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Guide to Mammals
1885

VISITORS' GUIDE
TO THE
COLLECTION OF MAMMALS
IN THE
AMERICAN MUSEUM OF NATURAL HISTORY,
(CENTRAL PARK, MANHATTAN SQUARE,)
77th Street and 8th Avenue,
NEW YORK.

PRINTED FOR THE MUSEUM.

L. S. FOSTER, PRINTER, 35 PINE ST., N. Y.

1885.

THE
LIBRARY
OF THE
MUSEUM OF
COMPARATIVE ZOOLOGY
AT HARVARD UNIVERSITY

PLATE I
MARINE MAMMALS
OF THE
NORTH PACIFIC

Sea Lion.

Walrus.

Ribbon Seal.

Hooded Seal.

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VISITORS' GUIDE TO THE MAMMALS.

The series of visitors' guides, of which this on mammals is one, is intended as a help to examine the most interesting objects in the museum, and as an aid to learning their natural relations.

THE HALL OF MAMMALS.

On entering the building the collection of mammals first presents itself before the visitor.

Over the vestibule entrance is a portrait, by Huntington, N. A., of the late ROBERT L. STUART, second president of the museum.

The visitor will notice the admirable arrangement of well-lighted cases, wherein the specimens are exhibited with every accessory for displaying their characteristics to the best advantage. The building is of iron and stone, and the cases are iron with a thin finishing of wood on the exterior. The valuable collections are thus placed out of the reach of harm from fire. The doors of the cases are of finest plate glass.

As the old plan of exhibiting specimens of birds and mammals with natural accessories, as trees and rocks, is untidy and otherwise undesirable, objects are here regarded as works of art, that require for their proper display simply pedestals, neatly proportional to the specimen. As an important part of these appointments, which are intended to be in harmony, as much so as a bust or statue with its base, the label is in due symmetry with the stand or perch.

The term **GROUP**, with a number affixed at the head of certain paragraphs in these guides, indicates in what part of the collection the specimen is to be seen; for example, **GROUP I** stands for man-like apes, seen in the collection of monkeys on the second floor.

Square labels seen in the cases, bear numbers corresponding to those in the Guide, respectively.

THE ANIMAL KINGDOM.

VERTEBRATE ANIMALS.

MAMMALS.

Animals having a bony skeleton, supported by numerous bony blocks which form the backbone and surmounted by a skull that protects the brain, are called vertebrate animals. A certain number of these suckle their young, and are seen to be the higher forms, quite easily distinguished from the remainder; as for example from the birds, from the reptiles, and from the fishes.

This class of vertebrate animals is named *Mammalia*, from the term indicating the great distinguishing feature, the source of milk, which all mammals require from birth.

Man, the highest mammal, has been variously regarded in classification. The older naturalists placed him in a separate Order, *Bimana*, from the distinguishing feature, two hands; the monkeys and apes being classed as four handed, and placed as Order II. *Quadrumana*. In deference to man's superior estate, he may well be left free from classification.

As the collection includes some skeletons of one of the lowest races of human beings, the Australian, it will be instructive to view them as examples of the highest of mammals.

AUSTRALIAN (*Homo sapiens*), represented by several skeletons; one of them, a female, measures six feet in height.

Skulls of many native races from various portions of the world are here; the several skulls of the Chinook Tribe of North American Indians are interesting from their condition exemplifying the flattening of the head artificially. It is well known that nearly every tribe of Indians from the Arctic regions to Patagonia once practised this barbarous custom. The Chinooks yet continue it. The embalmed bodies in the doorway of the Archæological gallery are of

this tribe. The group consists of a chief and his wife and child, on whom a somewhat elaborate embalming has been practised. The heads are wrapped in snake skins, and the whole body inclosed in a handsomely colored buckskin sewed by thongs of the same. The outer buckskin is handsomely figured and colored, and around the limbs are long strings of beads. The unusual amount of decoration on these mummies indicates a former high rank borne by these individuals.

THE HIGHER ANIMALS.—ORDER PRIMATES.

The first of animals, or the highest after man, are embraced in this Order, which includes Apes, Monkeys, and Lemurs. Two very distinct groups are noticed among the monkeys; found respectively in the old and new worlds. The Lemurs form a group almost entirely inhabiting Madagascar.

The Old World Monkeys (Family *Simiadeæ*) are regarded as highest in the scale of life; several sub-families are recognized.

Gibbon.

Orang.

Chimpanzee.

Gorilla.

Man.

Representatives of the first family of the Animal Kingdom—the Primates.
From D. Appleton & Co.'s "Elements of Zoology, Science Series."

GROUP 1.—The first sub-family embraces what are known as man-like apes. Twelve species are recorded, inhabiting tropical Africa and the East Indies.

Gorilla.

From D. Appleton & Co.'s "Elements of Zoology, Science Series."

The GORILLA (*Troglodytes savagei* Owen) inhabits

Central Africa, and shares about equally with the chimpanzee the sum of characteristics that places these forms nearest man.

The CHIMPANZEE (*Mimetes troglodytes* Gray). This ape inhabits Central Africa; it does not attain the size of the former, its extreme height being five feet; examples, however, are seldom met with as large as this. Its jet black hair and placid, good-natured face is in striking contrast to the diabolical countenance of the gorilla.

The ORANG-OUTAN (*Simia wurmbii* Fischer) is represented in this collection by five remarkably fine examples, in a group consisting of male and female adults, two half-grown males, and a baby. A taxidermist of Prof. H. A. Ward's establishment, in Rochester, N. Y., shot these individuals, constituting a family, in the situation in which they are here seen. It is a habit of the orang to retain several generations of its progeny in its neighborhood, and likewise to construct platforms or open houses in the tree-tops as here depicted. The taxidermist has preserved leaves, fruit, and tree of the Durian, and here reproduced the scene with great fidelity, all just as he saw it in the tropical forest. The orang is quite dependent upon the tree-tops for home and food, and is quite out of his element on the ground; his feet are like hands, made to hold securely to the boughs, and would be quite useless upon level ground.

The GIBBONS (*Hylobates*) are native to the East Indies. Eight species are known; these with the three species of great apes, above noticed, comprise the distinctly marked group of man-like apes. The gibbons are seen to resemble very closely the chimpanzee; having no tails like their allies of the group, they would seem to be quite removed in point of rank from the next. That this is not the case to any considerable extent is seen when we find that group having the longest tails of any. These long tails are equalled in some species of American monkeys, but none are prehensile or clasping as in the latter.

GROUP 2.—SEMNOPIITHECUS. This genus is represent-

ed in the East Indies by sixteen very distinct species; many of the most prominent are here seen, and are so named from a fancied sleepy or venerable aspect. They are also called tailed apes, from the fact that their tails contrast strongly with those of many of the dog-faced monkeys, which comprise the next group, and whose tails are quite rudimentary.

The PROBOSCIS MONKEY (*Nasalis larvatus* Geoff.) is found in Borneo, and is the only species known to have such a nasal appendage. The specimen here exhibited is an adult, and an excellent example. A young one of the same shows the early stages of the nasal development.

The genus *Colobus* embraces six species. Black or black and white are characteristic of the hair of these monkeys; they are all African.

The GUEREZA (*Guerza ruppelli* Gray) is somewhat larger, yet having the black and white markings. It inhabits Western Africa.

GROUP 3.—The DOG-FACED MONKEYS form several genera in which twenty-six species are embraced.

The little MOUSTACHE MONKEY (*Cercopithecus cephus* Erxl.) is an interesting one. There are several very pretty gray-coated species, with a curious white spot on the nose; for example the WHITE CHEEKED HOCHER (*Cercopithecus petaurista*). Several of this group have white crests or patches of white hairs over the head, and surrounding the neck in various ways. The DIANA MONKEY (*Cercopithecus diana* Erxl.) is a notable one; so named from the crescent-shaped white patch on the head, which suggests the frontal ornament of the goddess. The DIADEM MONKEY is another, having distinguishing marks also in white, shaped to simulate a diadem.

The COLLARED MANGABY (*Cercocercus collaris* Gray) is an example of several of this genus. The term mangaby, like many others, is a local African one.

The MACAQUES are pretty uniformly alike in characteristics as distinguished from the preceding, most of them have very short tails. They are all African.

THE BONNET MACAQUE (*Macacus sinicus* Gray) is one of the most common; so named from its peculiar tuft of hairs on the crown.

THE THIBET MACAQUE (*Macacus thibetanus*) is a newly discovered species from the colder regions of Thibet, a most unusual locality for monkeys, as they require in most cases a warm climate.

THE MAGOT (*Inuus candatus* Geoff.) is the familiar Gibraltar species, and is the only one found in Europe. It is said that less than a dozen are now living on the rocks they have been so long identified with.

THE GELADA (*Gelada ruppelli* Gray) is a remarkable creature in hair development; the back and shoulders seem to be covered by a fur or hair cape, which has a more artificial appearance from the fact that the loins are nearly destitute of hair. The HAMADRYAS is similarly coated, besides having a most diabolical countenance. These forms show the dog-faced characteristic well.

Twenty-three species of macaques and dog-faced monkeys proper are known. Members of the latter portion of this group are called baboons. The CHACMA (*Cynocephalus porcarius*) is a very common example, the term cynocephalus meaning dog-headed.

THE MANDRILL (*Mormon maimon*), inhabiting Africa, is of all animals, without excepting even the gorilla, the most repulsive in appearance; the mandrill exceeds in size all other monkeys, excepting those of the first group, the man-like apes.

The American Monkeys (Family *Cebidæ*) inhabit South America, and a few species also the Isthmus of Panama. They are separated from the preceding, those of the old world, Africa, and the East Indies, by certain well-marked characteristics. A large number of the American monkeys have prehensile tails by which they swing themselves from tree to tree, and even by their sensitive tail-tips remove eggs from a very deep nest; indeed this member is equivalent to a fifth hand. These creatures are strictly arboreal, being wholly unfitted for terrestrial loco-

motion, they have no cheek pouches, nor the calloused portions present in the old world forms.

The famous Spider Monkeys are first in rank. There are twelve species embraced under the title *Ateles*.

GROUP 4.—The COAITI (*Ateles paniscus* Geoff.) is the most familiar species; and exhibits the more remarkable characteristics peculiar to this group of monkeys. It is often seen in the zoological collections in Central Park. One is impressed at once, on seeing this monkey moving within his cage, with its striking resemblance to a great slender spider; especially from certain deliberate movements of the limbs; five equally important and equally used members are in motion at once, the tail being of the first importance; constantly he presents this member, a fifth hand, from over his head ready to clasp the first support attainable before him, it is the *avant courier* of all his movements. Other species are larger and have the same strong prehensile tail; notably the BARTLETT SPIDER MONKEY.

The next genus includes two species, the most common of which is HUMBOLDT'S MONKEY (*Lagothrix humboldti* Geoff.), famous for its beautiful fur, that is an important article of commerce in Brazil. Sixteen species of the genus *Cebus* follow next in rank.

The MONK MONKEY (*Cebus xanthocephalus* Spix) is one of the most familiar forms. Several species of these monkeys are frequently trained for street exhibitions.

Ten species of the genus *Myctes* are known, they are the notable and notorious HOWLERS; terrible disturbers of the quiet of their native woods. They have a peculiar development in the throat by which their loud harsh voice is much increased in volume.

The GOLDEN HOWLER (*Myctes seniculus* Kuhl.) is a familiar form; it has a large body, yet its prehensile tail is sufficient to hold it suspended even by the use of only the extreme tip.

GROUP 5.—Several weak-looking, long-haired monkeys

Humboldt's Monkey.

From D. Appleton & Co.'s "Elements of Zoology, Science Series."

belong to this group. Five species are known in the genus *Pithecia*, called severally YARKEE, BLACK YARKEE, WHISKERED YARKEE, &c.

Of the genus *Brachyurus*, SHORT-TAILED MONKEYS, there are three species, having the tails short and club-shaped; they are called RED ACARI, WHITE ACARI, and BLACK AND WHITE ACARI; these terms having some local meaning.

GROUP 6.—Three species of very small, large-eyed monkeys are called *Nyctipithecus* or NIGHT MONKEYS, being well adapted, like the owl, for seeing in the night. The DOUROUCOULI (*Nyctipithecus trivirgatus* Gray) is the

most common form, its trivial name being derived from its peculiar cry.

Three species of the genus *Chrysothrix* are known. The TEE TEE (*Chrysothrix sciurus* Wagner) is a familiar example, so named from its two-syllabled cry. Its generic name refers to its beautiful fur, and its specific to its resemblance to the squirrels.

The term *Callithrix* has a similar meaning to the preceding generic name. Eleven species of this genus are known. They are also called TEE TEE, having a like cry. By some they are called ORUBASSU, from a local, native word.

There are sixteen species of very small monkeys, called respectively MARMOSETT, MARAKINA, PINCHE, MIDAS, and TAMARIN, all probably from native designations. There are seven genera which embrace the above species, as follows: *Hapale*, *Facchus*, *Cebuella*, *Mico*, *Leontopithecus*, *Edipus*, *Midas*, *Cenocetus*.

The MARAKINA (*Leontopithecus rosalia* Gray) is a more common form, called LION MONKEY from its singular resemblance to that beast. The MARMOSSETTS are interesting pets, and appear to be the most harmless and timid of all mammals.

GROUP 7.—The LEMURS, family *Lemuridae*, are notable for being native to one comparatively small area, that of the island of Madagascar. There are forty-one species embraced in thirteen genera. The largest and most interesting form is the INDRIS (*Indris brevicaudatus*). The creature has a most remarkable arrangement of black and white fur; its tail is too short to be observed, differing greatly in this respect from the very beautiful pompon-like appendages of the nearly allied DIADEM LEMURS, five specimens of which are grouped near the former.

The family of LEMURS proper embraces the genera *Indris*, *Propithecus*, *Avahis*, *Lemur*, *Hapalemur*, *Lepilemur*, *Chirogaleus*, *Galago*, *Loris*, *Nyctictebus*, and *Perodictus*. The smallest of the group is the DEMIDOFF GALAGO

Aye Aye.

Lemur.

From D. Appleton & Co.'s "Elements of Zoology, Science Series."

(*Galago demidoffi* Fischer), not much larger than a good-sized mouse.

The family *Tarsiidae* includes one genus, with only one species, the TARSIER (*Tarsier spectrum* Geoff.), a delicate little creature, with staring, bright eyes, which are conspicuous at night; hence the last or specific name. Its slender limbs and peculiar toes also are noticeable.

The family *Chiromyidae* includes one genus, and, like the last mentioned, with one species: the AYE-AYE (*Chiromys madagascarensis*). This creature so resembles in certain features the rodents, that it has been regarded by some as more naturally placed among them. The present view of its affinities gives it this place.

FLESH-EATING ANIMALS.—ORDER CARNIVORA.

This order of animals is very easily distinguished from others by the character of their teeth and claws.

GROUP 8.—The CATS, family *Felidæ*, rank first.

The AFRICAN LION (*Felis leo*) leads the family. The superb specimen, mounted by Verreaux of Paris, is one of highest attainments in the art of taxidermy. The Asiatic lion, much lighter in color and with little mane, may be seen in the group "Courier attacked by lions."

Tiger.

From D. Appleton & Co.'s "Elements of Zoology, Science Series."

The TIGER (*Felis tigris*) is represented by a specimen of rather more than ordinary size from northern Asia, its northern habitat is indicated by its superb coat of long-haired fur.

The JAGUAR (*Felis onca*), inhabiting South America, the largest living cat on this continent, is truly a noble beast. The Central Park menagerie has two exceedingly fine examples. The black and gold coloration, and the powerful yet graceful form, render him marvellously attractive.

The LEOPARD (*Felis pardus*). This splendid cat is a native of Africa, but is also found in Asia, its resemblance to the jaguar is at first confusing, but a nearer view shows the latter to be much the stouter, with a more vicious countenance, and a heavier, shorter tail. The spots of the latter are composed of rosettes, having central dots of black. Both are remarkably elegant in coloration.

The PUMA (*Felis concolor*) is the more familiar panther or "painter" of the Eastern States; though now it is rare. Its range is over the whole continent south of Canada. Its plain lion-color has earned for it the name American lion, and indeed it quite resembles a small lioness.

The OUNCE (*Felis uncia*) is one of the most unfamiliar of carnivorous animals, being very seldom seen in collections. It inhabits the cold regions of northern Asia, and its long white and spotted fur gives it an aspect of great size.

The OCELOTS or TIGER CATS are very beautiful creatures, mostly inhabiting South America, though one or more are found in Central America.

The SERVAL (*Felis serval*) is an African species; peculiar in having longer legs and a shorter tail than usual.

Lynx.

From D. Appleton & Co.'s "Elements of Zoology, Science Series."

The CHEETAH or HUNTING LEOPARD (*Felis jubata*) is a notable beast. In India, having been properly trained, it is made use of to capture deer and other large game. Its long stiff legs are suggestive of the dogs, and some authors have regarded this as nearly allied to them.

Several specimens are in this collection, which are called WILD CATS; they are much larger than the ordinary domestic cat, yet are probably progenitors of the latter.

The LYNX (*Felis canadensis*) is a fine example of this race, its thick coat of light-colored fur rendering it quite attractive. It is abundant in Canada and the Rocky Mountains. The peculiar ear tufts and the very short tails are distinguishing features of this group of cats.

The CARACAL (*Felis caracal*) is a near relative of the lynx, having the same ear tufts, but with a slenderer body. It is found in Africa and Asia.

Embraced within the family *Felidae* are several sub-families, as follows:

GROUP 9.—The CRYPTOPROCTAS. Sub-family *Cryptoproctinae*. One species only is known of this, viz.: *Cryptoprocta ferox*. This little animal is very rare, but few specimens having as yet reached European collections. It is a native of Madagascar, that region of singular forms, and is credited with the fiercest disposition of any known mammal.

The CIVET CATS, Sub-family *Viverrinae*. These are cat-like animals, many of them being peculiarly slender, like the weasels. The civet secretion, which is derived from some of them, is a white, fatty substance, originating in certain glands or pouches, just under the tail, and is used by the perfumer.

The AFRICAN CIVET (*Viverra civetta*) is the chief species, and the one producing the civet of commerce.

The ASIATIC CIVET or ZIBET (*Viverra zibetha*) is the handsomer animal; a superior specimen is here exhibited. Its habits are little known, but it appears to be domesticated with but little effort.

Other forms of this group are here seen, the GENETTE, the ICHNEUMONS, and others, all of which bear appropriate labels. The Ichneumons are more familiar, from the fact that they are used as rat exterminators, one species, the MUNGOOS, being especially fitted for this purpose. Though the body is long, and the animal is much heavier than a rat, yet it is so very slender that it passes into holes with as much ease as the latter. It is employed in the East as a fighter of the poisonous serpent, the deadly cobra, singularly escaping the fatal result from the bite of this venomous reptile.

The PARADOXURE is represented by several species. As in many other instances there is no common English name for these animals. The only external feature of the species which may be considered characteristic is the singular twisted tail which appears abnormal, but is not so; and from this the name is derived. Twenty-seven genera are included in the groups or sub-families *Viverrinæ* and *Herpestinæ*. Many of the genera are here represented, and of the *Herpestinæ* there are numerous species in this collection. Sub-family *Rhinogalidæ* embraces five African genera. The SURICATE is one.

GROUP 10—The HYÆNAS, Family *Hyænidæ*. This is one of the smallest families. It has a sub-family embracing a genus called *Proteles* of one species, the AARD-WOLF, inhabiting southern Africa, the affinities of which are between the civets and the hyænas. Scarcely another animal is so unfamiliar as this, it seldom being seen in collections.

A single genus forms the family of hyænas, of which three species only are known: The STRIPED HYÆNA (*Hyæna striata*), inhabiting northeastern Asia; the SPOTTED HYÆNA (*Hyæna crocuta*), inhabiting northern Africa, and the *Hyæna brunnea* found in South Africa. Externally hyænas have the appearance of ugly dogs.

GROUP 11.—The DOGS, Family *Canidæ*. The domestic dogs, wolves, and foxes comprise this family, including three genera, with fifty-four species.

The DINGO (*Canis dingo*) is a native of Australia, where it abounds, being regarded by some as the only true dog found in a wild state.

Wolf.

From D. Appleton & Co.'s "Elements of Zoology, Science Series."

The WOLF (*Canis occidentalis*) is a fair example of and the largest of its family. The PRAIRIE WOLF (*Canis latrans*), called also the COYOTE on our western plains, is considerably less than half the size of the preceding. It is yet quite numerous on the prairies west of the Mississippi River. It hunts in packs.

The FOXES, Sub-family *Vulpinae*, form another division distinguished by certain characteristics.

The ARCTIC FOX is here represented by a most beautiful specimen, white as the purest snow. It inhabits the arctic regions of both continents.

The COMMON RED FOX inhabits the Fur Country and Labrador, and southward to the Carolinas. Though much resembling the European Red Fox our form is regarded as distinct; both species are represented in the collection, the American one being the larger.

The SWIFT FOX is a much smaller species, found on the prairies west of the Mississippi River.

The SILVER GRAY and the CROSS FOX are also North American species.

Common Fox.
Arctic Fox.
Polecat.

Mink.
Ermine.

From D. Appleton & Co.'s "Elements of Zoology, Science Series."

GROUP 12.—The WEASELS, Family *Mustelidae*. This large family is divided into three sub-families, including over twenty genera. The first division is composed of the otters.

The CANADA OTTER (*Lutra canadensis*). This is the common species, formerly inhabiting the entire continent of America; but, like many other animals, it has retired steadily before civilization, the eastern shore of Maryland having been once a favorite locality for it. The most characteristic habit of this otter is that of sliding down hill as if for pleasure! Audubon and others testify to seeing otters even in summer, snow or ice being absent, select some steep bank, and indulge in this play, apparently with the keenest enjoyment.

The SEA OTTER (*Enhydra marina*) is almost as much a sea-going creature as the eared seals. It feeds exclu-

Sea Otter.

From D. Appleton & Co.'s "Elements of Zoology, Science Series."

sively upon fish, and from its large, webbed feet is well adapted to swimming. It inhabits the waters of the extreme northern parts of America and Asia, and ranges as far south as California. Its fur is highly esteemed and is usually very expensive.

The next sub-family has as its representative the skunk, and includes also the badgers and allied forms.

The COMMON SKUNK (*Mephitis mephitis*) is present by several specimens, adults as well as young. A singular species called MYDAUS is closely related to the skunk, but it has a very short tail. It inhabits the East Indies.

The AMERICAN BADGER (*Taxidea americana*) as we here see it, beside the European species, would seem to be the same, but certain characteristics, notably those of the teeth, place it even in a separate genus. Another species is said to inhabit Central America. The badger abounds in the fur countries of the north, and is found on the plains east of the Rocky Mountains. Several other forms, representing several genera from the Old World, are in the collection.

The weasels proper belong to the third sub-family, six genera being here included.

The **ERMINE WEASEL** (*Putorius erminea*) is the most interesting form. Its pure white coat, with a single, black bar at the tail tip, renders it an attractive creature. The American, the European, and the Asiatic forms are now acknowledged to be identical. Ten species, some of them perhaps mere varieties, are recognized in North America.

The **MINK** (*Putorius vison*) inhabits North America at large, it is considerably stouter than the weasels proper, and has a dark, richly colored fur. It is perhaps the most familiar species known in the northern States. It lives exclusively along water-courses.

The **BLACK-FOOTED FERRET** (*Putorius nigripes*). Audubon described this animal, and for a long time no other specimen was found. It is now by no means rare. A good example is in this collection.

The **WOLVERINE** or **GLUTTON** (*Gulo luscus*) is found in the colder regions of both continents. It is one of the largest of the fur animals. It occasionally reaches the northern portions of the State of New York, and Prof. Emmons, a few years since, stated that it yet exists in the Hoosac Mountains in Massachusetts. Its general appearance is much that of a small bear.

GROUP 13.—Family *Procyonidae* includes the small group of bear-like creatures represented by the **RACOONS**, **COATIMUNDIS**, and like forms.

The **RACCOON** (*Procyon lotor*) is one of the most common of American mammals, and has an extended range over this continent. Its food consists of shell-fish, birds-eggs, &c., but it is said to prefer vegetable food. Its habits are mostly nocturnal. Two other species of racoons are recognized. The common racoon hibernates like the bears. This group is interesting as being exclusively American. Four genera and eight species are enumerated by Wallace.

COATIMUNDI (*Nasua narica*). Of this genus five species are noticed. The specific name refers to the nose, which is upturned, and suggests as a common name the term

"nosey." This creature is frequently seen in menageries. It is lively and comical in its habits.

The KINKAJOU (*Cercoloptes caudivolvulus*) is quite unique in appearance, as well as in numbers. It is the only one of the genus, and is American, inhabiting South America, and extending as far north as Mexico. Its tail is prehensile, nearly as much so as in the monkeys. It is entirely nocturnal.

The BASSARIS (*Bassaris astuta*). This animal was for a long time regarded as allied to the civet cats of the Old World. As there are none of the latter family in America, the bassaris was considered curiously unique. It has, however, been ascertained that it is closely in affinity with the preceding forms, and it is now here located. It bears a striking resemblance to the racoon.

Family *Ailuridæ*. This is represented by only two genera, with two species, PANDA being only the common name. They inhabit the Himalayas and Thibet, their nearest relations being the bears and coatimundis.

GROUP 14.—The BEARS, Family *Ursidæ*. Bears are clearly defined as a group, and are pretty well distributed, though some regions form exceptions. One species only inhabits South America, and they are absent in Australia and central and southern Africa; one is found in Europe; the larger number inhabit temperate North America. A peculiar group of bears is found in Asia and the islands of the Indian Ocean; these are called Sun Bears from their fondness for basking in the sunlight. They are small, and have a horseshoe shaped mark upon their breasts. The extraordinary habit of hibernation is illustrated especially in the AMERICAN BLACK BEAR (*Ursus americanus*). If there is no appropriate shelter of dead tree or the like at hand, the bear, if fat, lies down and pulls the dead leaves and brush around him, and soon falls asleep, the snow covering him; and in this natural den he sleeps away the winter months, sustained by the immense layers of fat on his body. The black bear is yet quite common in the

Adirondacks and the Alleghany Mountains. A variety called the CINNAMON BEAR is found in California. Five genera, with fifteen species, are known.

White Bear.

Walrus.

From D. Appleton & Co.'s "Elements of Zoology, Science Series."

The WHITE or POLAR BEAR (*Ursus maritimus*) is quite a marine animal, diving and pursuing its prey under the ice in the polar seas, displaying great activity and endurance.

The GRIZZLY BEAR (*Ursus horribilis*) is pre-eminently the superior over all the carnivorous animals on this continent, both as to its size and the fearful power of limb that it possesses. In its range, it is confined to the American continent, inhabiting the Rocky Mountain region.

GROUP 15.—THE EARED SEALS, Family *Otariidae*. The seals form a sub-order of the carnivora, called *Pinnipeds*, or wing-footed or fin-footed, referring to their "flippers." The highest forms, called Eared Seals, have the ex-

tremities so placed that they can walk on all fours. This group includes the FUR SEALS, so prized for their rich fur; excellent examples are in this collection.

The FUR SEAL (*Callorhinus ursinus*) is here represented by male, female, and young. The fur does not show in these specimens, on account of the long hairs that project beyond it; these hairs are cut off by scraping the inside of the skin, the roots being longer and more deeply sunken than those of the fur proper.

Several other grand individuals of the Eared Seal family are here, notably,

The CALIFORNIA SEA LION (*Zalophus californianus*). This is the familiar species so common on the rocks off San Francisco. The eared seals are confined to the shores of the Pacific in both hemispheres; none are found on the Atlantic coasts. Four genera, with eight species, are known.

Family *Trichechidae* embraces one genus, with one species, the WALRUS.

The MORSE or WALRUS (*Trichechus rosmarus*) inhabits the circumpolar region of the north. The largest specimen known is here exhibited. The female and young are also here. These animals rank as midway between the preceding eared seals and the common seals. To the Eskimo, this creature is most valuable, and to civilization it contributes the ivory of its tusks; this together with its oil and hide are of considerable commercial importance.

GROUP 16.—The COMMON SEALS, Family *Phocidae*. Of this family thirteen genera, with twenty-one species, are known. They are called True Seals or Earless Seals, as they have no external ears. This is a distinguishing characteristic. Yet much more important features are seen that place the latter group lower in the scale of life than the eared seals. The Common Seals are more residents of the sea; yet though able to live out of it, their forms are less suited to locomotion.

The HARBOR SEAL (*Callocephalus vitulinus*) is the most

familiar form. Until recently it was seen in considerable numbers in New York harbor ; now it is but rarely observed south of Cape Cod. This species is especially amenable to domestication.

Harp Seal.

From D. Appleton & Co.'s "Elements of Zoology, Science Series."

The HARP SEAL is a beautiful and very abundant species off the shores of Greenland. The BANDED SEAL is so rare that at present there are only two specimens in this country, one of them being in this collection. Its curiously marked fur is quite attractive.

The SEA ELEPHANT quite rivals the walrus in size, though not so bulky proportionately. Its length is thirty feet, and its girth fifteen to eighteen feet. The males have a singular development, which has the effect of a proboscis, hence the name of the creature.

The HOODED or CRESTED SEAL also has a similar nasal protuberance. Fine examples of this seal are in this collection. A skeleton of each group is here to be seen, from which much may be learned of their characteristic features.

THE HOOFFED ANIMALS.—ORDER UNGULATA.

Family *Hyracidae*. The little creatures about the size of a rabbit, which alone form this sub-order, are the conies of

the Scriptures. They have hoofs and teeth resembling those of the rhinoceros and kindred forms; consequently, though so small, they are placed among the great animals that constitute this large order. A good, mounted specimen is here to be seen, as well as a skeleton, both affording a good view of the peculiar characteristics that warrant its rank as the representative of a sub-order. Only one genus with twelve species are known. The Syrian form is the one mentioned in the Scriptures as a cony, others are found in various parts of Africa.

GROUP 17.—Family *Elephantidae*. The ELEPHANTS form a group, or sub-order, which includes the MASTODON, the DINOTHERIUM, and several other extinct beasts, whose remains, together with those of certain forms of prehistoric elephants, are found in the western United States.

GROUP 18.—Family *Tapiridae*, the TAPIRS. This family includes two genera with six species. The MALAY TAPIR (*Tapirus malayanus*) is the most familiar, being seen at times in menageries. A fine example is in this collection. The AMERICAN TAPIR (*Tapirus terrestris*) is found in South America, where other species inhabit. It is the largest of South America's mammals. BAIRD'S TAPIR dwells upon the Isthmus of Panama and in Mexico.

GROUP 19.—Family *Rhinocerotidae*, the RHINOCEROS. One genus with five species are recognized in this family, inhabiting Asia and Africa. The skull of one, and the separated horn, here seen, show the features of this formidable weapon. Four extinct families, following the above naturally, are present in the large number of such remains found in the western portions of our country. To us they seem to have been very peculiar creatures, some remotely resembling the rhinoceros, others horse-like in appearance.

GROUP 20.—Family *Equidae*, the HORSES. One genus, including eight species, is now regarded as embracing all

of this family. The ZEBRAS, ASSES, QUAGGAS, and similar forms, are of them. Though there is no living American horse, there are numerous species found among the fossil remains in the United States.

GROUP 21.—Family *Hippopotomidæ*, the HIPPOPOTAMUS. One genus with two species form this family. The well-known animal of the River Nile is the representative. Eight extinct species are known by their remains discovered in Europe.

GROUP 22.—Family *Suidæ*, the HOGS. This family includes five genera with twenty-two species. The WILD BOAR (*Sus scrofa*) is native in Europe and there abounds. The PECCARY (*Dicotyles torquatus*), inhabiting South America, is singularly fierce, though its size is not more than that of a half-grown hog, yet the great carnivores of South America find in it a dangerous enemy.

Babirusa.

From D. Appleton & Co.'s "Elements of Zoology, Science Series."

The BABIRUSSA and PHACOTHERIUM, or WART-HOG, extraordinary looking creatures, inhabit the East Indies and Africa respectively.

GROUP 23.—Family *Camelidæ*, the CAMELS. Of this family there are six species embraced in two genera.

Arabian Camel or Dromedary.

From D. Appleton & Co.'s "Elements of Zoology, Science Series."

The Old World camels are well known. Two distinct species are represented; by the BACTRIAN CAMEL with its two humps and long, silky hair, from which the valuable shawls are made, and by the DROMEDARY, or ONE-HUMPED CAMEL of the desert. In South America, the camels are small, four species being known; two of them are domesticated and serve as beasts of burden. The LLAMA (*Vicuna guanaco*) is the more familiar form. Many extinct fossil American species are recognized.

GROUP 24.—Family *Tragulidæ*, the CHEVROTIANs. This is a group of small hornless, deer-like animals, resembling antelopes. Some have tusks in their upper jaws pointing downward. Two genera with six species are known. The MUSK DEER is the largest of the group. Several species are about the size of a rabbit, but they stand on long, slender legs.

GROUP 25.—Family *Cervidæ*, the DEER. This important and extensive group is represented in the American

fauna by the largest species. Wallace records eight genera, with fifty-two species, as the total number known.

Moose.

From D. Appleton & Co.'s "Elements of Zoology, Science Series."

The MOOSE (*Alce americanus*) is the largest species known. A family of these animals, including both sexes and young, is here to be seen. In view of the near possible extinction of this creature, which is now mostly confined to the region north of Canada, it is gratifying to know that such superior specimens are here preserved.

This is true also of the WAPITI (*Cervus canadensis*) male, female, and young; noble creatures and fine examples of the kind. This fine deer is at present chiefly restricted to the northwestern portions of our own country. Rivaling the moose in size, it has erroneously been called the elk, which name is properly the local European title for the moose.

The AMERICAN RED DEER (*Cervus virginianus*) though so named is no more Virginian than any other. It is widely distributed.

The WHITE-TAILED DEER or LONG-TAILED DEER (*Cervus leucurus*) is a western species, differing in several particulars from the preceding, its long tail being quite distinctive.

The BLACK-TAILED DEER (*Cervus columbianus*) has a strong specialized mark, besides that of the tail, in a black

Wapiti.

From D. Appleton & Co.'s "Elements of Zoology, Science Series."

horse-shoe shaped patch on the forehead. This species is found in Oregon and California.

The MULE DEER (*Cervus macrotis*) is known at once by its great ears and its larger size. In general dimensions it is nearest to the wapiti. The upper Missouri and the Yellowstone region are its favorite localities.

A species of deer resembling *virginianus* is met with in Mexico.

Fine examples of these deer are to be seen in this collection, together with several forms from the East Indies and South America.

GROUP 26.—Family *Camelopardalidæ*. The CAMELOPARD. This is exclusively an Old World family, having but one genus with a single species, the familiar tall crea-

ture that "looks not like an inhabitant o' the earth, and yet is on't."

GROUP 27.—Family *Bovide*. The BOS family is a large and important one, and is led by the BISON (*Bison americanus*), the well-known "Buffalo" of the plains. Superior examples of the two sexes and the young are here preserved. One other species only is known, the European Bison. This is so rare, that were it not for the preservation of a small herd in Lithuania in Europe, by the Emperor of Russia, none would be alive at present. The specimen in the collection was obtained by permission of the emperor and is the only one in this country. It is the Auroch of European geological deposits.

This family *Bovide* includes the Antelopes, Wild Cattle, the Buffaloes of Asia and Africa, Chamois, Goats, Sheep, &c. The notable CHAMOIS of the Alps is a prominent member. The largest of the antelope kind is the ELAND, a most beautiful creature, very frequently seen in menageries. It is about the size of a cow.

The GORGON GNU (*Catoblepas gorgon*) here represents that small group of African forms. The gnu or horned horse has always been an attractive object, and like the preceding often seen in menageries. Its horse-like head and cleft hoofs seemingly being contradictory.

A large skull with extremely wide-spreading horns here represents one of the great EAST INDIAN OXEN.

The true buffalo is an African animal. Several species of the *Bos* family can be usually seen alive in the Central Park menagerie. The interesting SACRED BULL of Burmah has bred there several times. The great massive INDIAN BIBOS is also there at present.

The MOUNTAIN GOAT (*Marama montanus*) is probably the most unfamiliar of American animals. Though not especially scarce, its extreme isolation among the highest peaks of the mountains has hitherto proved a nearly complete barrier to its capture. A few specimens have recently been added to museums in this country. One of

the finest being in this one. This animal is regarded as having some of the attributes of the antelope and therefore is not a true goat. It is peculiar to America; the chamois of the Alps is nearer like it than any.

The PRONG-HORN ANTELOPE (*Antilocapra americana*). This is a characteristic American animal, found in no other country. It abounds on the western prairies, being there found in large herds. The beautiful specimens here to be seen give a capital idea of it. In size it is a little less than the American red deer. This animal presents a feature quite unexpected in an antelope, its horns being partially hollow and yet are shed yearly, like those of the deer; a core or process of the skull is permanent, and over that the new horn is developed when the old one is ready to drop off. It thus reveals an intermediate link between the solid and hollow horned ruminants.

The antelopes are very fully represented in this collection. Reference to this group, will show what beautiful creatures they are, and how diversified in shape of body, horns, and other features. The great SASSIBY, the smaller GAZELLES, the SPRING BOCK, and others, all readily recognizable by their labels, are very interesting creatures.

Saiga Antelope.

From D. Appleton & Co.'s "Elements of Zoology, Science Series."

They are nearly all from Africa, that home of the antelope, where they replace the deer.

The SAIGA ANTELOPE is remarkable for its nose development. It is also unique in being the only one found in cold regions; Siberia being its habitat.

Musk Sheep.

From D. Appleton & Co.'s "Elements of Zoology, Science Series."

The MUSK SHEEP (*Ovibos moschatus*). This curious animal is very scarce in collections, being so difficult of capture in its native country, the extreme Arctic regions, where it is fairly common. As this species is more like a sheep, the term musk ox is incorrect. A fine specimen has just been added to the Museum collection.

The MOUNTAIN SHEEP (*Ovis montana*) is a noble example of this group. It is much larger than any known species. The male and female here seen are excellent of the kind, the former exhibits the wonderful development of horns, which are immensely large and extremely strong in proportion to their size. This is exclusively an American animal.

Rocky Mountain Sheep.

From D. Appleton & Co.'s "Elements of Zoology, Science Series."

THE GNAWING ANIMALS.—ORDER RODENTIA.

Animals of this character form a very natural group; the squirrel, mouse, beaver, no one will mistake them, or confound them with other creatures. One important characteristic they have, which gives them the name rodents or gnawers, it is seen in their chisel-like front teeth. The four front teeth, which in cats, dogs, and most other animals are quite small, and apparently of little use, are in the rodents developed into important organs. The beaver not only finds his food by gnawing, but his gnawers are tools, by which he builds his house and home.

This is a very large order, and can here only be viewed in a general way. The familiar mouse and squirrel suggest to us examples. A glance at recorded facts shows us that the rodents are distributed pretty completely over the world. Many groups are confined to certain localities; for example, no less than twelve genera are exclusively African.

Of the order of rodents there are over 800 living species known. The squirrels alone have one hundred and eighty-

Harvest Mouse. Mole Rat. African Porcupine.

From D. Appleton & Co.'s "Elements of Zoology, Science Series."

two species. These are largely from America, and Europe and Asia.

The true mouse family is of the Old World. Our domestic mice are foreigners, introduced by our forefathers. A group of mice-like animals, resembling the latter, is exclusively American. There are eighty or more species. The little meadow mouse is an example.

The only rodent common to both Europe and America is the beaver, which is not regarded as the same in both countries.

GROUP 28.—The SQUIRRELS, Family *Sciuridae*. The SQUIRRELS are considered as the highest form of the rodents. The large GRAY SQUIRREL, RED SQUIRREL, and the little CHIPMUNK are the more familiar kinds. Numbers of other species are here seen, both from the American continent and the Old World.

This group of rodents is particularly subject to the conditions of *albinism*, a state of pure whiteness of fur, and of *melanism*, the opposite.

The FLYING SQUIRREL (*Sciuropterus volucella*) is an interesting form, very familiar to the New England country-side. It is a gentle creature, easily tamed, and proves a pleasing pet.

In singular contrast are the great flying squirrels of Asia. Several of them are here; the fur having much the appearance of that of the beavers. A representative African form of squirrel-like animal is the ZERUS, a specimen of which is seen in this group.

Tamias includes a number of small Squirrels of which the CHIPMUNK or STRIPED SQUIRREL (*Tamias striatus*) is a familiar example. Most country boys have tried a hand at box-trapping them.

A sub-family includes small groups, one of which is represented by the SPERMOPHILES (*Spermophilus*), of several species. They are long bodied, with slender tails, and otherwise resemble the preceding. None inhabit the Eastern States, most of them being found on the western plains. One species has become naturalized, by introduction, near Tuckerton, New Jersey.

Prairie "Dog," or Marmot.

From D. Appleton & Co.'s "Elements of Zoology, Science Series."

Another genus includes the PRAIRIE DOGS (*Cynomys*). Two species are found on the western prairies, where they abound in great numbers. They are exclusively American

forms. The term dog is erroneously applied, as they are more like rats.

The other genus is represented by the WOODCHUCK (*Arctomys*), BEAR MOUSE, as the name imports. There are several other species found in the western portions of the continent.

The rodents are so extremely numerous, it will be impossible to point out more than a few prominent and representative forms. In order to keep an outline of the classification, which teaches us as near as is possible the relative connection of families, their natural place in the scale of life, we will record each family in place, though we may not find room to dwell upon its members.

GROUP 29.—The HAPLODONS, Family *Haplodontidæ*. This family is an American one, having only two species, included in one genus.

The SEWELLEL (*Haplodon rufus*), found in the mountains of California, is the representative. It resembles somewhat a musk-rat, or a very large rat, and is, perhaps, one of the most unfamiliar of American mammals.

GROUP 30.—The BEAVERS, Family *Castoridæ*. The well-known and valuable animal that represents this family, is seen here with a piece of his work in the form of a large trunk of maple, which has been cut half through with the intention of felling it. Two species only are known, the European differing sufficiently to constitute a separate species. The picture represents the beavers at work, their dam and houses.

GROUP 31.—The DORMICE, &c., Family *Myoxidæ*. This family includes the Old World DORMICE, and a few other forms; twelve species.

GROUP 32.—Family *Lophiomyidæ*. One very rare animal constitutes this family. The LOPHIOMYS or CRESTED MOUSE, as the name implies, found in Arabia.

Beavers, their houses and dam.

From D. Appleton & Co.'s "Elements of Zoology, Science Series."

GROUP 33.—The MICE, RATS, &c., Family *Muridæ*. This family presents a wonderful contrast to the preceding, having thirty-seven genera with 330 species.

Of the genus *Mus* alone there are about one hundred species, all natives of the Old World. This family is subdivided into ten sub-families. The MICE and RATS, HYDROMYS or WATER RAT, GERBILLAS or JUMPING MICE, HAMSTER, MEADOW MICE, MUSK RAT, and many quite unfamiliar forms represent the sub-families respectively.

The true mice and rats are all found in parts of the Old World, but are not natives of America. The genus *Hes-*

peromys includes a group of little animals very much like them in appearance, called MEADOW MICE. The term *Hesperomys* is made to indicate their nativity, meaning western mouse.

GROUP 34.—Family *Spalacidae*. Seventeen species of most singular rat-like short-legged animals constitute this family. MOLE RATS is a good trivial name. (See the figure in "Group of Rodents.") They are all Old World forms.

GROUP 35.—Family *Geomyidae*. This family includes a number of strictly North American animals that bear much resemblance to the preceding. They have on each side of the mouth, fur-lined pouches, and are hence called POUCHED RATS. The four claws are enormously developed to suit their habits of digging in the earth.

The genus *Geomys* includes five species, found in Mexico. *Thomomys* two species, inhabiting the upper Missouri region. They are commonly call gopher, which term is also used as a name for several other different kinds of mammals as well as reptiles.

GROUP 36.—Family *Dipodidae*. The JUMPING MICE, JERBOAS, are members of this family, and natives of the Mediterranean region. The DEER MOUSE, *Meriones*, is the only member found in America, its range being from Canada to California. Ten species, called variously POCKET MICE, KANGAROO RATS, POCKET RATS, &c., inhabit from the British Possessions to Mexico.

GROUP 37.—Family *Octodontidae*. This family includes a number of curious and obscure rat-like animals, mostly confined to the mountains and open plains of South America, but have a few stragglers in other parts of the world. BENNETT'S HABROCOME (*Habrocoma bennetti*) is an example. *Capromys* and *Myopotamus*, RIVER RATS, are of the same.

GROUP 38.—The PORCUPINES, Family *Hystriidae*.

The CANADA PORCUPINE (*Erethizon dorsatus*) is the American representative of the family. The most familiar form however is the African. (See the picture in "Group of Rodents.") The former is erroneously called hedgehog, the name of a European animal. Several singular creatures, native in South America, belong to this family. One having a strongly prehensile tail. Twelve species of porcupines comprise the group. All American, excepting the one large African form.

GROUP 39.—The CHINCHILLAS, Family *Chinchillidæ*. Represented by the little creature that furnishes the delicate "Maltese"-like fur of commerce, the CHINCHILLA of South America. Several rabbit-like animals belong to this group, as the *Lagidium* and *Lagostomus*.

GROUP 40.—Family *Dasyproctidæ*. Several species of squirrel-like animals with long hind legs, are members of this family. The AGOUTI (*Dasyprocta agouti*) is the most familiar form, native in South America.

GROUP 41.—Family *Dinomyidæ*. Having one genus, *Dinomys*.

GROUP 42.—The CAVIES, Family *Cavidæ*. The GUINEA PIGS are the familiar representatives. Most erroneously called so, as they are not swine, nor are they from

Capybara.—The Largest Rodent.

From D. Appleton & Co.'s "Elements of Zoology, Science Series."

Guinea, being really from Guiana, and true rodents. Twenty-eight species are known, all native to South America. This family is notable for having the largest species. The PACAS and CAPYBARA (*Hydrochæras*) are much the largest. The latter is about the size of a half-grown pig. Some resemblance has given rise to the term water hog. They are all South American forms.

GROUP 43.—Family *Logomyidæ*. The LOGOMYS or PIKA is a small rabbit-like animal. The one species inhabiting North America, near Oregon River, much resembles a young rabbit, and hence has received the trivial name LITTLE CHIEF HARE (*Lagomys princeps*).

GROUP 44.—The RABBITS, Family *Leporidae*. One genus with forty species comprise the family. Rabbits inhabit the colder regions of both continents. One species, the POLAR HARE, extends to the Arctic regions. Several fine hares are found on the plains, and near the Rocky Mountains.

The JACKASS HARE (*Lepus callotis*) is a large, long-eared animal, abundant on the great western plains.

THE BATS.—ORDER CHIROPTERA.

GROUP 45.—The Bats form one of the great orders of the animal kingdom, being sufficiently distinct in characteristics to be readily recognized. Until lately these were regarded as being entitled to a high rank, and were classed next to the Primates or Monkeys. They have a large brain, and in several respects have features that seemed to warrant the old classification. Late investigations find the sum of characteristics correspond more nearly to the rodents on one side and the insectivora and cetacea on the other. A large variety of these singular animals are here.

The FRUIT-EATING BATS (*Pteropus*) are more notable from their extreme size. Some measuring three feet in extent of wing. The so-called FLYING FOXES are large bats. They are native in the East Indies. Four hundred species,

or more, have been described, included in five families. A considerable number of species are North American, good specimens of which are in the Museum collection. The VAMPIRE of South America, about which so many tales are told, is comparatively a small animal. Its bite is not considerable, though it is annoying to animals.

Chiroptera and Insectivora.

Moles,

Bat.

Hedgehog.

Shrew.

From D. Appleton & Co.'s "Elements of Zoology, Science Series."

INSECT EATERS.—ORDER INSECTIVORA.

GROUP 46.—Like the preceding order this has been regarded of late as being nearer in its natural place in the scale of life where we now find it. Ten families are recognized.

The GALEOPITHECUS, formerly placed with the lemurs, has been regarded as a flying monkey. It resembles also

the bats, and its affinities seem to be near them and the insectivorous animals.

The Family *Tupaïidæ* includes a few small squirrel-like animals, but having their long jaws filled with the peculiar teeth of the insect eaters. These are from the East Indies.

The Family *Macrocelidæ* embraces a few little creatures with trunk-like snouts, and kangaroo legs, and several other like forms, all from South Africa.

Family *Erinaccidæ* includes fifteen species, of which the EUROPEAN HEDGEHOGS are prominent examples. (See picture of Insect Eaters.)

Family *Soricidæ* is formed by the SHREWS. There are sixty-five species, having a wide distribution. (See picture of Insect Eaters.)

Family *Talpidae*, the MOLES, has a large distribution, nineteen species are known. (See picture of Insect Eaters.) The TALPAS inhabit Europe and Asia. One species, the *Condylura*, or STAR-NOSE MOLE, inhabits the Eastern United States. Several others are found in North America. Family *Potamogalidæ* has one species, a small otter-like creature, discovered in West Africa by DuChaillu. Family *Solenodontidæ* includes two species only: the Solenodons of the West Indies. Family *Centetidæ* has about ten species, inhabiting Madagascar. Family *Chrysochloridæ* embraces three species: curious spiny-looking creatures with golden hairs; hence the name.

THE WHALES.—ORDER CETACEA.

Two sub-orders include all living species of WHALES. One sub-order embraces the extinct species as far as discovered. Many remains of bones have been found that seem to belong to an intermediate place; that is, between the other two sub-orders.

GROUP 47.—The WHALEBONE or RIGHT WHALES, Family *Balænidæ*. Fourteen species of the BALEEN WHALES are recognized. They all inhabit the temperate and cold seas of both northern and southern hemispheres.

Skeleton of Arctic Right Whale.

From D. Appleton & Co.'s "Elements of Zoology, Science Series."

a represents the arm bone as it articulates with the shoulder blade. *b*, the nostril or blow hole; Baleen or Whalebone fills the mouth; *fa*, the forearm bones; *h*, the hand and wrist; *p*, *th*, *l*, the rudimentary pelvic and thigh bones. The small figure *r* represents a cross-section of the head; *tw*, *w* show the flukes of whalebone; *f* is where the tongue lies.

The GREENLAND WHALE (*Balæna mysticetus*) is the great representative of the race, furnishing the best and most oil and whalebone.

The ATLANTIC RIGHT WHALE (*Balæna cisarctica*) has been so nearly extinct, that no adult specimen has been seen during the past century until 1881, when a female was

brought into New York harbor. It is the whale that was so abundantly captured during the years preceding the Revolution. The skeleton of an adult is in the Museum. The baleen or whalebone is seen in this skeleton, situated as in life; serving the purposes of strainers when the great masses of soft jelly fishes are taken in for food. The water flows out of the mouth through these plates, leaving the jelly food free to be swallowed. The whale most familiar to our coast, and the one seen from vessels crossing the ocean, is the FIN-BACK WHALE, a long and slender kind, related to the great sulphur-bottom and rorqual of the Pacific, which are the longest living animals; reaching near a hundred feet in length.

Hump-back Whale suckling young.

From D. Appleton & Co.'s "Elements of Zoology, Science Series."

Another sub-order embraces the toothed whales; those having the jaws armed with teeth as follows :

GROUP 48.—The *Odontoceti* includes four families—which embrace the SPERM WHALES, RIVER PORPOISES, DOLPHINS, and NARWHALS.

A specimen of the jaw of a sperm whale is seen under the number of this group. The enormous head of the sperm whale is made up mostly of flesh, forming a great

square tank as it were, in which the sperm is deposited. This sperm is so liquid that whalers after cutting a hole in the top of the head lower buckets and dip it out in large quantities. This is the pure spermaceti of commerce, after it has assumed a harder condition in the external air.

The singular one-toothed creature called NARWHAL, is of this sub-order. Naturally it has two of the tusks, but from some unknown cause one only, as a rule, is developed. Sailors fondly designate this the SEA-UNICORN.

The PORPOISE is a familiar form of this group; not often seen, excepting in summer, when it rolls over and over seemingly in continuous progression, and in numbers suggesting a drove of hogs: indeed the name "PUFFING PIG" is given it. It is air breathing and a mammal, and comes regularly to the surface to expel the old and take in new air. It is the noise of expelling the air that gives rise to the term puffing—and in this case as well as in that of the large whales there is no water blown out, it is the vapor that is seen in a column, as one may see, as it often floats away like smoke. The porpoise does not roll, but simply comes to the surface to present the opening to the lungs for air, when it descends again, giving the aspect of rolling continually. There are many interesting kinds of cetaceans, or whale-like creatures, and some fine examples are here.

The BLACK DOLPHIN (*Globicephalus melas*) is very abundant off our coast in summer, and the Cape Cod men, who call them black-fish, capture great numbers for their oil. It should be kept in mind that whales, porpoises, and all the cetaceans are in no respect fishes; their exterior only is fish-like.

The WHITE WHALE (*Beluga catadon*) is abundant in the St. Lawrence River, where it is taken for its oil. This is about the size of the black dolphin, about twelve feet. It is notable for being the only one ever kept in confinement. The New York Aquarium contained several, of about ten feet in length. In confinement they live but few months, yet are seemingly not much annoyed at being transported, entirely out of water, during several days,

White Whale.

From D. Appleton & Co.'s "Elements of Zoology, Science Series."

covered with wet sea-weed to keep them moist. One was successfully removed to England, where it was the wonder during several weeks. A fine cast of an adult is in this Museum, an exact reproduction of the original.

ORDER SIRENIA.

GROUP 49.—This small group includes a few animals that are formed to swim and remain in the water, usually at the mouths of fresh-water streams, where they feed on

Manatee.

From D. Appleton & Co.'s "Elements of Zoology, Science Series."

succulent vegetation that grows under the surface or in meadows. They cannot progress far on land.

The MANATEE (*Manatus americanus*), represented by a specimen here, and by its skeleton, is found on the Gulf side of Florida. While the seals, which remind one of this creature, are carnivorous, the manatees are herbivorous, their teeth being adapted for grinding. Two species only are recognized. Another nearly related animal is called DUGONG, an example of whose skeleton is here seen. Another genus with one species comprises, with the above, the entire order. The latter is the RYTINA (*Rhytina stelleri*), once abundant on the northwestern coast of America, but now wholly extinct.

THE TOOTHLESS ANIMALS.—ORDER EDENTATA.

GROUP 50.—Not all of this order are entirely toothless, though many of them are, and the remainder are so nearly so, and having other affinities with the former, they are more or less naturally classed together.

The SLOTHS, Family *Bradipodidæ*. Three genera and twelve species of SLOTHS are known. Examples of the three genera are seen here. They are essentially tree animals; their hands and feet being adapted for climbing. The wonderful extinct forms of South American cave deposits are among the most remarkable. The great megatherium is of this group.

The ANT EATERS, Family *Myrmecophagidæ*. This embraces three genera, entirely confined to South America. But few species are known. The GREAT ANT EATER being the largest.

The ARMADILLOS, Family *Dasypodidæ*, embrace seven genera, each with a few species of curious armor-bearing animals, of which the PEBA (*Tatusia peba*) is a more familiar kind, being found in Texas. All the other species are confined to South America, where great fossil extinct species are found.

Family *Manidæ* embraces three genera, being the only

Marsupials and Toothless Animals.

Opossum.

Sloths.

Great Ant Eater.

Armadillo.

From D. Appleton & Co.'s "Elements of Zoology, Science Series."

members of this family found out of America. They inhabit Africa and the East Indies. The species are curious scaled animals, not unlike the armadillos.

The AARD VARK, Family *Orycteropodidæ*. One genus and two species alone comprise this family. The *Orycteropus capensis*, or AARD VARK, from Africa, resembles a hog somewhat, being about the size of a half-grown one, yet it is a simple ant eater.

THE MARSUPIALS.—ORDER MARSUPIALIA.

Animals having pouches in which to carry their young. Singularly circumscribed, these creatures, with the exception of a few species of opossums in America, are confined to New Holland or the Australian region. Many are wholly

unfamiliar. The kangaroos are less so, perhaps, after the opossums. They are often seen in the Central Park menagerie. In this Museum there are over twelve species; also fine examples of the opossum, showing how the prehensile tail is able to hold their weight suspended. Ten genera and thirty species are known.

GROUP 51.—The OPOSSUMS, Family *Didelphyidæ*, has three genera and twenty-two species.

The VIRGINIA OPOSSUM (*Didelphys virginiana*) inhabits the United States from the Hudson River to Florida. It seems to be absent from the western country, west of the Missouri.

GROUP 52.—The POUCHED WOLF, &C., Family *Dasyuridæ*. A number of variously shaped and sized animals

Koala.

Kangaroos leaping.

Flying Marsupial.

Male Kangaroo and Female with young in pouch.

From D. Appleton & Co.'s "Elements of Zoology, Science Series."

belong in this family, many of them seen here. The most notable and largest is

The TASMANIAN or POUCHED WOLF (*Thylacinus*). A number of smaller animals about the size, and resembling cats, are named NATIVE CATS; the DASYURES are they.

GROUP 53.—Family *Peramelidæ* embraces three genera and ten species of small pouched animals. Some are called BANDICOOTS.

GROUP 54.—THE KANGAROOS, Family *Macropodidæ*, includes ten genera and fifty-six species. In the collection here present, interesting forms will be seen, varying from the short-legged TREE KANGAROO, to the long-legged and short-armed GREAT KANGAROO, and the pigmy "KANGAROO RATS."

GROUP 55.—The FLYING POUCHED ANIMALS, Family *Phalangistidæ*. Eight genera and twenty-seven species are enumerated. They comprise a variety of creatures that appear in every respect like common flying squirrels, and would easily be taken for them, if the teeth were not seen. The largest species of *Petaurus* here seen, as compared with the great flying squirrel quite of the same size, will prove interesting. Some of the smaller ones of this family look like flying mice. They all belong, however, to a low rank in the scale of life.

GROUP 56.—Family *Phascolomyidæ* has but one genus and three species. The rather more familiar WOMBATS are members, about the size, and rather like a badger in some respects.

Sub-class PROTOTHERIA or ORNITHODELPHIA. The animals embraced under this division are so far removed from all others, it is regarded as more natural to include them distinctly in a sub-class. Two families contain all the species known, as follows :

Ornithorhynchus, and burrow. Echidna.
Ornithorhynchus asleep,
and same swimming,

From D. Appleton & Co.'s "Elements of Zoology, Science Series.

GROUP 57.—Family *Ornithorhynchidæ* includes one genus with one species, the wonderful DUCK-BILLED ANIMAL, a view of which is seen here, and specimens in the collection. It has long been suspected that this creature, known to be the lowest form of mammal, or sharing that honor with the next succeeding, not only has bird-like features, but actually does lay eggs. Late investigation proves this to be true.

Family *Echidnidæ*, has two genera. The ECHIDNA, quite resembling a hedgehog, has similar organization as the preceding, and is with it distinguished as the lowest of mammals in the scale of life.

ERRATA.

Page 22, line 3, read *Cercoleptes* for *Cercopithecus*.

Page 31, line 32, read *Mazama* for *Marmota*.

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