Note on the Races of Rein Deer.—*By* Edward Blyth.
(Concluded from page 306.)

In a foot-note to p. 283, I briefly remarked on the races of Rein Deer, and stated that I would recur to the subject in the sequel.

Mr. Andrew Murray of Edinburgh has been engaged in investigating the question, whether the Rein Deer of Lapland differs from the barren-ground race of N. America, and he has figured what he assumes to be characteristic horns of each race, suspecting that the broad vertical plate into which the brow-antler commonly expands in the barren-ground Caribou, to be peculiar to that race *(Edin. New Ph. Journ.*, April, 1858). In a Lapland specimen, however, in the Society's museum, received from that of Christiania (and not improbably the head of a wild animal), the horns more nearly resemble the American horns figured by Mr. Murray; and I therefore greatly doubt his supposed distinction between the barren-ground Caribou and the *wild* Lapland Deer.

Referring also to the detailed notice of the wild Rein Deer of northern Scandinavia, in Mr. L. Lloyd's 'Scandinavian Adventures' (II, 193), I find that this author remarks (probably on the authority of Prof. Nilsson), that the horns of the *wild* Rein Deer of Europe "are large and slender, with brow-antlers *which are broad and palmated.*" But the horns of the wild animal of arctic Europe would seem to be rare in museums; while those from America are exclusively the production of wild animals, and, as a rule, are undoubtedly picked specimens chosen from a considerable number. Hence, perhaps, the difference alleged or suggested by Mr. Murray. Moreover, in no other species of Deer are the horns so extraordinarily variable; wherefore, to arrive at a fair conclusion, it must be necessary to examine a considerable number of unselected horns of the wild animal from both regions.*

* The *Cervus coronatus* of Geoffroy was founded on a very remarkable pair, supposed by him to have belonged to a peculiar species of true Elk (or Moose)! *Vide* figure in Griffith's English edition of the *Règne Animal* (IV, 96), and also in Cuvier's *Ossemens Fossiles* together with a gradation of other horns referring them clearly to the Rein Deer: this curious pair consisting of broad palms without any beam, and dividing anteriorly into spillers.

It would appear that the wild Rein Deer of arctic and sub-arctic Scandinavia still exists in very considerable numbers. Thus Lloyd, quoting Prof. Nilsson, states that—"On the high fjälls in the vicinity of Röldahl and Woxlie, the Rein Deer collect at times in astonishing numbers. One day in the beginning of June, 1826 (a couple of months before my visit to this district), the fjäll, for the breadth of a Norwegian mile—which is a trifle more than seven English miles—was as thickly covered with Rein Deer as the ground is where Sheep feed in a flock. * * * The herd extended such a distance, that the eye could not embrace the whole at once. Subsequently the Deer separated into three divisions. * * * This reminds one as well of the interminable herds of Antelopes in the deserts of Africa, as of the equally large herds of Bisons in the prairies of America. * * * That this account is literally true, the Professor adds, is the more certain, because it was given him at different places and by different persons, who all agreed in their relations. The phenomenon excited a great deal of interest—no person having previously seen so large a number of Rein Deer collected in one and the same place. On the Jemtland and Herjeadalen mountains in Sweden, as well as in the north-eastern portion of Lapland up to the North Cape, [the wild] Rein Deer are also pretty abundant. But in the intermediate country, which with some propriety may be called Western Lapland, though formerly numerous, very few, according to Læstadius, are now to be found.

"The number of wild Rein Deer killed annually in Scandinavia, by one means or another, is considerable. Very many, to my knowledge, are shot on the Norwegian mountains by peasants and others; as also in the more northern part of the peninsula. One of my guides in Russian Lapland, who was much celebrated as a chasseur, assured me, indeed, that in his time he had destroyed hundreds of those animals—in one instance as many as nine in a single day. For the most part he had shot them during the autumn, when they were in the best condition: but many he had also run down on Skidor." There ought, therefore, to be no great difficulty in procuring fine horns of the wild European animal for museums.

"Of the tame Rein Deer of Lapland," continues Mr. Lloyd, "there are, so to speak, two kinds: the so-called *Fjäll Ren*, or moun-

tain Rein Deer, which for the greater part of the year are herded on such elevated regions as to be destitute, or nearly so, of arborea[1] vegetation ; and the *Scogs Ren*, or forest Rein Deer, that all the year are pastured in the forests. The Skogs Ren is the larger of the two ; but even he is much inferior in size and nobility of appearance to the wild Rein Deer. The latter is occasionally killed, weighing about 350 lbs. ; whereas the tame Rein Deer, according to Swedish naturalists, never attain to more than 200 lbs.* The wild Rein Deer is of a much lighter and more handsome colour than the tame. His coat—in the winter at least—is immensely thick." (Lloyd's 'Scandinavian Adventures,' II, 190, 192, 198, 206.)

Another writer describes the wild Rein Deer of Scandinavia as "thinner, with more appearance of bone, and considerably stronger," than the tame ; in fact, a more 'game'-looking animal, as is usually the case with species in a state of nature.

The object of these citations is to shew that the fossil Rein Deer of the British Islands may well be identical with the existing wild animal of Scandinavia, as distinguished from the tame kind, rather than of a race peculiar to the barren-grounds of arctic America (as has been suggested), which, however, I suspect to be one and the same particular race ;† whereas the Musk Ox, likewise met with fossil in Britain, is actually now confined to the American 'barren-grounds ;' where, also, upon the western continent, the European Bear is exclusively observed.

"Nilsson," continues Mr. Lloyd, "has a curious speculation respecting the Rein Deer. He imagines that those once inhabiting Scania came from the southward immediately after the boulder-formation,

* The main reason, I suspect, of the inferior size of the tame Rein Deer, as compared with the wild, is that the young are deprived of their necessary supply of milk. *Vide* end of note to p. 285, *antea*.

† Since the above and the note to p. 283 were written, I have seen the abstract of Dr. H. Falconer's paper 'On the Ossiferous Caves of Gower, in Glamorganshire, South Wales,' published in the *Ann. Mag. N. H.* for October, 1860, p. 297 *et seq.* The fossil Deer referred to in p. 283 *(antea)* are there referred to "species or varieties allied to the Rein Deer *(Cervus Guettardi* and *C. priscus)*." Prof. Owen's figure of what he assigns to C. TARANDUS in his *Palæontology*, p. 374 is merely a copy of a *restored* figure of a British fossil figured in his *British Fossil Mammals and Birds*, p. 479, and is therefore not authoritative.

and whilst that province was still united to Germany: that, on the contrary, those which at present inhabit the northern portion of Scandinavia, came at a much later period (and subsequent to the land stretching between the Gulf of Bothnia and the White Sea having risen from the deeps), by the way of Finnish Lapland. He has come to this conclusion from fossil remains of the Rein Deer having been found in abundance in the alluvial peat-bogs of Scania; whereas in the whole of the line of country between that province and southern Lapland, nothing of the kind has been met with." *(Ibid.* II, 191.) No diversity of race is alluded to; and there can be little doubt that the ancient British was identical with the Teutonic, and both with the existent wild Deer of Scandinavia.

The large Asiatic race, which in a tame state is commonly *ridden* by the Toungouz or Tungusians and others,* and which I suspect to be identical with the Woodland Caribou of N. America, is doubtless the so-called 'Roe-buck' of the Amûr territory noticed in p. 92 *antea.* This I gather from a passage in the Journal of the celebrated pedestrian traveller, Capt. John Dundas Cochrane, R. N. (nephew of the late venerable Earl of Dundonald), who was informed, at Boukhtarmisk, that "Rein Deer abound in the mountains [southward, beyond which is the lake from which the river Irtisch takes its rise], which also contain Sheep. The horns of the former are considered valuable, fetching two or three guineas a pair; when very young the Chinese purchase them and extract a favourite medicine; the younger the animal who has shed the horns, the greater the value." (Cochrane's 'Narrative,' 2nd edit., I, p. 180). Capt. Cochrane should have said—the younger the horns of the animal, not "the younger the animal." Old Bishop Pontoppidan, as quoted by Mr. Lloyd, remarks that—"When the Rein Deer sheds his horns, and gets new ones in

* The small Lapland race is occasionally ridden. Thus Clarke writes—"The lad who had conducted me vaulted on the back of one of them, having a Rein Deer skin for his saddle, and two seives by way of stirrups." And again, at Erontikis,—"The rest of the night was passed in mirth and rejoicing, we had races in sledges, drawn by Rein Deer, and amused *ourselves by riding* on the backs of these animals." *(Clarke's Winter in Lapland).* Capt. Cochrane, writing of the Tongousi (as he terms them) remarks—"I was amused with their manner of catching Rein Deer, as it reminded me of the hunting of wild bullocks I had seen in Mexico; with this difference only, that there the man rides a Horse fully trained, and here a Rein Deer," &c. &c. *(Pedestrian Journal,* I, 373).

their stead, they appear at first to be covered [as in all other Deer] with a sort of skin, and till they come to a finger's length, are so soft, that they may be cut with a knife, like a sausage, and are delicate-eating even raw. This we have from the huntsmen's account, who, when they are far out in the country, and are pinched for food, eat them, which satisfies both hunger and thirst." Of course they are then most highly vascular and full of blood; and thus it appears that this strange delicacy is not quite peculiar to the Chinese.

Professor Pallas, tracing the geographical range of the Rein Deer in Asia, notices the occurrence of this animal in the Kinyan Alps in Mongolia, between the rivers Amûr and Naun. (*Zoogr. Rosso-asiatica*, edit. 1830, I, 203.) It can hardly migrate annually to the sea-coast from that mountainous far-inland region, which migration is held to be a necessity of existence with the Rein Deer of Lapland. But does the large or Woodland race of this animal anywhere migrate to the sea-coast?

It is remarkable that the Rein Deer has never been domesticated in arctic America; and the more so, as the immediate *western* shore of Behring's Straits and the Aleutian Isles are inhabited by true Esquimaux (*Vide* Von Wrangell, Sabine's Translation, pp. 343, 372), who cannot but know of the domestic herds in the possession of their neighbours the Tschuktschi;* but a reason may well be, that where

* By the way, Dr. Godman remarks that the wild "Rein Deer often pass, in summer, by the chain of the Aleutian Islands, from Behring's Straits to Kamschatka, subsisting on the moss found on these islands during their passage" (*i. e.* from America to Asia). Pennant stated that "they are not found in the islands that lie between Asia and America, though numerous in Kamschatka." They do not appear to inhabit them permanently.

Cuvier has shewn, by a laborious investigation, that, during the historic period, this animal never extended in Europe further south than the Baltic and the northern parts of Poland; and, at present, as Sir C. Lyell remarks, it "can scarcely exist to the south of the 65th parallel in Scandinavia; but descends, in consequence of the greater coldness of the climate, to the 50th in Chinese Tartary, and often roves into a country of a more southern latitude than any part of England." Referring to Dekay's 'Natural History of New York,' this author states—"It is with much hesitation that I include the Rein Deer in the *Fauna* of our State; but the representations of hunters lead me to suspect, that, when the yet unexplored parts of the State have been more thoroughly examined, its existence may be disclosed. Pennant, in his time, asserted that the Rein Deer was not found further south than the most northern part of Canada. Charlvoix, however, saw one killed at Quebec. The specimen in the cabinet of the Medical College at Albany came from Nova Scotia; and Harlan asserts that it does not pass the State of Maine into the United States, implying its existence there." Professor Emmons observes—"It is only a few years

Dogs are employed for sledging, and are unaccustomed to the sight of tame Deer, they would be very apt to attack and destroy them, as has happened in instances where individual Rein Deer have been tamed in the American fur-countries by Europeans. In Lapland, however, the herds of domestic Rein Deer are always tended by several Dogs, which guard and keep them in order and serve to hunt back any stragglers. (*Vide* Lloyd's *Sc. Adv.* II, 213.)

Referring to Dr. J. E. Gray's 'Synopsis of the Species of Deer' (*Proc. Zool. Soc.* 1850, p. 225), I observe that he admits one species only of Rein Deer, but which "varies exceedingly in size." He remarks—"They have a large variety in Newfoundland, nearly as large as a heifer [a heifer of what race ?*], having very large and heavy horns. There are some horns of this variety in the British Museum. M. Middendorf informed me that the horns of the large Siberian variety were as large as, and greatly resembled, the horns from Newfoundland (Nova Scotia) in the British Museum collection." In other words, the American Woodland Caribou, and the large race of N. Asia, are, in all probability, quite identical.

since this animal appeared in the northern parts of Vermont and N. Hampshire; from which it is not unreasonable to infer, that in earlier time it may have passed still further south. Its gregarious habits and unsuspicious character would seem to ensure its speedy destruction, when placed within the reach of man." It is well known how much the climate of the Atlantic States of N. America has been ameliorated, from the seasons being rendered less excessive, by the gradual extensive clearance of the forests; as that of N. Europe since the time of Cæsar. On the Pacific Coast of N. America, Capt. Beechey remarks that Rein Deer occur in some seasons of the year in New Caledonia (now, to avoid confusion, termed British Columbia), or the country drained by Fraser's River.

* Clarke remarks, of the Cows which he saw in his journey from Tornea to the Muonio river,—"The Cows here are all of the same white colour, and very little larger than sucking calves in England; but so beautiful, and yielding milk of a quality so superior to any we had before tasted, that we longed to introduce the breed into our own country. It is almost all cream; and this cream, with the most delicious sweetness, is, at the same time, even when fresh, so coagulated, that a spoon will nearly remain upright after it has been plunged in it. Of course," it is added, "its richness must be principally attributed to the nature of the food which, during summer, these cows select for themselves in the forests; and this consists entirely of the tender twigs and young shoots of trees." *Travels to the North Cape*, p. 309.

The pretty little Norwegian cows are thus incidentally noticed: comment about the "as if" is, of course, unnecessary. "Then came the goats and sheep, and the little cows following like dogs, now and then stopping to take a bite, when the turf looked particularly sweet and tempting—little fairy cows were they, much smaller than our Alderneys, finer in the bone, and more active in the legs; they looked *as if* they had a cross of the Deer in them. They were all of one colour, a sort of dirty cream-colour approaching to dun, and almost black on the legs and muzzle." (*Forest Scenes in Norway and Sweden.* By the Rev. H. Newland, p. 156.)

Still it is rare that even the Woodland race in America attains to the weight of 350 lbs.! One, 4¼ ft. high at the shoulder, mentioned in Capt. Cartright's Journal, weighed, his quarters 270 lbs., the head 20 lbs., offal 20 lbs.—310 lbs. in all: he had an inch of fat on his ribs, and 1½ in. on his haunches. Another, "an old buck of the dwarf breed," five inches lower at the shoulder and which had forty points to his antlers* (the former having but 29), "was in excellent order, weighing in his quarters 314 lbs., with 2½ lbs. of fat on his haunches, and 1½ in. thick on his ribs." A buck of 27 stone is also mentioned, which, "had he been killed in prime of grease, would have stood at least 31 stone, or 434 lbs. A very fat old doe weighed 154 lbs., and another 155 lbs. But all of these were particularly fine animals." In Lapland, "a fat ox-Deer weighed 122 lbs., and had 10 lbs. of tallow. This is, I suppose," continues Mr. Laing, "as much as the tame animal in general will feed to. The wild race, which comes considerably further south, is a good deal larger."

The domestic Deer of Lapland, however, vary even in neighbouring parishes. "None that I saw," relates the Hon'ble A. Dillon, "were larger than our common English Fallow Deer. Those in Russian Lapland, near Kola, are said to be much taller; while the wild ones in Spitzbergen, though exceedingly fat, *are far inferior in size*." "The Deer which I observed, as I approached Tornea," remarks Sir A. C. Brooke, "and those I afterwards met with beyond it, confirmed me in what I had been told was the fact, that the further they live north, the larger they are; and when I saw those which were brought to England by Mr. Bullock from the Roraas mountains between Christiania and Drontheim (being the southernmost limit of their range in Scandinavia), their very great inferiority in size to the Deer of Finnmark removed all doubt on the point. Large, however, as is their size, I have been assured by persons who have made successive voyages to Spitzbergen, for the purpose of taking this animal and the Walrus, that the Rein Deer found on that island *exceed very considerably in bulk* those of Finnmark; and that their tallow alone, which is a principal object in their capture, in many of them amounts to the extraordinary weight of 40 lbs. Respecting the size of the Spitz-

* Capt. Cartwright obtained a pair "with 72 terminal points." ("Journal of 16 years' residence in Labrador.)"

bergen Deer," continues this author (at variance with Mr. Dillon, and also with a statement in the Appendix to Sir John Ross's 2nd voyage), "I have been able to satisfy myself, from having had an opportunity of seeing in London a haunch, that was brought to England, having been salted, and afterwards dressed; and from the extraordinary dimensions of it, the animal must have been *considerably larger* than any of the Rein Deer of Lapland." According to Clarke,—"The breed of Rein Deer in the parish of Eroutikis [in Lapland] is larger than that of Bickasjerf, but smaller than that of Kittila; and this difference is wholly to be ascribed to the difference in the soil, as suited to the growth of Rein Deer moss; on which account the Rein Deer of the mountains are always smaller than those of the forest."

Here, indeed, we have probably the key to the difference between the barren-ground and woodland races of America, if not elsewhere;* but the difference of *habit* is remarkable. "In the fur-countries of North America," writes Sir John Richardson, "there are two well marked and *permanent* varieties of this animal [*incipient species*, according to Mr. Darwin's theory], one of them confined to the woody and more southern districts, and the other retiring to the woods only in winter, and passing the summer on the coasts of the Arctic Sea, or on the barren-grounds.† The latter weigh so little, that I have seen a Canadian voyageur throw a full grown doe on his shoulders, and carry it as an English butcher would a sheep. The bucks are larger, and weigh (exclusive of the offal) from 90 to 130 lbs. Those of the Woodland variety from 200 to 240 lbs." "A small doe of this," remarks Hearne, "is equal to a northern buck: but, though so considerably larger, their antlers, although much stronger, are not so large and branching." In Sir John Ross's 2nd Voyage, we read that a specimen, "of larger size than ordinary," was obtained in Boothia, weighing 250 lbs. From nose to base of tail it measured 5 ft. 10 in.; the tail $5\frac{1}{4}$ in.: height at the shoulder $4\frac{1}{4}$ in.; of the hind-quarters 4 ft. 5 in.; and girth behind the four legs 55 in.; those of Melville Island, Boothia, and *Spitzbergen*, it is stated, "did not average above half the weight." Probably, therefore, a straggler of the woodland

* The American barren-grounds are physically similar to the mountainous parts of Lapland, and also to the 'tundras' of Siberia.

† He subsequently remarks—"Contrary to the habits of the Barren-ground Caribou, the Woodland variety travels southward in the spring."

race. We may accordingly presume that the current statement that the further northward this animal inhabits, the larger it grows, is true only within certain limitations, depending much on the character of the country. The large woodland race, indeed, inhabits southward of the small barren-ground race: the former migrating in summer to the polar sea; the latter southward to the mountains of the interior; and this alike in Asia and America.

A NOTE ON THE ANTIQUITY OF THE HUMAN RACES.

To which I am induced by recalling to mind a passage in the Introduction to Von Wrangell's 'Narrative of an Expedition to the Polar Sea' (Sabine's Translation, p. cxvii), wherein a flint implement is mentioned as being in use in modern times (*A. D.* 1809). Indeed, elsewhere (p. 376), Von Wrangell notices, of the Tschuktschi, that—"Iron being scarce, they sometimes employ Walrus tusks instead;" and also that—"The inhabitants of the Aleutian Isles use spears pointed with slate in killing Whales" (p. 340). So did other Esquimaux further *east* (*i. e.* in America) fashion slate as well as bone weapons until they became acquainted with the use of iron, and acquired possession of metal instruments from their European visitors.—"On Fadegew Island, Sannikow found a Jahakir sledge, and a knife, such as is generally used for scraping Rein Deer skins. The blade, however, was not of iron, but of a hard sharp *flint*. In New Siberia they had found an axe made of the tusk of a Mammoth."—Now Nilsson, exploring certain exceedingly antique *tumuli* in Scania (the *southernmost* province of Sweden), found in them flint arrow-heads or spear-heads—the so-called *Celts* or *Kelts*,—together with bones of now extinct mammalia, and human bones including skulls, which skulls were distinctly of the hyperborean type of humankind, in a latitude considerably to the southward of the abode of the hyperborean Mongol at the present epoch, unless where a a much severer winter climate obtains! Considering the ultra-remote antiquity of the 'Celts' elsewhere discovered in temperate latitudes, does not Nilsson's discovery somewhat point to the glacial period of Agassiz? Albeit the human animal most assuredly never originated in the circum-polar regions, any more than on the minor continent now called America, however ancient may be the indis-

putable human remains discovered by Dr. Lund in certain Brazilian caverns, and others since disinterred in the valley of the Mississipi! The human organism pertains strictly to the *catarrhine* as opposed to the *platyrrhine* division of anthropomorphous creatures, the former proper to the major continent, the latter to the minor continent,—the former (as in mankind) having invariably but two præ-molars above and below on either side, the latter as constantly a series of three præ-molars, &c. &c.: and it need hardly be added that the naked frame (with hair on scalp affording some protection from the sun, but certainly not from cold,) most surely indicates the original and indigenous abode of mankind to have been in a hot region of the earth, even where, at the present time, the animals most nearly akin to humanity—so far as their bodily organization is concerned—inhabit. But what do we know of the geology of the regions tenanted by the Gorilla, the Chimpanzee, and the Orangs? Just a little! Of their palæontology, almost nothing. It is therefore exceedingly premature to dogmatize or to venture to affirm whether or not a nearer (fossil) link may even yet be brought to light than is the formidable Gorilla Ape, itself a re-discovery but of yesterday, when the proper regions of the earth for such a quest shall have been duly investigated. These remarks are meant to afford little more than a hint; but it is one that will be understood by those for whom it is intended.—E. B.

A NOTE ON DOMESTIC ANIMALS IN GENERAL.

In page 291 *antea*, it is remarked that the efforts of modern Zoological and other Societies have not been attended with much result hitherto, as regards the domestication of wild animals; and I believe, as there intimated, that the subjection of all the more important domestic creatures was effected by human beings in a very rude state of savagery. Since writing those remarks, I have seen the article in No. CCXXV of the 'Edinburgh Review' on the "Acclimatization of Animals," in which the results hitherto attained are brought to notice. "The acclimatization of the Eland," we are told, "may be now considered a *fait accomplè*;" but this is, at most, a preliminary to its *domestication*, which by no means necessarily follows, or may

even be possible. The Common Pheasant, for example, was probably introduced into Britain during the period of Roman domination; yet, however thoroughly naturalized to the country (for the amount of acclimatization in this instance is inconsiderable), and also however tameable, it certainly manifests no tendency to become a domestic bird, like the ordinary Common Fowl or the Turkey. It will not attach itself to a home-stead. "The practical results," we are told, "of *reproduction* and *acclimatization* have been so entirely lost sight of for ages, that the Turkey in 1524, the Musk Duck in 1650, the Gold Pheasant in 1725, and the Silver Pheasant in 1740, are the only additions to our catalogue of domesticated animals since the Christian æra." Surely the Gold and Silver Pheasants cannot be justly termed *domesticated*, although tame, and the races permanently maintained either *in strict confinement*, or turned loose into preserves.* Most assuredly they are not likely to become free denizens of the poultry-yard; like the Guinea-fowl, the domestication of which is really of comparatively modern date. Its name of *Guinea*-fowl indicates the indigenous abode of the particular species, a country unknown to the Greeks and Romans; whose *Meleagris* and *Gallina numidica (quasi nubica ?)* referred to the species of N. E. Africa and perhaps of Arabia (Numida ptilorhyncha of Rüppell), received by them *viâ Nubiæ*.†

Next, of the two other instances cited,—the Turkey and the Musk Duck—it is remarkable that both of these were found by the Spanish discoverers already domesticated in the New World. This Schlegel

* Neither of them has begun to vary in colour as yet, as the semi-wild British Pheasant often does, to the same extent as the tame Guinea-fowl.

† According to W. G. Browne's 'Travels in Africa,' &c. (1792 to 1798), p. 264, those birds were even then brought in cages, "as a profitable commodity," to Cairo from Darfour; and doubtless therefore at the present day also, as likewise in ancient times. There is no reason to suppose that the Romans *domesticated* them, even though they may have kept many in captivity. Prince John of Portugal, the famous patron of African discovery (but more probably one of his successors), has the credit of first introducing and multiplying the modernly domesticated species from *Guinea;* and the earliest known *distinctive* description of it is that by Dr. Caius (1570), in which the purple colour of the neck is mentioned, which will not apply to the E. African N. ptilorhyncha.

That the E. African bird was that known to the Romans is further distinctly indicated by an expression of Columella, who notices its "*paleam et cristam*" (peak and crest); referring to the frontal crest of N. ptilorhyncha (whence its name), which is utterly wanting in the bald-fronted bird of Guinea.

has remarked of the CARAINA MOSCHATA;* and the *Carnivora* of Montezuma's menagerie were fed on the flesh of domestic Turkeys.

* 'Revue Critique des Oiseaux d' Europe,' p. 108. Were the Geese of *this species* which were "bred to supply feathers for ornaments" in the now ruined city of Quiché (lat. 15° N.), which, like Mexico, had its zoological and botanical gardens attached to its palace? (Stephens's *Incidents of Travel in Central America*, II, 179.) I have not access to the original authorities, and know of no traveller more thoroughly indifferent to all matters of Natural History than was Mr. Stephens, in a country, too, so teeming with objects of interest in its *Fauna* and *Flora*. In the hunts of that most exquisitely plumaged bird, the Ocellated Turkey (MELEAGRIS OCELLATA), where so void of fear that he knocked one over with a pistol (I, 397), he does not appear to have distinguished it from the common wild Turkey of the United States (M. GALLIPAVO): and at the ruins near Palenque (within the Mexican territory, in about 17° 20′), he remarks—"We expected at this place to live upon game, but were disappointed. A wild Turkey we could shoot at any time from the door of the palace; but, after trying one, we did not venture to trifle with our teeth upon another" (II, 320). Just as, in this country, an old Peafowl has the merited reputation of being tough, as has likewise an aged gander! But it does not follow that all are not excellent eating when of a proper age. (Indeed, another writer describes the flesh of the Ocellated Turkey as "most delicious-eating." *Proc. Lin. Soc.* 1859, pt. 1, p. 62). The Jaguar (FELIS ONCA) is indifferently styled by Mr. Stephens both 'Tiger' and 'Leopard;' and the Cougar or Puma (F. CONCOLOR) is of course his 'Lion.' This was to have been expected; but that the most superficial of observers should see the Ocellated Turkey and pass no remark on its extraordinary beauty is somewhat surprising. At least it is not probable that the wild MELEAGRIS MEXICANA occurs so far southward even as Palenque; and at the modern village from which the neighbouring ruins derive their current name, the author mentions having procured a domestic Turkey for provender.

It may seem strange that the M. OCELLATA, in addition to M. MEXICANA, was not domesticated by the populous race which the Spaniards found so highly civilized (in some respects) over a vast extent of country which it inhabits; but neither have the Jungle-fowls of S. India and Ceylon respectively (GALLUS SONNERATII and G. STANLEYI *v. Lafayettii)* been domesticated, while their congener of N. India and of all S. E. Asia and its archipelago, even as far as Timor, (G. FERRUGINEUS *v. bankivus,)* has been diffused in a domestic state over the world. Mr. Gosse remarks that—"The common Turkey is, so far as European knowledge is concerned, *indigenous to the greater Antilles;* having been found by the Spanish discoverers already domesticated by the Indians; and the European domestic breed is descended from the West Indian, and not from North American parentage." *(Birds of Jamaica*, p. 329.) He gives no authority for the statement, and its accuracy is more than doubtful. As the late Mr. Broderip remarked—"Mexico was discovered by Grijalva in the year 1518: and we soon after find a description of the Turkey as one of the productions of the country by Gomarra and Hernandez, the latter of whom gives its Mexican name *Huexototl*, and makes mention of the wild birds *as well as of the tame.* Oviedo, whose work was published in Toledo in 1526, describes the Turkey well, as a kind of Peacock of New Spain, *which had been carried over to the islands and the Spanish main*, and was about the houses of the Christian inhabitants." (Broderip's *Recreations in Natural History.)* This statement of Oviedo quite disposes of Mr. Gosse's assertion of its being *indigenous* to the greater Antilles.

In tracing the southern natural distribution of the genus MELEAGRIS, it should be borne in mind that the so-called "wild Turkeys" of Guiana, mentioned by various authors, are *Curassows*, often by their own shewing; while that of Paraguay is no other than the PSOPHIA CREPITANS *(Vide* 'Letters from Paraguay, Brazil, and the Plate,' by C. B. Mansfield, M. A., 1856, p. 533); and that the *Dindons sauvages*,

It is only recently that the true prototype of the common Turkey (GALLIPAVO MEXICANA of Gould) has been made known; and the wild bird is peculiar to the eastern water-shed of N. America; the wild Turkey of the Atlantic side of the Rocky Mountains being conspicuously distinct. The domestic Turkey was imported into Spain early in the 16th century; and from Spain it was introduced into England in 1524. "This fowl was first seen in France in the reign of Francis I, and in England in that of Henry VIII. By the date of the reigns of these monarchs, the first Turkeys *must have been brought from Mexico;* the conquest of which was completed A. D. 1521."* These facts are generally known; but not the fact, for which there is abundant evidence, that the *domestic* Turkey was introduced *from Europe* into the N. American colonies, where a kindred wild species abounded in the forest.† Mr. Gould has remarked that the hybrids

or 'wild Turkeys,' of various regions of the old world are different Bustards; among others the great Bustard of Australia is not unfrequently designated the 'wild Turkey,' and the Australian TALEGALLA LATHAMI is termed the 'Brush Turkey.' But it appears that the true wild Turkey of the Atlantic side of the Rocky mountains of North America (M. GALLIPAVO *verus)* was formerly naturalized in Ireland! —"the breed, the true copper-colour, with red legs." *(Vide* Thompson, 'On the former Existence of the Capercali in Ireland.' *Ann. Mag. N. H.*, X (1843), p. 33.) The *Société d' Acclimation* should turn its attention to the naturalization of this fine species, before it is quite extirpated, in various forests of Europe. (For information regarding the Ocellated Turkey, *vide Proc. Lin. Soc.* 1859, pt. 1, p. 62, and *The Ibis*, No. VIII.)

As the indigenous range of the Turkey genus is restricted to North and Central America, so is that of the various Bustards to the major continent with Australia. But the name 'Bustard' is misapplied in the West, as that of 'wild Turkey' in the East. Thus the so-called 'Bustard' of the N. American fur-countries is the Canada Goose! (Vide Franklin's 2nd Voyage, p. 80.) Hence 'Bustard Island' on Lake Athabaska! Pernetty, in his *Historical Journal* of the *Voyage to the Falkland Islands*, under the command of M. de Bougainville, states that "We found the Bustard exquisite, either boiled, roasted, or fricasseed. It appeared from the account we kept that we ate 1500 of them." The Falkland Island Goose is probably here intended. In S. Africa, the largest species of Bustard is known as the *Paouw* (or 'Peacock') to the colonists—perhaps the true pronunciation of the Latin *Pavo*, imitative of the voice of the Peafowl.

* *Encyclopædia Brittanica.*

† The reverend divine, Mr. Francis Higgeson, who wrote 'A Description of New England's Plantation' in 1630, remarks of the harbour of Plymouth, that "the parsnips, carrots, and turnips are here bigger and sweeter than is ordinary to be found in England; the Turkeys are far greater than *our English Turkeys*, and exceedingly fat and sweet and fleshy." I take this quotation from the 'Edinburgh Review,' No. CCVIII, p. 560; and it may be that wild Turkeys are intended; but the reference to *English Turkeys* should indicate that the latter were never derived from the N. American 'plantations,' at least within the knowledge of the colonists more than two centuries ago. Again, Mynheer Vander Donk, in his 'Description of the New Netherlands' (Amsterdam, 1656), describing the State of New York as it appeared at its first settlement by Europeans, states, that "the most important fowl of the country is the wild Turkey. *They resemble the tame Turkey of the Netherlands!*"

raised from the domestic Turkey crossed with the wild species of the Atlantic States are rarely prolific.

Civilized man—or at any rate European civilized man—has domesticated no animal from the New World; he has tamed and bred certain Curassows and Guans, but it is doubtful if they can ever be trusted loose and unmutilated in the poultry-yard, like the indigenously domesticated Turkey. The only truly domesticated animals of America are sundry native Dogs, the Llama and Alpaca, and the little insignificant Guinea-pig, among mammalia; and the Turkey and the Musk Duck among birds. Of Old World species, the Rabbit has been domesticated probably within the Christian æra, and also the Ferret (to a certain extent) among *Carnivora;* but neither of these are allowed their liberty (though some Rabbits, I think, might be,) any more than are the races of white and parti-coloured Mice,—all of which are so far domesticated that individuals require no taming, and may be freely handled without occasioning distrust: the development of the breeds of domestic Rabbits is, indeed, quite of modern date; unless, perhaps, in the instance of the long-haired Angora Rabbit. I believe that all of the true Geese are most readily domesticable; and the fine Canada Goose falls within the category, but although tame Canada Geese multiply freely, they have not yet so far succumbed to the usual influences of domestication as to vary in colour, like the Pea-fowl and Guinea-fowl, and even the semi-wild and protected Pheasant and the Fallow Deer. Neither, for that matter, has the semi-domestic Swan, which differs in no respect from the wild mute species, nor the Pea-fowl and Guinea-fowl more than the semi-wild Pheasant. All of the more thoroughly subdued (and highly varying) and of the more important of domestic animals would seem to have been subjected by mankind in an exceedingly low stage of civilization.

The only domestic *Insessorial* bird is the Canary-bird; and it remains to be shewn that this also is not descended from a tame stock possessed by the ancient Guanche inhabitants of the Canary islands. With the exception of the Canary-bird, all *domestic* members of the class *Aves* are either *Pavonidæ*, *Columbidæ*, or *Anatidæ*. The only domestic mammalia are the Dog and Cat (and Ferret to a certain extent) among the *Carnivora*, the Rabbit, Mouse, and Guinea-

pig among *Rodentia*, the Horse, Ass, and Pig among *Pachydermata*, and the rest are *Ruminantia* including the *Camelidæ*.

Of other *Vertebrata*, only the CYPRINUS or CARASSIUS AURATUS; and of *Invertebrata* only one or more species of Hive-bee and of Mulberry silk-moth, unless the *grana-fina* COCCUS which is doubtful, —but the fact is attested that certain insects are *domesticable*. Among mammalia, however, there is the crowning instance of all-dominant civilized and domesticated mankind. Other species are or have been (the individual, not the race,) tamed and trained, as the Elephant—the Chita, Caracal, and even the Lion,—the Otter and the Cormorant, —and various *Falconidæ*;* but not any of these can claim to be regarded as domesticated races. A few more years will perhaps show whether civilized man is competent to add to the number of the latter.

I now pass to another and comparatively unimportant matter, which I have not before discussed in a scientific Journal. Having treated of the domestic Turkey, it may further be remarked that the origin of the English name *Turkey* has been much discussed, as applied to a bird indigenous to America. The question has often been asked, and I think that it can be answered satisfactorily. It is certain that the *Guinea-fowl* was commonly termed the "Turkey Hen" in former days, and hence a difficulty sometimes in knowing which bird is meant by sundry old authors. As the Portuguese discoveries along the west coast of Africa preceded those of the Spaniards in America, there is reason to infer that our British ancestors became acquainted with the Guinea-fowl prior to their knowledge of the Turkey; and the English trade being then chiefly with the Levantine countries, our ancestors may well have fancied that it came from thence. Referring to a curious old dictionary in my possession (published in 1678), for the word *Meleagris*, I find it translated "a Guinny or Turkey Hen:" *Gallinæ Africanæ seu Numidicæ, Var. sine quæ vulgo Indicæ*" *(Coq d' Inde* of the French, corrupted into *Dinde* and *Dindon!)*. Again, *Numidica guttata* of Martial is rendered "a Ginny or Turkey Hen." Looking also into

* Add the Pig-tailed Monkey (INUUS NEMESTRINUS) in Sumatra, where trained to gather cocoa-nuts; whence termed by Raffles *Simia carpolegus*. Also CYNOCEPHALUS HAMADRYAS by the ancient Egyptians. (*Vide* figure in Wilkinson's 'Domestic Manners of the ancient Egyptians,' I, 150.)

an English and Spanish Dictionary of so late as 1740, I find *Gallipavo* rendered "a Turkey or Guinea Cock or Hen." Well, it is known that our British forefathers originally derived the domestic Turkey from Spain; and meanwhile they are likely to have obtained a knowledge of the true *habitat* of the Guinea-fowl; and therefore may very probably have supposed the former to be the real *Turkey*-fowl, as distinguished from the *Guinea*-fowl; and if the word 'fowl' be dropped in the one instance and not in the other, be it remembered that there was another special meaning for the word *Guinea*, having reference to the Gold Coast;* otherwise the bird might have come to be known as the 'Guinea,' as the Bantam-fowl is now currently designated the 'Bantam,' and the Canary-bird as the 'Canary,' or the Turkey-fowl the 'Turkey.'† The latin-sounding name *Gallipavo* seems to be of Spanish origin, and obtains among the Spaniards to this day; but their earliest name for it was *Pavon de las Indias*, "c'est a dire," as Buffon remarks, "*Paon des Indes Occidentales;*" which explains the reference to India (perpetuated in *Dindon*).

* The name *Guinea-pig*, I believe, is not a corruption of 'Guiána-pig' (as has been suggested); but the animal was brought to Europe in the Guinea slavers on their return voyage; who also brought sundry small African Finches, which have been described as natives of Brazil. It is curious that the Musk Duck was formerly known in England as the 'Guinea Duck,' also because brought from S. America by the Guinea slavers, and it was considered as a great delicacy for the table; and the white breed of it is mentioned by Dr. Caius, so early as 1570, by the name of the 'Turkish Duck!' This species was noticed by Crawfurd in the Siamese capital, and there known as the 'Manilla Duck.' It has long been diffused over S. E. Asia, and is now common even in Polynesia. (Vide Ellis's *Missionary Tour through Hawaii*, &c.)

† Another curious instance of the kind is that of the small speckled red Finches of India (ESTRELDA AMANDAVA), which have long been known in England by the name of 'Amadavats.' They are more than once familiarly referred to, as 'Amadavats,' in Sheridan's 'School for Scandal' (Act V, Sc. 1), brought out in 1777. And they actually take this name from the city of Ahmedabád in Guzerát! Witness the following passage from 'A New Account of East India and Persia,' by John Fryer, M. D., *Cantabriy*. (1698). Among other curiosities brought to Surát, were—"From *Amadavad* small birds, who, besides that they are spotted with red no bigger than measles, the principal chorister beginning, the rest in concert, make an admirable chorus." In the 'History of the Settlements of the Europeans in the East and West Indies,' translated from the French, by J. Justamont in 1776, I find the name of the Guzerát city spelt *Amadabat!* And hence, again, the specific name *Amandava* of Linnæus, and the generic name *Amadina* of Swainson! The French term these pretty little birds *Bengális*, adopted as the English generic appellation by Swainson in treating of sundry African species. Our Indian bird is the *Bengalus punctulatus* of Brisson, *le Bengali piqueté* of Buffon, and *Amaduvade Finch* of Albin (about 1750). The name *Bengali* has probably reference to Benguela in W. Africa, whence sundry of the tribe had been brought to Europe.

At the present time the domestic Turkey is nowhere raised more abundantly, nor is more cheaply procurable, than in the country from which it thus erroneously derives its English name: for, although the Musalmáns of India refuse to eat its flesh, (alleging that it partakes of the nature of the Hog, as shewn by the tuft of bristles on its breast,) their co-religionists of Turkey, Egypt, and even Arabia (at Jidda at least, the port of Mekka), esteem it highly; and at Cairo it is customary, some hours before killing one, to give it a dose of *ráki*, which is believed to render the flesh more tender. The only Turkeys I have seen in India are of the Norfolk breed, with generally black plumage; and this, with the bare skin of the head and neck, may possibly have led to a supposition that the bird is akin to a common black Vulture of the country, with bare red neck, the OTOGYPS PONTICERIANUS;* yet, if the bird had been introduced by Muhámmedans—say from Persia, instead of by Christians from Europe, it is probable that people of that faith would have eaten the Turkey here as elsewhere. Old Chardon mentions its introduction into Persia from Venice by some Armenian merchants.

* Some Turkeys which I once possessed did actually associate, to a certain extent, with a Vulture of the kind chained to a post; that is to say, they generally kept near it, as if imagining the black Vulture to be one of their own kind.