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ZOOLOGY

OF

THE VOYAGE OF H.M.S. BEAGLE,

UNDER THE COMMAND OF CAPTAIN FITZROY, R.N.,

DURING THE YEARS

1832 to 1836.

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MAMMALIA,

BY GEORGE R. WATERHOUSE, ESQ.

CURATOR OF THE ZOOLOGICAL SOCIETY OF LONDON., ETC. ETC.

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STEWART AND MURRAY, OLD BAILEY.

Mammalia & Waterhouse —

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the seamen in Commodore Byron's voyage (in 1765) in rather a ludicrous manner. Byron says that seals were not the only dangerous animals that they found, "for the master having been sent out one day to sound the coast upon the south shore, reported at his return that four creatures of great fierceness, resembling wolves, ran up to their bellies in the water to attack the people in his boat, and that as they happened to have no fire-arms with them, they had immediately put the boat off in deep water." Byron adds that, "When any of these creatures got sight of our people, though at ever so great a distance, they ran directly at them; and no less than five of them were killed this day. They were always called wolves by the ship's company, but, except in their size, and the shape of the tail, I think they bore a greater resemblance to a fox. They are as big as a middle-sized mastiff, and their fangs are remarkably long and sharp. There are great numbers of them upon this coast, though it is not perhaps easy to guess how they first came hither; for these islands are at least one hundred leagues distant from the main. They burrow in the ground like a fox, and we have frequently seen pieces of seals which they have mangled, and the skins of penguins lie scattered about the mouths of their holes. To get rid of these creatures, our people set fire to the grass, so that the country was in a blaze as far as the eye could reach, for several days, and we could see them running in great numbers to seek other quarters."

The habits of these animals remain nearly the same to the present day, although their numbers have been greatly decreased by the singular facility with which they are destroyed. I was assured by several of the Spanish countrymen, who are employed in hunting the cattle which have run wild on these islands, that they have repeatedly killed them by means of a knife held in one hand, and a piece of meat to tempt them to approach, in the other. They range over the whole island, but perhaps are most numerous near the coast; in the inland parts they must subsist almost exclusively on the upland geese, *(Anser leucopterus,)* which, from fear of them, like the eider-ducks of Iceland, build only on the small outlying islets. These wolves do not go in packs; they wander about by day, but more commonly in the evening; they burrow holes; are generally very silent, excepting during the breeding season, when they utter cries, which were described to me as resembling those of the *Canis Azaræ*. Spaniards and half-cast Indians, from several districts of the southern portions of South America, have visited these islands, and they all declare that the wolf is not found on the mainland; the sealers likewise say it does not occur on Georgia, Sandwich Land, or the other islands in the Antarctic ocean. I entertain, therefore, no doubt, that the *Canis antarcticus* is peculiar to this archipelago. It is found both on East and West Falkland, as might have been inferred from the accounts given by Bougainville and Byron, who visited different islands;—I state this particularly, because the contrary has been asserted. I was

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assured by Mr. Low, an intelligent sealer, who has long frequented these islands, that the wolves of West Falkland are invariably smaller and of a redder colour than those from the Eastern island; and this account was corroborated by the officers of the Adventure, employed in surveying the archipelago. Mr. Gray, of the British Museum, had the kindness to compare in my presence the specimens deposited there by Captain Fitzroy, but he could not detect any essential difference between them. The number of these animals during the last fifty years must have been greatly reduced; already they are entirely banished from that half of East Falkland which lies East of the head of St. Salvador Bay and Berkeley Sound; and it cannot, I think, be doubted, that as these islands are now becoming colonized, before the paper is decayed on which this animal has been figured, it will be ranked amongst those species which have perished from the face of the earth."—D.

2. Canis Magellanicus.

Plate V.

Canis Magellanicus, *Gray*, Proceedings of the Zoological Society of London, part iv. 1836, p. 88.
Vulpes Magellanica, *Gray*, Magazine of Natural History, New Series, 1837, vol. i. p. 578.

C. *suprà albo nigroque variegatus; lateribus fulvescente fuscoque lavatis; capite fusco-flavo et albescente adsperso; rostro supernè obscuriore; auribus, artubusque extùs flavescenti-rufis; corpore subtùs sordidè flavescenti-albo; pectore fulvo lavato; mento fuscescente; caudâ fulvescenti-fuscâ, pilis ad apicem nigris, subtùs pallidiore; plagâ supernè prope basin caudæ, hujusque apice nigris.*

Description.—This species is considerably larger than the European fox; its form is more bulky, the limbs are shorter and stouter in proportion, the ears are smaller and the tail is more bushy. The fur is long, thick, and loose. The under fur is very long, abundant, and of a woolly texture. The back is mottled with black and white, the former of these colours being predominant; the hairs on this part are gray at the base, there is then a considerable space of a pale, or whitish brown colour; next follows a broad white ring, beyond which the hairs are black. On the sides of the body the hairs are coloured in the same way, excepting that the white portion is more extended, and is followed by a rich yellow-brown, shaded into black as it approaches the apex of each hair. Hence the general hue of the sides of the body is paler than that of the back, the brown and white tints being the more conspicuous.

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The hairs of the head are annulated with white, and fulvous, and are black at the tip; the two former colours are most conspicuous. The chin is brownish. The lower part of the cheeks, the throat, and the under parts of the body, are of a dirty yellowish white colour, inclining to buff in certain parts, especially on the lower part of the neck and chest. The limbs are of a rich deep fulvous, or yellowish rust colour externally; the feet and inner sides of the legs are of a paler hue. On the hinder legs externally, above the heel, is a patch of bright rust colour; such is also the colour of the ears externally, and likewise of that portion of the neck behind the ears. Internally the ears are furnished with long yellowish white hairs. The tail is long and very bushy; at its base the hairs are rusty white, towards the middle they are of a paleish rust colour, and at the apex they are black; there is also a black patch on the upper part towards the base. The hairs of the tail beneath are almost entirely of an uniform rusty white colour, those on the upper side are all tipped with black.

	In.	Lines.		In.	Lines.
Length from nose to root of tail . .	31	0	Length of ear	2	0
to base of ear . .	6	9	Height of body at the shoulders . .	14	6
of tail (hair included) . .	17	0			

Habitat, Chile. (*June.*)

"This animal was first brought to Europe by Captain Philip P. King, who obtained it at Port Famine in Tierra del Fuego, where it is common. My specimen was obtained in the valley of Copiapó in the northern part of Chile. The Magellanic fox, therefore, has a range on the western coast of at least 1600 miles, from the humid and entangled forests of Tierra del Fuego, to the almost absolutely desert country of northern Chile. In La Plata, on the Atlantic side of the continent, I believe it is not found.* It is mentioned by Molina in his account of the animals of Chile,† under the name of Culpeu, which he supposes to be derived from the Indian word "culpem," signifying madness; for this animal, when it sees a man, runs towards him, and standing at the distance of a few yards, looks at him attentively. He adds, although great numbers are killed, they do not leave off this habit. Molina states that he has repeatedly been a witness of this, and I received nearly similar accounts from several of the inhabitants of Chile: yet I must observe, that the people of the farm-house, where my specimen was killed

* Azara has not described this animal, which circumstance alone would render it probable that it is not an inhabitant of Paraguay or La Plata. The two Foxes mentioned by him are the Aguará-guaza, (*Canis jubatus*, Auct.) a very large kind of fox (a strangely exaggerated description of this animal is given by Falkner) of which I could not obtain a specimen; and the Aguará-chay, or *Canis Azaræ*.

† Molina, Compendio de la Historia del Reyno de Chile, vol. i. p. 330 and 332.

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(after it, together with its female, had destroyed nearly two hundred fowls) bitterly complained of its craftiness. From this bold curiosity in the disposition of the Culpeu, Molina thought that it was the same animal as that described by Byron at the Falkland Islands, but we now know that they are different. The Culpeu burrows holes under ground, often wanders about by day, is very strong and fleet. When riding one day in the valley of Copiapó, accompanied by a half-bred greyhound, I happened to come across one of these foxes; and although the ground was, in the first part of the chase, level, it soon entirely distanced its pursuer. Whilst running, it barked so like a dog, that until it had run some way a-head of the greyhound, I could not tell from which animal the noise proceeded. After the Culpeu had reached the mountains, it made a sudden bend from its course, and returned in a nearly parallel line, but at the base of a steep cliff of rock; it then quietly seated itself on its haunches, and seemed to listen with much satisfaction to the dog, which was running the scent on the mountain side, above its head."—D.

3. Canis fulvipes.

Plate VI.

Canis fulvipes, *Martin*, Proceedings of the Zoological Society of London, 1837, p. 11.

C. *suprà niger, albo adspersus, capite lateribusque fuscis, sordidè albo nigroque adspersis; rostro superiore, mentoque fusco-nigricantibus; gulâ, labiis superioribus, femoribusque ad partem anteriorem, sordidè albis; pectore abdomineque fuscescentibus; auribus externè rufo-castaneis; brachiis internè, tarsis, digitisque fuscescenti-fulvis; artubus posticis extùs supra calcem fusco-nigrescentibus; caudæ colore ad basin ut in corpore, apice nigro.*

Description.—This species is considerably less than the common European fox, (*Canis Vulpes*, Auct.) its weight probably would scarcely exceed half that of the latter animal. The form of the body is stout, the limbs are short and rather slender; the head is also short, and the muzzle is pointed; the ears are of moderate size. The tail is about equal to half the whole length of the body, head included; and compared with that of ordinary foxes, is much less bushy, especially at the base. The general hue of this animal is very dark; the fur is rather short, and harsh to the touch; the under fur is abundant, and of a woolly texture. On the back, all the hairs are of a deep brown colour, annulated with white near the apex, and black at the apex. When the fur is

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in its ordinary position, the brown colour is not seen, and the black and white produce a grizzled appearance; the black colour, however, predominates. On the sides of the body each hair is grayish at the base, then pale brown, near the apex annulated with white, and at the apex black: the three last mentioned colours are exhibited in about equal proportions (the fur being in its natural position) over the haunches and shoulders, but between these two parts, the brown and white colours are the more conspicuous. The hairs of the head are coloured in the same way as those of the sides of the body, excepting that the brown portion of each hair, is replaced by rusty brown, which gives a rufous hue to this part. The muzzle and chin are of a sooty brown colour. A dirty white patch is observable on each side of the muzzle at the apex, and this colour is extended along the margin of the upper lip on to the lower part of the cheeks, and over the whole of the throat; all the hairs in these parts (with the exception of those on the lips) being of a deep brownish gray colour, with their apical portions only, white. The ears are covered internally with long yellowish white hairs; towards, and on the margin of the ears externally, the hairs are of a buff colour, on the remaining portion of the ears, and on the sides of the neck, they are of a reddish chestnut hue. The hairs of the under parts of the body are brown, those near the hinder legs, and between them, are of a dirty white colour at the apex; towards the rump they are of a yellowish brown colour. The hairs of the tail are brown, black at the apex, and annulated with white near the apex; on the apical portion the hairs are black, and brown at the base. The fore legs are of a brown colour externally, internally they are of a brownish fulvous hue; such is also the colour of the feet. The fore part of the posterior legs is whitish, and there is a large blackish patch on the outer side, and extending around the posterior part, above the heel.

	In.	Lines.		In.	Lines.
Length from nose to root of tail . .	24	0	Length of ear	2	$3\frac{1}{2}$
to base of ear . .	0	$4\frac{3}{4}$	Height of body at shoulders . .	10	6
of tail (hair included) . .	10	0			

Habitat, Chiloe. (*December.*)

"I killed this animal on the sea-beach, at the southern point of the island; it is considered extremely rare in the northern and inhabited districts. Molina mentions this fox, which he falsely considered as the *C. lagopus*, under the name of the *Payne Gurú*, and he adds, that in the Archipelago of Chiloe, it is found of a black colour. From this circumstance I am induced to believe that the species is confined to these islands."—D.

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4. Canis Azaræ.

Plate VII.

Canis Azaræ, *Pr. Maximilian*, Beiträge zur Naturgeschichte Braziliens, vol. ii. p. 338.

Agouarachay, *Azara*, Essais sur l'histoire naturelle des Quadrupèdes de la Province du Paraguay, tom. i. p. 317.

C. *suprà albo nigroque variegatus; lateribus cinerescentibus; capite, auribus externè, artubusque, cinereo-cinnamominis; mento nigro; tibiis externis ad basin nigro lavatis; caudâ albescente, suprà nigro variegatâ, ad apicem nigrâ; spatio pone angulos oris, gutture, corporeque subtùs albescentibus; fasciis duabus griscescentibus in pectore plus minusve distinctis.*

Description.—Compared with the common fox (*Canis Vulpes*, Auct.), the present animal is rather smaller, and of a more slender form. Its limbs are a little longer in proportion; the ears are not so broad. The tail is not quite so bushy, neither is it so long; the fur is much longer, and of a harsher nature.

The predominant colours of the body are black and white; the limbs are of a fulvous hue externally. The hairs on the under part of the feet are dirty brown; the fore part of the anterior legs, and the feet, are of a buff colour; on the former, the hairs are more or less distinctly tipped with black, which produces a grizzled appearance. The inner side of the fore legs is of an uniform pale buff colour; the hinder part of these legs, the fore part of the posterior legs, and the inner side of the thighs, are white. On the outer side of the hinder legs, at some little distance above the heel, is a large blackish patch. The under parts of the body are of a dirty white hue, arising from the hairs being dusky or brownish at the base, and tipped with white, as on the fore part of the belly, or of a pale buff colour at the base, as towards the rump. The edge of the upper lip, the throat, neck, and chest, are white; a broad grayish band extends across the latter, and another of a paler hue crosses the lower part of the neck. The chin is black, and this colour is extended backwards around the angle of the mouth. The upper part of the head is of a pale yellow-brown colour, each hair being annulated with white near the apex. The ears are furnished with white hairs internally, and externally they are of a yellowish brown colour, tipped with black; at the base of the ears, and the portion of the neck on each side nearest to them, the

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hairs are of an uniform buff colour. The hairs of the moustaches are long and stiff, and of a black colour. The hairs of the back, which are very long, are brown at the base, very pale towards the skin, and of a deep brown in the opposite direction; each hair is then white, and at the apex black. The tail is whitish, mottled with black; the apical portion is black, and there is a patch of the same colour towards the base on the upper side.

	In.	Lines.		In.	Lines.
Length from nose to root of tail . .	27	6	Length of ear	3	2
to base of ear . .	5	9	Height of body at shoulders . .	14	0
of tail (hair included) . .	14	6			

Habitat, La Plata, Patagonia, and Chile.

The black and white portions of the hairs on the back produce in that part a mottled appearance, and in the specimen from which the above description is taken, these two colours are about equal in proportion. In another specimen now before me, the black colour predominates on the back. The fur in the younger animals of this species is not so long nor so harsh, and the upper parts are grizzled with black and white; that is to say, these two colours do not form patches of considerable extent as in the adults; the general colouring is also somewhat paler. The chin is brown-black or brown, instead of black, and the upper band, or that, which in the adult extends across the upper part of the neck, is interrupted in the middle; in fact, is only traceable on the *sides* of the neck.

Azara, in his description of the Agouarachay, says, the muzzle, as far back as the eyes, is blackish; whereas, in all the specimens examined by me, the muzzle is of the same colour as the other parts of the head, or *very* nearly so. In other respects his description agrees with the animal described by me, and *not* with the *Canis cinereo-argentatus*, which Desmarest and Lesson suppose to be the Agouarachay of Azara. In Fischer's "*Synopsis Mammalium*" the *Canis Azaræ* is described as having the tip of the tail white; whereas it is black, not only in the five specimens which have come under my notice, but also in those in the collection of Prince Maximilian* (who was the original describer) and in the Paris Museum.

"This animal has a wide range; Prince Maximilian brought specimens from Brazil; and it is common in La Plata, Chile, the whole of Patagonia, even to the shores of the Strait of Magellan; and a fox, which lives on the small islands not far from Cape Horn, probably belongs to this species. This animal generally frequents desert places; I saw many in the valley of the Despoblado, a branch of

* I am indebted to Mr. Ogilby, who visited the Prince's collection, for a description from the specimens of *C. Azaræ* therein preserved. In this description the tip of the tail is said to be black.

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that of Copiapó, where there is no fresh water, and where, with the exception of some small rodents, (the constant inhabitants of sterile regions) scarcely any other animal could exist. I saw also very many of these foxes wandering about by day (although Azara says they are nocturnal in Paraguay) on the plains of Santa Cruz, where various kinds of mice are abundant, and likewise around the Sierra Ventana. In the course of one day's ride in this latter neighbourhood, (not far from Bahia Blanca, lat. 39° S.) I should think I saw between thirty and forty. They generally were wandering at no great distance from their burrows; but, as they are not very swift animals, our dogs caught two. Azara states that in Paraguay this fox, which he calls the Agourá-chay, inhabits thick woods, and that it makes a great nest or pile of straw, to lie on; but that near Buenos Ayres it uses the holes of the Bizcacha. Further southward, where the Bizcacha is not found, it certainly excavates its own burrow.* In Chile these foxes are very destructive to the vineyards, from the quantity of grapes they consume; so that boys are generally kept in the vintage season with bells and other means to frighten them away. Azara states, that in Paraguay they likewise eat fruit and sugar-cane. By the same authority it is said, that the Agourá-chay, when taken young, is easily domesticated."—D.

1. Felis Yagouaroundi.

Plate VIII.

Felis Yagouaroundi, *Desmarest*, Mammologie, p. 230.

Yagouaroundi, *Azara*, Essais sur l'histoire Naturelle des Quadrupèdes de la Province du Paraguay, tom. i. p. 171.

Felis Darwinii, *Martin*, Proceedings of the Zoological Society of London, 1837, p. 3.

F. *vellere brevi, adpresso, purpurascenti-fusco; pilis flavescente annulatis; pedibus nigro lavatis; caudâ longissimâ; auribus parvulis.*

Description.—The fur is rather harsh, short, and somewhat adpressed: the under fur is of a pale grayish brown colour; the hairs which constitute the chief clothing of the animal, are black, annulated with brownish yellow, or in some parts, yellow-white, each hair having about three or four rings. The black and pale colours are about equal in proportion, and their mixture pro-

* Considering the great difference of climate and other conditions between the hot and wooded country of Paraguay, and the desolate plains of Patagonia, one is led to suspect that the *Canis Azaræ* of La Plata and Patagonia, which wanders about by day, and inhabits burrows instead of heaps of straw, may turn out to be a different species from the Agouará-chay of Azara, which is nocturnal in its habits, and lives in thick coverts.

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duces a deep brown tint, which is almost uniform throughout the body and limbs. On the head the yellowish colour predominates over the black, excepting on the tip of the muzzle, and thence back to the eye, where the hairs are of a brownish black colour. On the throat the hairs are brown. The underside of the tarsus is black, and on the outer side of the fore-foot there is a black mark which extends upwards on to the wrist. The tail is long and bushy; towards and on the base, the hairs are annulated with black and yellow, like those of the body; but beyond this they are of a more uniform colour, each hair being brown at the base, and gradually shaded into black towards the tip. The ears are small and rounded, and covered with hairs of the same colour as those on the head. The claws are of a large size, and white colour; the toes are united for a considerable portion of their length by the interdigital membrane.

	In.	Lines.		In.	Lines
Length from nose to root of tail . .	25	0	Length of ear	1	0
to base of ear . .	3	6	Height of body at shoulders . .	12	0
of tail (hairs included) . .	19	0			

Habitat, Rio de Janeiro, Brazil. (*May.*)

"This cat was given me by an old Portuguese priest, who had hunted it down in a thick forest with a small pack of dogs, after a severe chase. It was killed near the Gavia mountain, at the distance of a few miles only from Rio de Janeiro, where it was considered uncommon." D. Although small, compared with the Puma, (*Felis concolor*, Auct.), this cat, in its slender lengthened body, small head, long tail, and stout limbs, decidedly evinces an affinity to that species. According to the dimensions of the Yagouaroundi given by Azara, Desmarest, and Temminck, it appears that the tail is considerably shorter in proportion in the specimens examined by those naturalists, than in the present individual, and the difference was such, as to induce Mr. Martin to believe that the latter was a distinct species; he accordingly proposed for it the specific name of *Darwinii*. At the time that Mr. Martin described the specimen alluded to, I was also inclined to believe it was a distinct species. I mention this because I am afraid my opinion had a slight share in influencing Mr. Martin's determination. I have since seen many specimens, and upon comparing their dimensions, I find that the proportionate length of the tail varies more than is usual in other species of cats, and that the difference in the length in this member is not combined with any other distinguishing character. In colouring there is also a considerable variation, some specimens being almost black, and having the hairs but obscurely annulated with white; in others, the hairs are more distinctly annulated, and the head assumes a grayish hue. Others again, are brown, or black brown,

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having the hairs annulated with yellow. The following are the dimensions of two specimens in the Paris museum, and those given by the authors above alluded to.*

	Paris M.		*Paris* M.		*Desmarest.*		*Temminck.*		*Azara.*	
	In.	Lines.	In.	Lines.	In.	Lines.	In.	Lines.	In.	Lines.
Length from nose to root of tail .	30	6	28	0	23	0	30	0	36	9
of tail	24	0	17	0	13	9	22	0	13	9

2. Felis Pajeros.

Plate IX.

Chat Pampa, *Azara*, Essais sur l'histoire Naturelle des Quadrupèdes du Paraguay. Traduct. Franç. tom. 1. p. 179.

Felis Pajeros, *Desmarest*, Mammologie, p. 231.

F. vellere longissimo, flavescenti-griseo, fasciis flavescenti-fuscis indistinctè et sublongitudinalitèr notato; pedibus annulis latis nigris; abdomine maculis magnis nigris; mento albo; caudâ brevi; auribus mediocribus, ad apicem externum nigris.

Description.—The Pampas cat is about equal in size to the common wild cat of Europe (*Felis Catus*, Linn.). It is however of a stouter form than that animal, the head is smaller, and the tail is shorter.

The most remarkable character in this species consists in the great length of the fur, — the longer hairs on the back measuring upwards of three inches, and those on the hinder part of the back, are from four and a half, to four and three quarter inches in length. The general colour of the fur is pale yellow-gray. Numerous irregular yellow, or sometimes brown stripes run in an oblique manner from the back along the sides of the body. On each side of the face there are two stripes of a yellowish or cinnamon colour: these stripes commence near the eye, extend backwards and downwards over the cheeks, on the hinder part of which they join and form a single line, which encircles the lower part of the throat. The tip of the muzzle and the chin are white, and there is a spot in front of the eye, and a line beneath the eye, of the same colour: the belly and the inner side and hinder part of

* In measuring the species of Mammalia, I almost invariably, when wishing to give the length, measure from the tip of the nose *along the curve of the back* to the root of the tail. In the Ruminantia of course this plan is not desirable, but in other Mammals I have found it most convenient. If we take a Cat, for instance, and curve the body in whatever way we please, we find the length (taken in the way just mentioned) always the same. Whereas, if we take a straight line (as many naturalists do) the length will vary according to the position of the animal.

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the fore-legs are also white. An irregular black line runs across the lower part of the chest and extends over the base of the fore-legs externally, and above this line there are two other transverse dark markings on the chest, which are more or less defined. On the fore-legs there are three broad black bands, two of which encircle the leg, and on the posterior legs there are about five black bands externally, and some irregular dark spots internally. The feet are yellowish, and the underside of the tarsus is of a slightly deeper hue. On the belly there are numerous large irregular black spots. The ears are of moderate size, furnished internally with long white hairs; externally, the ears are of the same colour as the head, excepting at the apex where the hairs are black and form a slight tuft. The tail is short, somewhat bushy, and devoid of dark rings or spots — the hairs are in fact coloured as those of the back of the animal. On the upper part of the body each hair is brown at the base, then yellow, and at the apex, black. On the hinder part of the back the hairs are almost black at the base, and on the sides of the body each hair is gray at the base; there is then a considerable space of yellowish-white colour; towards the apex they are white, and at the apex black. The greater number of the hairs of the moustaches are white.

	In.	Lines.		In.	Lines.
Length from nose to root of tail . .	26	0	Length of ear	1	11
to base of ear . .	3	6	Height of body at shoulders . .	13	0
of tail (fur included) . .	11	0			

Habitat, Santa Cruz, Patagonia, (*April,*) and Bahia Blanca, (*August.*)

The markings in this animal vary slightly in intensity; those on the body are generally indistinct, but the black rings on the legs are always very conspicuous.

"This animal takes its name from 'paja,' the Spanish word for straw, from its habit of frequenting reeds. It is common over the whole of the great plains, which compose the eastern side of the southern part of America. According to Azara, it extends northward as far as latitude 30°, and to the south, I have reason to believe, from the accounts I have received, that it is found near the Strait of Magellan, which would give it a range of nearly 1400 miles, in a north and south line. One of my specimens was obtained, in 50° south, at Santa Cruz: it was met with in a valley, where a few thickets were growing. When disturbed, it did not run away, but drew itself up, and hissed. My other specimen was half-grown, and was killed in the end of August, at Bahia Blanca."—D.

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2. Felis domestica.

Felis domestica, *Brisson*, Reg. Anim. p. 264.

I find in Mr. Darwin's collection a cat, the colouring and proportions of which, convince me that its origin is from the domestic cat, as however it was shot in a wild state far from any house, a description may, perhaps, prove useful. Its general colour is deep gray, and the body is adorned with numerous irregular narrow black bands; there is a broad black mark, formed of confluent spots, along the middle of the back, which commences a little behind the shoulders; a considerable space around the angles of the mouth, the chin, throat, central portion of the chest, fore-feet, toes of the hinder feet, and the posterior portion of the belly, are white; a black line extends backwards from the posterior angle of the eye, on to the cheeks; thence, across the throat, there are two lines: the space between the eye is chiefly occupied with white hairs: the tail is slender, and tapers towards the apex; the basal half is gray with black rings, and the apical half is black, excepting the extreme point, which is white: the tarsus is black beneath: the legs are of a deep gray colour, banded with black externally.

To the dimensions I will add those of a domestic cat which in colour and markings very closely resembles the animal above described. I may add that I have chosen a cat rather above the ordinary size for my comparison, yet it will be seen that the wild cat has the advantage in bulk.

	Wild Cat.		Domestic Cat.	
	In.	Lines.	In.	Lines.
Length from nose to root of tail	22	0	19	0
of tail	12	3	11	6
of tarsus	5	1	4	7
of ear	1	11		
Height at shoulders	11	3		

Habitat, Maldonado, La Plata, (*May.*)

"This animal was killed amongst some thickets on a rocky hill a few miles from Maldonado. It appeared, when dead, much larger and stronger than any domestic cat I ever saw, and it was described to me as having been exceedingly fierce. I mention this because M. Temminck supposes that the domesticated varieties of all animals are of larger size, than the wild stock from which they are descended."—D.*

* I must refer the reader to my journal for some account of the habits of the jaguar and puma, which being well known animals, and the facts that I mention having little scientific interest, I have not thought it worth while to repeat them here.

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Gallictis vittata.

Gallictis vittata, *Bell*, Zoological Journal, vol. ii. p. 551–2.
————, „ Proceedings of the Zoological Society, for April, 1837, p. 39.
Gulo vittatus, *Desmarest*, Mamm. p. 175.

"This animal is not uncommon at Maldonado, where it is called "*Huron*" or thief, from the ravages it commits on eggs and poultry. Shortly after being killed this specimen weighed 1 lb. 8 oz. (Imp. weight)."—D.

1. Lutra Platensis.

L. vellere nitido, adpresso, intensè fusco; corpore subtùs pallidiore; gutture ad latera, et subtùs, pallidè fusco; mento rostrique apice sordidè flavescenti-albis; pedibus nigrescenti-fuscis; pilis caudæ supernè brevioribus, adpressis, illis ad caudæ latera longioribus et fimbriam efficientibus.

Description.—This Otter is about equal in size to the common European species (*Lutra vulgaris*, Auct.): its fur is short, glossy, and adpressed; the under fur is tolerably abundant and of a silky nature. The general colouring of the ordinary fur is deep brown, and that of the under fur is very pale brown, deeper externally. The tint of the under parts of the body is paler than the upper, and may be described as brown, that of the throat, sides and under part of the neck, pale brown; and, on the tip of the muzzle and chin, dirty yellowish-white. The hairs of the moustaches are brownish-white; the ears are covered with short deep brown hairs, those towards the tip are paler. The hairs covering the feet above are short, and of a very deep brown colour. The tail is tolerably long, thick at the base, whence it gradually tapers to the apex. The hairs on the base of the tail resemble those of the body, but on the remaining portion, they are short, glossy, and very closely applied to the skin both on the upper and under surface, whereas those on the sides are longer, and form a kind of fringe. The tip of the muzzle and the soles of the feet are naked, with the exception of the hinder half of the tarsus.

	In.	Lines.		In.	Lines.
Length from nose to root of tail . .	28	0	Length of tail	18	0

Habitat, La Plata, (*July.*)

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The La Plata Otter in its general colouring is of a somewhat deeper hue than the European species, the cheeks and throat instead of being nearly white are of a pale brown colour; the tail is longer in proportion, and tapers more gradually; the tip of the muzzle is naked, but the hairless portion is less than in that species, the boundary line between the naked part and the hair of the top of the muzzle forming almost a semicircle; the retiring extremities of this line touch the posterior angle of the nostril on each side, whereas in the common otter the boundary line of the hair of the muzzle is of a w-like form. The skull is figured in Plate 35, figs. 4, *a*, *b*, *c*, and *d*, and is compared with that of *L. Chilensis* in the next description.

"This specimen was killed by some fishermen a few miles from Maldonado, near the mouth of the estuary of the Plata, where the water is quite salt. I am not, however, by any means sure that it may not be a fresh-water species, which had wandered from its proper station; in the same manner as not unfrequently is the case with the *Hydrochærus Capybara*. I am indebted to Mr. Chaffers, the master of the Beagle, for having kindly presented me with this specimen."—D.

2. Lutra Chilensis.

Lutra Chilensis, *Bennett*, Proceedings of the Committee of Science and Correspondence of the Zoological Society of London for 1832, p. 1.

L. fusca; vellere mediocri, laxo et sub-extante; mento, gulâ, et faciei lateribus, pallidè fuscis; pedibus saturatè fuscis; corporis pilis ad apicem pallidè fuscis; caudâ mediocri; rostri apice calvo.

Description.—This species scarcely equals a full grown European otter in size. It is of a brown colour throughout; the cheeks, chin, and throat, being slightly paler, and the feet of a deeper tint, than the other parts. The fur is moderately long, rather harsh to the touch, and semi-erect: the under fur is abundant, and of a soft and silk nature. The hairs of the ordinary fur are deep brown, but tipped with a very pale brown colour. The hairs of the tail, like those of the body, are harsh and semi-erect; towards the apex, those on the upper and under part are in a slight degree shorter than those at the sides, and lie closer to the skin; these differences, however, are not very apparent on the upper side, though distinct on the under. The feet are naked beneath, with the exception of the posterior half of the tarsus. The hair of the muzzle extends only down to the posterior angle of the

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nostrils, where it terminates in a straight line, leaving the tip of the muzzle naked.

	In.	Lines.		In.	Lines.
Length from nose to root of tail . .	31	0	Length of tail	14	3

Habitat, Chonos Archipelago, (*January*.)

The Chile Otter was originally described by Mr. Bennett from a specimen presented to the Zoological Society by Mr. Cuming, but as this specimen is a young animal, scarcely half-grown, it does not present some of the characters of the species in so marked a manner as the adult. I have, therefore, availed myself of an adult specimen in Mr. Darwin's collection, to draw up the above description.

Compared with the Common Otter (*Lutra vulgaris*, Auct.) the most striking difference consists in the character of the fur: the hairs instead of being adpressed as in that species, are here semi-erect, and appear as if they had been clipped at the extremity. The fur is of a deeper colour, but has a slightly grizzled appearance, owing to the tip of each hair being of a much paler colour than the remaining part.

In the young animal described by Mr. Bennett, (which in weight was probably not more than one-third of that of the present animal) the hairs of the body are of an uniform deep brown colour; hence, if I am right in considering Mr. Darwin's animal as the same species, it would appear that the grizzled character of the fur is dependent on age.

The semi-erect fur will also serve to distinguish the present species from the *Lutra Platensis;* the fur is likewise longer, the tail is shorter, and the feet are smaller in proportion. The most important distinctions, however, are furnished by the skulls; I will, therefore, compare them.

The skull of *L. Chilensis* compared with that of *L. Platensis*, (Plate 35, figs. 4.) when viewed from above, presents but little difference in general form; it is, however, smaller in all its proportions, and the zygomatic arch is a little less convex: the palate is proportionately shorter; the tympanic bullæ are much smaller, less elevated, and wider apart, in which respect there is a greater approximation to the skull of *L. vulgaris* than to that of *L. Platensis;* but here, the tympanic bullæ are larger than in *L. Chilensis*. Both in *L. Chilensis* and *Platensis*, the sub-orbital foramina are kidney-shaped, the emarginated portion being downwards, whilst in *L. vulgaris* they approach somewhat to a triangulur figure, the apex being external. In *L. Chilensis*, however, this foramen is comparatively larger than in *L. Platensis*, and the outer portion of the foramen forms the

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segment of a larger circle than the inner one, whilst in *L. Platensis* both portions are equal.

The principal difference in the dentition of the La Plata and the Chile otters, consists in the comparatively smaller size of the posterior molars, both of the upper and lower jaws, of the latter species. In the upper jaw, the "carnassière" has its inner lobe, approaching somewhat to a triangular form, whereas in *L. Platensis* it is broader and almost semicircular. In the lower jaw, the last molar but one has the inner lobe much smaller than the middle outer lobe, whilst in *L. Platensis* these two lobes are of nearly equal size and elevation. Other points of dissimilarity will be perceived in the annexed table of admeasurements.

	L. Chilensis. In.	Lines.	*L. Platensis.* In.	Lines.
Whole length of skull	3	$9\frac{3}{4}$	4	$2\frac{1}{2}$
Greatest width	2	$6\frac{1}{2}$	2	$10\frac{1}{2}$
Width of skull from the apex of one mastoid process to the opposite	2	$3\frac{1}{2}$	2	$8\frac{1}{2}$
Length of palate	1	6	1	10
Breadth of palate between the posterior molars		$7\frac{3}{4}$		$7\frac{3}{4}$
Length from last molar to posterior margin of palate		$3\frac{1}{2}$		$5\frac{1}{2}$
from base of canine to hinder part of last molar		$11\frac{3}{8}$	1	$1\frac{1}{8}$
of carnassière		5		$5\frac{3}{8}$
Width of do.		5		$6\frac{1}{2}$
Length of last molar		$2\frac{3}{4}$		$3\frac{1}{2}$
Width of do.		$4\frac{1}{2}$		$5\frac{3}{8}$
Length of ramus of lower jaw	2	$4\frac{1}{2}$	2	$8\frac{3}{4}$
from canine to hinder portion of last molar (lower jaw)	1	$2\frac{1}{4}$	1	$4\frac{1}{4}$
of last molar but one (lower jaw)		$5\frac{3}{4}$		$6\frac{3}{8}$
Width of do.		$2\frac{3}{8}$		$3\frac{1}{2}$

"These animals are exceedingly common amongst the innumerable channels and bays, which form the Chonos Archipelago. They may generally be seen quietly swimming, with their heads just out of water, amidst the great entangled beds of kelp, which abound on this coast. They burrow in the ground, within the forest, just above the rocky shore, and I was told, that they sometimes roam about the woods. This otter does not, by any means, live exclusively on fish. One was shot whilst running to its hole with a large volute-shell in its mouth; another (I believe the same species) was seen in Tierra del Fuego devouring a cuttle fish. But in the Chonos Archipelago, perhaps the chief food of this animal, as well as of the immense herds of great seals, and flocks of terns and cormorants, is a red coloured crab (belonging to the family Macrouri) of the size of a prawn, which swims near the surface in such dense bodies, that the water appears of a red colour. This specimen weighed nine pounds and a half."—D.

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Family—DELPHINIDÆ.

Delphinus FitzRoyi.

Plate X.

D. suprà niger; capitis corporisque lateribus, corporeque subtùs niveis; caudâ, pedibus, labioque inferiore, nigris; fasciis latis duabus per latus utrumque obliquè excurrentibus, nigréscenti-cinereis, hujusque coloris fasciâ utrinque ab angulo oris ad pedem tendente.

Description.—Upper parts of the body black, under parts pure white, the two blended into each other by gray: extremity of snout, a ring round the eye, the edge of the under lip, and the tail fin, black; dorsal and pectoral fins dark gray; a broad gray mark extends from the angle of the mouth to the pectoral fin; above which, the white runs through the eye and is blended into gray over the eye; two broad deep-gray bands are extended in an oblique manner along each side of the body, running from the back downwards and backwards; iris of eye dark brown. Body anteriorly somewhat depressed, posteriorly compressed; head conical, arched above; the lower lip projecting beyond the upper; eye placed above and behind, but near the angle of the mouth; breathing vent situated in the same line as the eyes—supposing a circle to be taken round the head. Teeth slightly curved, and conical; in the upper jaw twenty-eight in number on each side, and in the lower, twenty-seven.

	Ft.	In.	Lines.
Total length (measuring along the curve of back)	5	4	0
Length from tip of muzzle to vent	3	10	9
to dorsal fin	2	6	5
to pectoral	1	4	5
to eye	0	9	9
to breathing aperture (following curve of head)	0	10	7
to angle of mouth	0	7	9
of dorsal fin along the anterior margin	1	0	5
Height of do.	0	6	4
Length of pectoral, along anterior margin	1	2	8
Width of tail	1	4	5
Girth of body before dorsal fin	3	0	6
before pectoral fin	2	8	2
before tail fin	0	7	8
of head over the eyes	2	0	0

Habitat, coast of Patagonia, Lat. 42° 30′, (*April.*)

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This species, which I have taken the liberty of naming after Captain FitzRoy, the Commander of the Beagle, approaches in some respects to the *Delphinus superciliosus* of the "Voyage de la Coquille," but that animal does not possess the oblique dark-gray bands on the sides of the body; it likewise wants the gray mark which extends from the angle of the mouth to the pectoral fins. In the figure the under lip of the *D. superciliosus* is represented as almost white, whereas in the present species it is black: judging from the figures, there is likewise considerable difference in the form. The figure which illustrates this description agrees with the dimensions, which were carefully taken by Mr. Darwin immediately after the animal was captured, and hence is correct.

"This porpoise, which was a female, was harpooned from the Beagle in the Bay of St. Joseph, out of several, in a large troop, which were sporting round the ship. I am indebted to Captain FitzRoy for having made an excellent coloured drawing of it, when fresh killed, from which the accompanying lithograph has been taken."—D.

Family—CAMELIDÆ.

Auchenia Llama. *Desmarest.*

Guanaco of the aborigines of Chile.

"The Guanaco abounds over the whole of the temperate parts of South America, from the wooded islands of Tierra del Fuego, through Patagonia, the hilly parts of La Plata, Chile, even to the Cordillera of Peru. I saw several of these animals in Navarin Island, forty miles north of Cape Horn; the Guanaco, therefore, has, with the exception of a fox and mouse, inhabitants of the same island, the most southern range of all American quadrupeds. Although preferring an elevated site, it yields in this respect to its near relative the Vicuña. On the plains of Southern Patagonia, we saw them in greater numbers than in any other part. Generally they go in small herds, from half a dozen to thirty together; but on the banks of the Santa Cruz, we saw one herd, which must have contained at least five hundred. On the northern shores of the Strait of Magellan they are also very numerous. The Guanacoes are generally wild and extremely wary: Mr. Stokes told me, that he one day in Patagonia saw through a glass a herd of these beasts, which evidently had been frightened, and were running away

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at full speed, although their distance was so great that they could not be distinguished by the naked eye.

"The sportsman frequently receives the first intimation of their presence, by hearing from a long distance their peculiar shrill neighing note of alarm. If he then looks attentively, he will, perhaps, see the herd standing in a line on the side of some distant hill. On approaching, a few more squeals are given, and then off they set, at an apparently slow but really quick canter, along some narrow beaten track to a neighbouring hill. If, however, by chance he should abruptly meet a single animal, or several together, they will generally stand motionless, and intently gaze at him;—then, perhaps, move on a few yards, turn round, and look again. What is the cause of this difference in their shiness? Do they mistake a man in the distance for their chief enemy the puma? Or does curiosity overcome their timidity? That they are curious is certain, for if a person lies on the ground, and plays strange antics, such as throwing up his feet in the air, they will almost always approach by degrees to reconnoitre him. It is an artifice that was repeatedly practised with success by the sportsman of the Beagle, and it had moreover the advantage of allowing several shots to be fired, which were all taken as parts of the performance. On the mountains of Tierra del Fuego, and in other places, I have more than once seen a Guanaco on being approached, not only neigh and squeal, but prance and leap about in the most ridiculous manner, apparently in defiance, as a challenge. These animals are very easily domesticated, and I have seen some in this state near the houses in northern Patagonia, although at large on their native plains. They are, when thus kept, very bold, and readily attack a man, by striking him from behind with both knees. It is asserted, that the motive for these attacks is jealousy on account of their females. The wild Guanacoes, however, have no idea of defence; and even a single dog will secure one of these large animals, till the huntsman can come up. In many of their habits they are like sheep in a flock. Thus when they see men approaching in several directions on horseback, they soon become bewildered, and know not which way to run. This circumstance greatly facilitates the Indian method of hunting, for they are thus easily driven to a central point, and are encompassed.

"The Guanacoes readily take to the water; several times at Port Valdes they were seen swimming from island to island. Byron, in his voyage, says he saw them drinking salt water. Some of our officers likewise saw a herd apparently drinking the briny fluid from a Salina near Cape Blanco; and in several parts of the country, if they do not drink salt water, I believe they drink none at all. In the middle of the day, they frequently roll in the dust, in saucer-shaped hollows. The males often fight together; one day two passed quite close to me, squealing and trying to bite each other; and several were shot with their

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hides deeply scored. Herds appear sometimes to set out on exploring parties: at Bahia Blanca, where within thirty miles of the coast these animals are extremely scarce, I one day saw the tracks of thirty or forty, which had come in a direct line to a muddy salt water creek. They then must have perceived, that they were approaching the sea, for they had wheeled with the regularity of cavalry, and had returned back in as straight a line, as they had advanced. The Guanacoes have one singular habit, the motive of which is to me quite inexplicable, namely, that on successive days they drop their dung on one defined heap. I saw one of these heaps, which was eight feet in diameter, and necessarily was composed of a large quantity. Frezier remarks on this habit as common to the Guanaco as well as to the Llama;* he says it is very useful to the Indians, who use the dung for fuel, and are thus saved the trouble of collecting it.

"The Guanacoes appear to have favourite spots for dying in. On the banks of the Santa Cruz, the ground was actually white with bones in certain circumscribed spaces, which generally were bushy and all near the river. On one such spot I counted between ten and twenty heads. I particularly examined the bones; they did not appear, as some scattered ones which I had seen, gnawed or broken as if dragged together by a beast of prey. The animals in most cases, must have crawled, before dying, beneath and amongst the bushes. Mr. Bynoe informs me, that during the last voyage, he observed the same circumstances on the banks of the Rio Gallegos. I do not at all understand the reason of this; but I may add, that the Guanacoes which were wounded on the plains near the Santa Cruz invariably walked towards the river. This quadruped seems particularly liable to contain in its stomach bezoar stones. The Indians who trade at the Rio Negro, bring great numbers to sell as Remedios or quack medicines; and I saw one old man with a box quite full of them, large and small."—D.

* D'Orbigny says, (vol. ii. p. 69.) that all the species of the genus have this habit.

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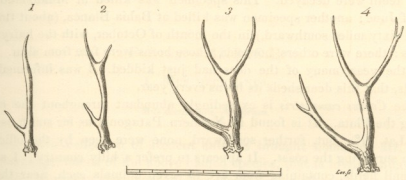
Family—CERVIDÆ.

Cervus campestris.

Cervus campestris, *F. Cuvier*, in Dict. des Sc. Nat. VII. p. 484.
————, Cuvier Oss. Foss. IV. p. 51. Pl. 3. f. 46.*
Guazuti, *Azara*, "Natural History of the Quadrupeds of Paraguay." W. P. Hunter's translation, vol. i. p. 135.
————, French translation, vol. i. p. 77.

Besides skins of this species of stag, I find, in Mr. Darwin's collection, three pairs of horns, which, together with a pair belonging to one of the skins, constitute a sufficiently complete series to illustrate the different forms which these appendages assume, as the animal increases in size.



The above four sketches, which are all drawn to the same scale, will help to convey a clear idea of the forms, and relative proportions, of these horns.

The most simple horn (fig. 1.) consists of a *beam*, eight and a half inches long, which is slightly arched outwards and considerably compressed about two and a half inches from the apex. At one inch from the base there is a small brow antler which projects forwards and upwards.

In the next horn, (fig. 2.) there is the same small brow antler, but there is a single small *snag*, about equal in size to the brow antler, which is directed back-

* Figures 47 and 48 of M. Cuvier's work represent horns so unlike either of those brought over by Mr. Darwin, that I cannot help suspecting they belong to some other species of stag.

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wards and upwards, and is situated at three and a quarter inches from the apex of the beam. The total length of the beam is eight inches, measured in a straight line.

The third pair of horns, (fig. 3.) which must have belonged to an animal considerably older than either of the preceding pairs, exhibits a large brow antler, in length exceeding half that of the beam: here the posterior snag is also large, and is directed backwards and upwards, whilst the apical portion of the beam is directed forward about as much as the snag is directed backwards. The total length of this horn is eleven and a half inches, measured in a straight line.

The last figure (No. 4.) represents the horn of one of the specimens of which an entire skin was brought over. This horn differs only from the last in being slightly larger, and in having two additional small snags, one springing from the under side, and near the apex, of the brow antler, and the other springing from the hinder part, and near the apex of the great posterior snag.

"The Spaniards say they can distinguish how old a deer is by the number of the branches on the horns. They affirmed that the specimen, of which figure 4 represents one of the horns, was nine years old. It certainly was a very old one, as all its teeth were decayed. This specimen was killed at Maldonado, in the middle of June; another specimen was killed at Bahia Blanca, (about three hundred and sixty miles southward,) in the month of October, with the hairy skin on the horns: there were others, however, whose horns were free from skin. At this time of the year, many of the does had just kidded. I was informed, by the Spaniards, that this deer sheds its horns every year.

"The *Cervus campestris* is exceedingly abundant throughout the countries bordering the Plata. It is found in Northern Patagonia as far south as the Rio Negro, (Lat. 41°); but, further southward, none were seen by the officers employed in surveying the coast. It appears to prefer a hilly country; I saw very many small herds, containing from five to seven animals each, near the Sierra Ventana, and among the hills north of Maldonado. If a person, crawling close along the ground, slowly advances towards a herd, the deer frequently approach, out of curiosity, to reconnoitre him. I have by this means killed, from one spot, three out of the same herd. Although thus so tame and inquisitive, yet, when approached on horseback, they are exceedingly wary. In this country nobody goes on foot, and the deer knows man as its enemy, only when he is mounted, and armed with the bolas. At Bahia Blanca, a recent establishment in Northern Patagonia, I was surprised to find how little the deer cared for the noise of a gun: one day, I fired ten times, from within eighty yards, at one animal, and it was much more startled at the ball cutting up the ground, than at the report.

"The most curious fact, with respect to this animal, is the overpoweringly

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strong and offensive odour which proceeds from the buck. It is quite indescribable: several times, whilst skinning the specimen, which is now mounted at the Zoological Museum, I was almost overcome by nausea. I tied up the skin in a silk pocket-handkerchief, and so carried it home: this handkerchief, after being well washed, I continually used, and it was, of course, as repeatedly washed; yet every time, when first unfolded, for a space of one year and seven months, I distinctly perceived the odour. This appears an astonishing instance of the permanence of some matter, which in its nature, nevertheless, must be most subtile and volatile. Frequently, when passing at the distance of half a mile to leeward of a herd, I have perceived the whole air tainted with the effluvium. I believe the smell from the buck is most powerful at the period when its horns are perfect, or free from the hairy skin. When in this state the meat is, of course, quite uneatable; but the Spaniards assert, that if buried for some time in fresh earth, the taint is removed. These deer generally weigh about sixty or seventy pounds."—D.

Family — MURIDÆ.

1. Mus decumanus.

Mus decumanus, *Auctorum*.

In the extensive collection of Rodent animals brought home by Mr. Darwin, I find several specimens of the above named species, that is to say, animals which resemble the European specimens of *Mus Decumanus* in all those characters which are the least liable to variation in individuals of the same species, such as the proportions which the various parts of the animal bear to each other: they differ, however, somewhat in colouring.

Buenos Ayres, Maldonado, Valparaiso, East Falkland Island, and Keeling Island, are each, it appears, infested with the common European rat. I have now before me two specimens from East Falkland Island, and one specimen from each of the other localities, and among these I find none equal in size to the largest European specimens: as regards the colouring, the Buenos Ayres specimen differs only from the English specimens of *Mus Decumanus*, in having the upper parts of a richer and deeper hue, owing to the tips of the shorter hairs being of a deep yellow instead of pale yellow, and in having a rusty tint over the haunches.

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Mr. Darwin found this variety "common about houses in the country around Buenos Ayres."

In the Maldonado variety, the shorter hairs of the upper parts of the body are of a rusty yellow colour at the apex, in other respects it resembles the British variety. The rusty yellow colour of the tips of the hairs produces a general reddish hue, which is the more conspicuous, when the animal is placed near an English specimen. "Was caught in a house, at Maldonado. I saw a specimen of the common gray English, or Norway rat, lying dead in the streets, and it certainly had a very different appearance from these red rats. The latter, I saw crawling about the hedges in the interior provinces at Santa Fé, and likewise in the forest of the island of Chiloe. This latter fact, however, is a strong argument against its being aboriginal, since I did not find even one undoubted American species, out of the many which I collected, inhabiting both sides of the Cordillera."—D.

The specimen from Valparaiso very closely resembles that from Maldonado; it is, perhaps, a little less red. "Common about the houses in the town of Valparaiso."

The two specimens from East Falkland are of a brighter hue, and have less gray in their colouring, than in the European variety of the common rat. "One of them was caught in a Bay, which is sometimes frequented by shipping, but which is distant thirty or forty miles from any habitation. These rats have spread, not only over the whole of East and West Falkland, but even on some of the outlying islets. When the cold, wet, and gloomy nature of the climate is considered, it is surprising that these animals should be able to find food to live on."—D.

The general hue of the Keeling Island specimen, is deep brown, the longer hairs of the upper parts of the body being, as usual, black; but the shorter hairs, instead of having the pale yellow tint which we observe in the European, (or, rather, British) specimens of *Mus Decumanus*, are of a deep, rusty yellow. The most remarkable difference, however, consists in the colouring of the under parts being of a yellowish tint, and, towards the root of the tail, of a very distinct buff yellow: the feet are brownish.

"This rat is exceedingly numerous on some of the low coral islets forming the margin of the Lagoon of Keeling Island, in the Indian Ocean. The climate is dry and hot. The rats are known to have come in a vessel from the Mauritius, which was wrecked on one of the islets, which is now called Rat Island. They appeared stunted in their growth, and many of them were mangy. They are supposed to live chiefly on cocoa-nuts, and any animal matter the sea may chance to throw up. They have not any fresh-water; but the milk of the cocoa-nut would supply its place."—D.

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Mus longicaudatus. *Mus gracilipes.*

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Mus bimaculatus. *Mus elegans.*

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Mus flaviscens. *Mus arenicola.*

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Mus brachiotis. *Mus Magellanicus.*

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2

1

1 *Mus Renggeri.*
2 ——— *obscurus.*

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Mus longipilis.

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2

Fig 1. Mus canthorhinus 2. Mus nasutus

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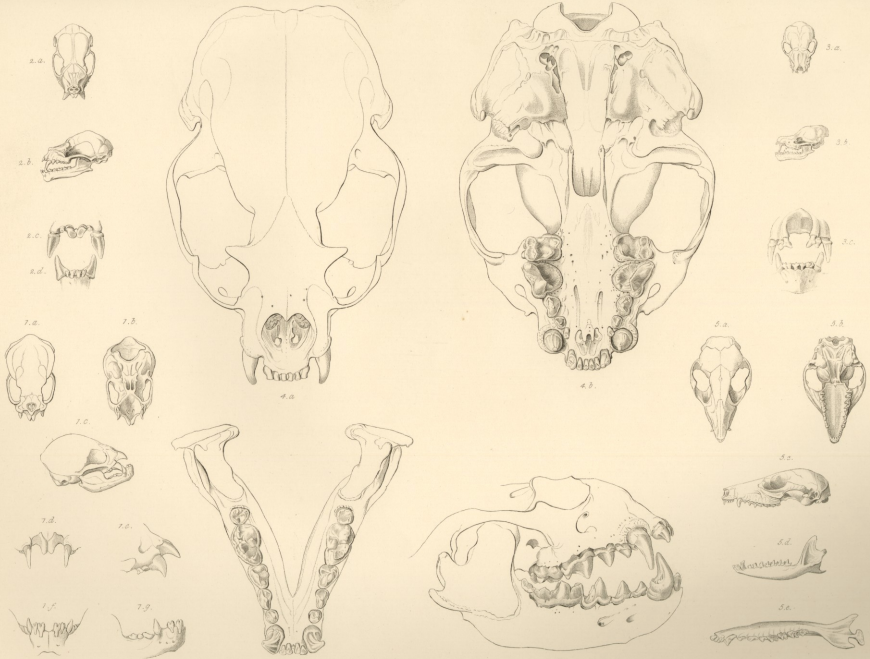

Drawn by C. H. Curtis.

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PROSPECTUS.

In order to secure to science the full advantage of the discoveries made in Natural History, during the Voyage of the Beagle, the Lords Commissioners of Her Majesty's Treasury have been pleased to make a liberal grant of money towards defraying part of the expenses of this publication. The work, in consequence, has been undertaken on a scale worthy of the high patronage it has thus received, and will be offered to the public at a much lower price than otherwise would have been possible.

Figures will be given of many species of animals hitherto unknown or but imperfectly described, together with an account of their habits, ranges, and places of habitation.

The collections were chiefly made in the provinces bordering on the Rio Plata, in Patagonia, the Falkland Islands, Tierra del Fuego, Chile, and the Galapagos Archipelago in the Pacific.

The following gentlemen, with a disinterested zeal for science, have undertaken different departments of the work; in those branches with which they are respectively best acquainted. Mr. Owen will describe the Fossil Mammalia; Mr. Waterhouse the Recent Mammalia; Mr. Gould the Birds; Mr. Bell the Reptiles; and the Rev. L. Jenyns the Fish.

A description of some of the invertebrate animals procured during the voyage will also be given. At the conclusion of the work Mr. Darwin will incorporate the materials which have been collected, in a general sketch of the Zoology of the southern part of South America.

CONDITIONS OF PUBLICATION.

It is impossible at present to define precisely the limits of this work, or the exact order in which the several subjects will be published; but it is estimated that it will extend to *Twenty Numbers*, one of which will be published on the first day of every alternate month; and the whole, when completed, will comprise about six hundred pages of letter-press, and from two hundred to two hundred and fifty Engravings, in Royal Quarto.

The price of each Number will vary according to the quantity of plates and letter-press it may contain, depending upon the subject of which it particularly treats; but it is estimated that the average price will not exceed *Ten Shillings*.

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