mantschuricus) Manchurian Deer Sika nippon Japanese Deer Sika nippon mantschuricus Manchurian Deer Sika taiouanus Formosan Deer Simplicidentata Simplicidentata Sirenia Sea Cows Sminthopsis Pouched Mice Solenodon cubanus Solenodon Solenodon paradoxus Solenodon Sorex alpinus Alpine Shrew Sorex araneus Common Shrew Sorex minutus Pigmy Shrew Soricidae Shrews Sotalia Dolphins, Long-beaked River Spalax hungaricus Mole-rats Spalax microphthalmus Mole-rats Speothos venaticus Bush-dog Spilogale putorius Spotted Skunk Spilogale pygmaea Spotted Skunk Steatomys Fat Mice Steatomys pratensis Fat Mice Steno rostratus Dolphin, Rough-toothed Stenodelphis blainvillei La Plata Dolphin Stenoderminae Short-nosed Vampires Stenorhynchus leptonyx Sea-leopard Strepsiceros imberbis Kudu Strepsiceros strepsiceros Kudu Suidae Pigs Suncus caeruleus Musk-shrews Suncus murinus Musk-shrews Suricata suricatta Meerkat Suricata tetradactyla Meerkat Sus Pigs, True Sus celebensis Celebes Wild Pig Sus cristatus Indian Wild Boar Bornean Wild Boar Sus barbatus Sumatran Wild Boar Sus barbatus oi Sus leucomystax White-whiskered Swine Papuan Wild Pig Sus papuensis Pigmy Hog Sus (Porcula) salvanius Wild Boar Sus scrofa Javan Wild Pig Sus verrucosus

Sus vittatus
Sylvilagus
Sylvilagus aquaticus
Sylvilagus bachmani
Sylvilagus palustris
Symphalangus syndactylus
Syncerus
Syncerus caffer
Syncerus caffer caffer
Syncerus caffer aequinoctialis
Syncerus caffer radcliffei
Syncerus nanus brachyceros
Syncerus nanus planiceros

Tachyoryctes splendens Talpa caeca Talpa europaea Tamandua tetradactyla Tamias Tamias striatus **Taphozous Tapirus** Tapirus bairdii Tapirus dowi Tapirus indicus Tapirus pinchaque (or roulini) Tapirus roulini Tapirus terrestris Tarsipes rostratus Tarsius Tatera indica Taurotragus derbianus derbianus Taurotragus derbianus congolanus Taurotragus derbianus gigas Taurotragus oryx Taxidea taxus Tayassu pecari Tayassuinae (or Dicotylinae) Tavra barbara Tetraceros quadricornis Thalarctos maritimus Theropithecus Theropithecus gelada Theropithecus obscurus Thos adustus Thos aureus Thos lupaster Thryonomys Thrvonomys swinderianus Thylacinus cynocephalus Thylacomys lagotis **Tolypeutes** Trachypithecus pyrrhus Tragelaphinae Tragelaphus Tragelaphus angasi

See under: East Indian Wild Boar
Cottontails
Swamp Rabbits
Brush Rabbit
Swamp Rabbits
Siamang
Buffaloes, African
Black Buffaloes
Cape Buffaloes
Nile Buffalo
Uganda Buffalo
Lake Chad Buffalo
Gambia Buffalo

Mole-rats Blind Mole European Mole Tamandua Chipmunks North American Chipmunks Tomb-bats **Tapirs** Baird's Tapir Dow's Tapir Malayan Tapir Roulin's Tapir Roulin's Tapir South American Tapir Honey Mouse Tarsier Indian Gerbil Eland, Giant Eland, Giant Eland, Giant Eland Badger, American White-lipped Peccary Peccaries Tayra Four-horned Antelope Polar Bear Geladas Gelada Baboon Gelada Baboon, Dusky Side-striped Jackal Oriental Jackal Wolf-like Jackal Cane-rats Cane-rats Thylacine Rabbit-bandicoot Three-banded Armadillo Moor Langur

Tragelaphines

Bushbucks

Nyala

Tragelaphus buxtoni Tragelaphus scriptus Tragelaphus (Limnotragus) spekei Tragulidae Tragulus javanicus Tragulus kanchil Tragulus stanlevanus Tragulus (Moschiola) meminna Tremarctos ornatus Trichechidae (= Manatidae) Trichechus (= Manatus) inunguis Trichechus (= Manatus) latirostris Trichechus (= Manatus) manatus Trichechus (= Manatus) senegalensis Trichechus (= Manatus) manatus Trichosurus Trichosurus caninus Trichosurus vulpecula Trichosurus vulpecula fuliginosus Tubulidentata Tupaia ferruginea Tupaia tana Tupaiidae Tursiops gillii Tursiops nuuanu Tursiops tursio (= truncatus) Tylonycteris pachypus

Uncia uncia
Ungulata
Urocyon cinereoargenteus
Ursidae
Ursus (Euarctos) americanus
Ursus arctos
Ursus arctos isabellinus
Ursus arctos pruinosus
Ursus arctos syriacus
Ursus arctos yesoensis
Ursus gyas
Ursus horribilis
Ursus kenaiensis
Ursus magister
Ursus middendorfi

Vampyrus spectrum
Vespertilio murinus
Vespertilionidae
Vetulus silenus
Viverra tangalunga
Viverra zibetha
Viverricula indica (= malaccensis)
Viverridae
Vizcacia (= Lagostomus) maximus
Vormela peregusna
Vulpes chama
Vulpes fulva

See under: Nyala, Mountain Bushbuck (proper) Sitatunga Chevrotains Malayan Chevrotains Malayan Chevrotains Malayan Chevrotains Indian Chevrotain Spectacled Bear Manatees Manatees Manatees Manatees-Manatees Lamantin Australian Opossums Short-eared Opossum Long-eared Opossum Long-eared Opossum, Brown Aardvarks (or Ant-Bears) Tree-Shrews Tree-Shrews Tree-Shrews Dolphin, Bottle-nosed Dolphin, Bottle-nosed Dolphin, Bottle-nosed Thick-footed Bat

Snow-leopard
Ungulates
Fox, Grey
Bears
American Black Bear
Brown Bear
Isabelline Bear
Blue Bear
Syrian Bear
Japanese Bear
Grizzly Bear
Grizzly Bear
Grizzly Bear
Grizzly Bear
Grizzly Bear
Grizzly Bear

Parti-coloured Bat
Vespertilionids
Macaque, Lion-tailed
Tangalunga
Large Indian Civet
Rasse
Viverrids
Viscacha
Marbled Polecat
Fox, African Silver
Fox, North American Red

Vampire

Vulpes macrotis Vulpes pallida Vulpes velox Vulpes vulpes Vulpes zerda

Xerini Xerus rutilus

Zaėdyus pichyi
Zaglossus bruijni
Zaglossus
Zalophus californicus
Zalophus lobatus
Zapodidae
Zapus
Zapus hudsonicus
Zenkerella
Zibethailurus viverrina
Ziphiinae
Ziphius cavirostris

See under: Kit Fox Fox, Pale Sand Kit Fox Fox, Old World Red Fennec

Ground Squirrels, African Sudan Ground Squirrel

Dwarf Armadillo
Echidnas and Long-beaked Echidnas
Echidnas
Sea Lions
Sea Lions
Jumping Mice
Jumping Mouse
Scaly-tails
Fishing Cat
Beaked (Bottle-nosed) Whales
Cuvier's Beaked Whale