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ON THE RELATION
OF THE
DOMESTICATED ANIMALS TO CIVILISATION.

IN two previous papers, one "On the Conditions which Favour, Retard, or Obstruct the Early Civilisation of Man," and the other "On the Relation of the Domesticated Animals to Civilisation," I gave an outline of the subject which I propose in this and subsequent papers to treat in detail, and I now continue with "Birds." These, although they no doubt include a greater number of original species, are in all, as we find them domesticated, no more than nine in number, namely, the Common Fowl, the Guinea Fowl, the Pheasant, the Peacock, the Turkey, the Pigeon, the Duck, the Goose, and the Swan. I shall consider them in this order.

THE COMMON FOWL.—Of all our domesticated birds, incomparably the most important is the Common Fowl. This bird, the *Gallus bankiva* of naturalists, still exists abundantly in the wild state in all the warm and temperate regions of the continent of Asia, and of the islands adjacent to it, but even here limited to Hindustan and China, the countries between these, with the adjacent Philippine and Malayan Archipelagos, and not extending further than the thirtieth degree of North, or the seventh of South latitude. I have myself seen the wild birds in the woods of Upper Hindustan, of Burma, of Cochin China, and of Java, and can testify to their entire resemblance in note and plumage to some of the most ordinary varieties of our domestic poultry, being only smaller in size.

The domestic fowl is at present widely disseminated over the whole civilised and even semi-civilised world, of countless variety as to size and colour. This wide diffusion it owes to the hardihood of its constitution, its fecundity, and the excellence of its flesh and eggs. Where or by whom it was first domesticated it would be vain to inquire, for no

doubt it happened in rude times and remote ages. It is certain, however, that its first domestication must have been effected within the limits of the region in which it still exists in the wild state, and beyond which it has never been found so existing. Within that region, too, it is fair to conclude that its domestication was effected at many different and independent points.

As the common fowl, in the wild state, does not exist in any country west of Hindustan, and as there is no reason to believe that it ever did so exist, it must be concluded that in the domestic state it was introduced by man. For this introduction there is at least negative evidence; and it is remarkable that it is within the historic epoch, which can hardly be said of any other of our poultry except the Turkey and perhaps the Guinea fowl. It is never named in the Old Testament, and, indeed, the Jews had no domesticated bird, unless the Pigeon, and even that is uncertain. This brings us down to the seventh and eighth centuries, before the birth of Christ. In the Homeric Poems there is no allusion to it.

The high probability is that Central and Western Asia, with Europe, received the Cock through Persia; the Greeks, indeed, sometimes called it "the Persian fowl." These western countries would naturally receive it from the place nearest to them, and with which they had most communication, and this was Northern India, which may, therefore, be considered the parent country of the domestic fowl of the Western World. We have, indeed, indications of its progress westward. It is represented on the monuments of Nineveh, and was, therefore, known to the Assyrians before the destruction of that city. It is also represented on the Lycian monuments. These facts have been pointed out to me by my friends Mr Layard and Sir Charles Fellowes. The earliest mention of the common fowl in Greek literature is in the poems of Theognis, an author who died at an advanced age after the battle of Marathon, fought 490 years before Christ. At this time the Persians were at one and the same time in possession of the Asiatic colonies of Greece, and of some provinces of Hindustan, and must have possessed the bird. I state this on the authority of an accomplished Greek scholar, my friend the Hon. Edward Twisleton. In possession of it, the Greeks, through their colonies, would, of course, introduce it into Italy and Gaul, and from Gaul it would reach Britain, where Cæsar found it near 2,000 years ago. Its early introduction into Italy is shown by faithful representations of it on Etruscan monuments. It is also figured on the coins of the Samothracians and Himera, which carries us back to six centuries before the birth of Christ.

The common fowl, whether in the wild or domestic state, was wholly unknown on the continent and islands of America, and its introduction into them, therefore, goes no further back than the time of Columbus' first voyage. It was equally unknown on the Australian continent, into which we ourselves introduced it only seventy years ago. It was found by European navigators in several of the islands of the Pacific Ocean, but when or how introduced is wholly unknown. In these it does not exist in the wild state, nor is the name given to it traceable to any foreign language, as is the case with some of their most useful plants. New Zealand, however, was not one of those in which it was found, for it was first introduced there by Captain Cook, about ninety years ago, and so congenial are the soil and climate, and so few its enemies, that in some localities it has already resumed its wild state.

In attempting to trace the history of the domestic fowl, language affords us some assistance, but less than might have been expected. In the languages of countries in which the bird is an exotic, its name, for the most part, is but the generic one for the feathered tribe, with some epithet to distinguish it. This is the case in our own language, when we talk of the common fowl, the dunghill fowl, the domestic fowl, the game fowl, and the like. Such, too, seems to be the case in the other Teutonic languages; and even in the Persian the name is simply that of "fowl" in general, with an epithet signifying "domestic." There is, however, one well-known exception in the word Gallus in Latin, borrowed, with the customary modifications, by its derivative tongues, the Italian and Spanish. The word is the same as that for "a man of Gaul;" and, indeed, to distinguish them the Romans sometimes used for the former the epithet gallinaceus. I believe that the etymology of the word has not been traced; and I throw it out as a conjecture that the bird may have been first made known to the Romans through the Greek colony of Marsilles, founded just at the time, or 600 years before Christ, a time when the bird is ascertained to have been known to the Greeks. If this were really the origin of the word, the mistake of the Romans would be similar to our own, when we call our dwarf breed Bantams, because we first saw them in the Javanese kingdom of Bantam, to which they had been brought by native junks from Japan, their native country. It would not at all equal the blunder by which we call a bird of America, known to us only in very modern times, a Turkey. Had the word come direct, like many others in the Latin language, from Greece, it would have borne, we may presume, the usual Greek name of Alectryon.

In the languages of some countries of which the fowl is not a native,

its name would seem to have a figurative sense, derived from its character or habits. Thus, in Arabic its name is *Dājajāt*, which also signifies "domestics" and a "family." In Greek, the name is *Alectryon*, which (I again quote Mr Twisleton) would seem to have some relation to the word *Alectron*, "bedless" or "sleepless."

In the languages, however, of countries in which the bird is indigenous, it seems generally to have a specific name. Thus, in Sanskrit it is *Kukuta*; in the Tamil, *Ilori*; in Burmese, *Kret* or *Kyet*; in Malay, *Ayam*; and in Javanese, *Pitik*. In the Philippine tongues we have one name for the wild bird, *Labuya*; and another, *Manok*, for the domestic. The last of these words has a wide extension, for we find it in all the dialects extending from Java as far as the Philippines. Thus in the Javanese language it is the common term for bird or fowl, and in so far as the Philippines are concerned it would seem to imply that, although the common fowl existed in them in the wild state, the native inhabitants had not learnt to tame it, and that in the domestic state it was made known to them by the Javanese. These islanders now, however, occasionally tame the wild bird, for I find that they sometimes use it in cock-fighting.

In the Polynesian language, so widely spread over the islands of the Pacific, the name for the common fowl in the domestic state (for, as already stated, it does not exist in the wild) is *Möa*, while, strange enough, the generic name for bird or fowl is the Javanese one already quoted, *Manuk*, the final consonant, from the necessity of the language, being elided. When the tropical islanders of the Pacific migrated to New Zealand, they took with them the dog, but not the hog or common fowl, the only other domestic animals which, when first seen by Europeans, they possessed. When the colonists arrived in their new home, strange to them by its climate and productions, we may readily fancy that when they saw those strange, almost wingless, and ostrich-like birds which are there the substitute for quadrupeds bearing some resemblance to the domestic fowl which they had left behind them, they gave them the same name, namely, *Möa*, which is that which European naturalists suppose to be the specific name of the Struthian birds in question.

It would be superfluous to insist on the benefit which civilised man has derived from the domestication of the common fowl. This benefit it has been conferring on the nations of the old Western World for now 2,500 years, and must have done so for several of the nations of the East for a far longer time. The Hindus are the only existing people

who think their flesh unlawful food. It would appear indeed, from Cæsar's account of the manners of our forefathers, that in this respect they were no better than Hindus, the flesh of pullets and geese being forbidden food with them. There is certainly not a remnant of this prejudice among us now, for we are probably the greatest consumers of pullets and their eggs in the world. Our consumption of foreign eggs, exclusive of a far greater of our own, is good evidence. In 1858, the last year for which the public accounts are complete, the quantity which we imported amounted to 672,760 cubic feet, equal to something more than 16,000 measurement tons, of the value of 303,617*l.*, and yielding a revenue of 22,426*l.*

The perfection of the domestic fowl depends on care in breeding, on soil and on climate. The extent to which these causes have operated may be, to some extent, judged by the valuation put on the eggs which we import from different countries, a valuation which is not that of mere officials, but of poulterers cunning in their trade. Those of the Channel Islands, although the nearest country to us, and from which it may be supposed they come freshest to market, are valued the lowest, namely, 8*s.* 11*d.* per cubic foot, those of France at 9*s.*, those of Belgium at 9*s.* 2*d.*, and those of Spain, the remotest country, at 9*s.* 4*d.*

It may be presumed that the domestic fowl, when carefully reared, would attain the highest perfection in those countries of which it is a native. There are none worse, however, than the fowls of Hindustan generally, but this evidently results from sheer neglect, and there are facts to prove that such is really the cause. The game fowl of India is superior in size and strength and equal in courage to that of England, the latter, indeed, being no match for it in the cockpit. In one province, of Bengal Chittagong, a very fine breed, remarkable for its size, is reared, but this is supposed to have been the work of Portuguese settlers long established on its coast. In China much attention is paid to the rearing of the domestic fowl, and some large breeds are produced. I presume that the fowl which has of late years been introduced into this country, under the name of Cochin-Chinese, is really from Shanghai in the Chinese province of Kiangnan. I am at all events certain that it is not from Cochin-China, for after visiting three different parts of that country, I saw no breed resembling it. The breed which I did see was certainly a very fine one, much resembling our own game breed.

There is one use, or rather abuse, of the domestic fowl, which has been made, to which I must refer. The pugnacity and courage of the

males, qualities implanted by nature, seemingly to prevent the race from degenerating, have been taken advantage of, and their combats have been favourite sports with many nations, among whom we were ourselves once distinguished. I imagine this kind of amusement must have been almost coeval with the domestication of the cock. In the fresco painting of an Etruscan tomb in the Gregorian Museum of the Vatican there is the representation of two men facing each other, and each holding a cock, evidently prepared to set them down to fight. Cæsar tell us that the Britons kept the domestic fowl for their diversion and pleasure, "*animi voluptatisque causa,*" which may probably mean that they reared them for cock-fighting, and if so, the amusement is of venerable antiquity with us.

Cock-fighting as a sport is unknown to the Chinese and Hindus, but is, or was, a favourite pastime of the Mahomedans of Hindustan, and hence the superior game breed to which I have above alluded. The Malays, but not the Javanese, have always been great cock-fighters, and I found the natives of the populous island of Bali, notwithstanding their Hinduism, to be so also. In the Malay language there is a specific name for the comb of the cock, for his wattles, for his natural spur, for his artificial spur (a miniature two-edged dagger), for his conflict, and for the cockpit. But it is among the Philippine islanders that the passion for cock-fighting is most pervading. The nomenclature connected with the cock is as copious as the Malay one, while in the principal language of the chief island, there are specific names for no fewer than nine different varieties of the fighting cock himself. A Spanish writer, Buzeta, quoted by my friend Sir John Bowring, makes the following, among other remarks, on this absorbing amusement of the Philippine islanders: "The Indians have an inveterate passion for the sport, which occupies the first place in their amusements. The cock is the first object of their care, their general companion, which accompanies them even to the church door, and is fastened to a bamboo stake when they enter for the service of the mass. For no money will they dispose of a favourite bird. Some possess as many as half a dozen of these inappreciable treasures, for whose service they seem principally to live."

In every village of the Philippines there is a cock-pit under the direction of a government officer, and the Spanish government derives a revenue from them, which amounted last year to 18,700*l.*, a considerable item in the ways and means of this naturally rich Archipelago, although a good 1,000*l.* short of what we get from the duty on French eggs !

THE GUINEA FOWL, OR GALLINI.—Of this well-known bird there are no fewer than eight species, of which one only has been domesticated. The domestic differs but little from the wild bird in form, size, or plumage. It seeks the bush in breeding, never loses wholly the power of flight, perches in trees, and, in fact, never acquires the same amount of domestication as our ordinary poultry. The Gallini is a native of the tropical and sub-tropical parts of Northern Africa. It was known to the Romans under the name of Meleagris, and the “Numidian bird” pointing at the locality from which they derived it. It was no doubt first domesticated by the Numidians and other brown, but not Negro races of Northern Africa, and if so, it was, with the exception of the goose in Egypt, the only bird ever domesticated by an African people. We may, indeed, conclude that the Romans received the Gallini from the Numidians, in the same manner that the Spaniards received the turkey from the Mexicans, that is, already domesticated.

Pennant, in the 71st vol. of the “Philosophical Transactions,” states that “Guinea hens,” or Gallinæ Africanæ, had been long imported into England, and that in 1277 they were bred in the farm-yards of Buckinghamshire, but that, in consequence of the difficulty of rearing them, their breeding was discontinued. They were, at least, extremely rare down to the middle of the 17th century. This is proved by a statement made in a recent work, “The Arrest of the Five Members by Charles the First,” by my friend Mr John Forster, the first of our historians, since we have lost Hallam and Macaulay. The passage is contained in a letter to Sir John Pennington, the Admiral commanding the Channel Fleet, from Mr Secretary Nicholas, dated 29th of July, 1641. The writer is the same party who shortly afterwards conveyed Queen Henrietta and the Crown jewels to France. The Admiral had sent Mrs Nicholas four “Guinea birds,” and the Secretary, in acknowledging the gift says, “whereby you have made her a proud woman, and she desires to present to you her affectionate thanks for that great rarity.”

The guinea fowl, now widely diffused over Europe, has been conveyed by European emigrants to their settlements in Asia and America, and in some places, as for example in Jamaica, it has resumed its wild state, and is shot as game in the forests.

THE PHEASANT.—The Pheasants are very numerous, for an eminent naturalist, my friend Dr Grey, of the British Museum, tells me that, including “true,” “horned,” and “crested,” they amount to no fewer than twenty. They are found in most countries from the equator up

to the 40th degree of latitude, but all, the guinea fowls excepted, are confined to Asia and its islands. Three of them only have, been not domesticated, but naturalized only in foreign countries, the common pheasant, the silver, and the golden, but the domestication is a very imperfect one, for they are always more or less wild, and, when naturalized, undergo little or no change in form or colour.

The common pheasant is a native of Mingrelia in Asia Minor, where, during the Crimean war, our countrymen found it, as no doubt did the Argonauts some three thousand years ago. It was introduced into Greece, it is supposed, 500 years before the birth of Christ, and from the Greeks the Romans received it, and spread it over the civilized and temperate parts of western Europe. In our own country, the pheasant is traced back to the reign of our first Edward or the middle of the 13th century, and no doubt was brought from France by the Normans. At the end of that century it must have been already tolerably common, for in a tariff of poultry established for London in 1299, and quoted by Bishop Fleetwood in his "Chronicon Preciosum," the pheasant is valued at 4d., the same as a goose, and four times the price of a "fat cock." The pheasant is chiefly valued for sport, for its flesh is but a shade better than that of a pullet, and greatly inferior to that of any of our native game birds.

The Greeks gave the pheasant the name of *Taturas*, a word the origin of which is, I believe, unknown, but they also called it the Phasian bird, after the Phasis, a river of the ancient Colchis, near which, it may be presumed, they first found it. From this the Romans named it Phasianus, and this word, with various corruptions, has been adopted in all the modern languages of Europe, as *fagiano* in Italian, *faisan* in French and Spanish, *fasan* in German, and pheasant in our own tongue.

THE PEACOCK.—Independent of seven species of the small but beautiful bird called popularly the double-spurred Peacock, but by naturalists the *Polyplectron*, there are two species of the large peacock. One of these is a native of the tropical and subtropical parts of Hindustan, and the others of the tropical countries lying between India and China, of the Malayan Peninsula, and of the islands of Sumatra and Java. It may be remarked that neither of them is to be found in Borneo, Celebes, or any of the Philippines so near to the Malayan Peninsula and Sumatra.

Both species are of nearly equal size and beauty, and are incomparably the most splendid of the whole feathered creation. The first named of

these, the native of Hindustan, is that which has been so long naturalized in Europe. The precise time of the introduction of the peacock into Greece is unknown, but it certainly preceded that of Alexander, ascribed to it by Buffon and Cuvier, for the bird is mentioned, which I state on the authority of Mr Twisleton, in "The Birds" of Aristophanes, which is supposed to have been first acted 414 years before Christ, or 88 years before Alexander's Indian expedition. It must have been known, however, much earlier, for it was dedicated to Juno, as was the eagle to Jupiter, and therefore was engrafted on the mythology of Greece, which was an affair of antiquity in the days of Alexander and of Aristophanes.

Persia, which lay between Greece and India, and which had conquests in both countries, was the link which connected these countries, so remote from each other; and through Persia, therefore, it is natural to believe that the peacock would be first introduced into Greece. This is, indeed, corroborated by our finding the Greek and Persian name of the bird the same—namely, Taos, or Täus. The peacock is nowhere found represented on any of the ancient monuments of Assyria, Lycia, or Egypt. On the first of these, where the elephant is so faithfully sculptured, it might have been expected. The Egyptians, had they been acquainted with so striking an object, would hardly have failed to have sculptured it on their monuments, and from their ignorance of it it is to be inferred that their less civilized neighbours, the Jews, once their bondsmen, were equally unacquainted with it. From this it will probably be considered a legitimate inference that the peacocks of our translation of the Bible, represented as having been brought along with apes, ivory, and gold, by the fleets of Solomon, from Ophir, must have been some other birds, and I would suggest the hardy parrot as far more likely to have been brought from a remote country than the bulky and delicate peacock. Parrots, apes, ivory, and gold, might all have been got in parts of Africa, far more accessible to the ships of Solomon than remote India.

The Greek and Persian name for the peacock cannot be traced to any Indian name. The Sanskrit has, besides epithets, no fewer than four specific names for it, keki, barhi, sarang, and manyura, the last, in the corrupted form of mur, or mhur, being the usual one in the languages of Northern India derived from Sanskrit. In the languages of Southern India we find names for it wholly different. Thus, in the Tamil, it is mayil, and in the Telugu and Canara, nemale. In Malay and Javanese the name is mârak, while in the last of these tongues we have, in the polite dialect, the Sanskrit word written mañura. The peacock is a native of

all the countries in which the names enumerated prevail. The origin of the Persian name, borrowed by the Arabs, is, I believe, unknown. So I presume is the Latin one, *pavo*, from which comes the name of the bird in all the languages of Europe, as in Italian, *pavone*, in Spanish, *pavon*, in French, *paon*, in German, *pfau*, and with ourselves, *pea*.

The domestic peacock sports little in plumage, the varieties from the original being only to white and spotted, and not at all as to size or form, for in these respects it does not differ from the wild bird of the Indian forests. It is very easily domesticated, but its domestication to the extent to which it is carried by the European nations is unknown to the Indians. By the Hindus it is preserved in groves near temples and villages, as we preserve pheasants, with this very material difference, that they are never shot. Even this amount of domestication is not practised with the extra-Indian species.

A notion has prevailed among Europeans that the peacock is an object of worship with the Hindus, and surely it would be more worthy of it than snakes and monkeys which sometimes are so, but there is no foundation for this allegation. An English officer, Major Popham, who was a better soldier than a scholar, commanded, under the administration of Warren Hastings, the first British detachment that entered the country of the Rajpoots, in which he had imagined that peacock-worship was peculiarly prevalent. In this belief, and discreetly resolving to give no offence to the religious prejudices of the people, he is said to have issued the following general order to his troops: "Peacocks being the gods of this country, no one to shoot them on any account whatsoever."

The flesh of the full-grown peafowl, whether male or female, is tough and sapless, of little value as food, but that of the young bird sapid, tender, and well flavoured, equal, indeed, to that of a turkey poul. India, then, when it gave us the Peacock by no means conferred upon us an equal benefit, as did America when it gave us the Turkey.

THE TURKEY.—There are three wild species of this genus of Gallinaceous birds, which naturalists have called *Meleagris*, although with the Romans that was the name of the *Gallini*, or guinea fowl. These species are,—the *Mexicana*, the *Occidentalis*, or Turkey of the Southern States of the American Union, and the *Ocellata* or Honduras Turkey. The first of these only has been domesticated, a fact first ascertained by my friend Mr Gould, for, before his time, the second was considered to be the source of the domestic turkey.

The turkeys are exclusively natives of the New World, and the genial habitat of the species which has been domesticated is the plateau of the Cordillera of the Andes some 10,000 feet above the sea. The climate of this region is probably the most favourable to it, and consequently that in which it is most easily reared. It thrives, however, perfectly well in climates very different from it, as in that of France and England, of Bengal, and of Java, over a range of at least 60 degrees of latitude.

Cortes and his companions found the turkey domesticated in Mexico when they conquered it in 1520. It was the only domestic animal which the Mexicans possessed, for they had not, like the Peruvians and Chilians, tamed the llama and paco. Soon after the conquest of Mexico it must have been brought to Spain and Italy, for in pictures of Giacomo Bassano, representing the entrance into and issue from the Arc, the turkey is represented in all the variety of plumage which characterises the domestic bird. The artist in question was born in 1510, and died in 1592. If we suppose him to have painted the pictures referred to at forty, the turkey must have been a familiar bird to the Italians within thirty years of the conquest of Mexico.

Some eighty years ago Pennant thought it worth while to write an elaborate and learned paper in the "Philosophical Transactions," to prove that the naturalists who had gone before him were wrong in ascribing the turkey to Africa or India, and that it was really a native of America. In the course of his dissertation he shows that it was already tolerably common in England in 1855, or sixty-five years after the conquest of Mexico. Its first appearance in France, he shows, was at the nuptial feast of Charles the IXth, in 1570. It was certainly familiar enough in England in the time of Shakespear, for in several passages he alludes to it. Thus, in "Twelfth Night," Fabian says of Malvolio, "Contemplation makes a rare turkey cock of him. See how he jets (struts) under his advanced plumes;" and again, in another play, Fluellen says of Ancient Pistol, "Here he comes, swelling like a turkey cock." This would take us back to the last years of the sixteenth or first of the seventeenth century. When, however, Shakespear, in the first part of "Henry IV," makes a carrier complain that the "turkeys in his pannier are quite starved," owing to the high price of oats, he is guilty of an anachronism, since the time of the action of that play was 113 years before the conquest of Mexico.

The whole history of the turkey is European, for the Mexicans

had not disseminated it among any of the other American nations, and comprehended within the brief period of 340 years. As an article of food it is unknown to the people of Africa and Asia—even to the omnivorous Chinese, while the nations who have adopted the Mahomedan religion reject it on the whimsical ground that the tuft of hair on its breast bears some resemblance to the bristles of that, to them, obscene and forbidden animal, the hog.

The names given by European nations to the turkey do not point very clearly in any case to its origin. The Spaniards, who became first acquainted with it, called it by the Latin name of the peacock, *pavo*, adding the epithet “real,” or true, to distinguish the latter bird. The Italian and French names make reference to India, which, however, may be either the East or the West Indies, but our own is the most preposterous of all, for we derive it from a country in which it did not exist either in the wild or domestic state, and where, indeed it is but little known at the present day. In Persia it seems not to be known at all. While one of the missions of the late Sir John Malcolm was at the Persian Court, an account was brought to it of a wonderful and strange bird, which was to be seen about twenty miles from Tehran. Some of the gentlemen of Sir John’s suite, solicitous for the extension of natural history, rode to the spot in hot haste, and found a turkey cock!

The turkey is no doubt a valuable gift, conferred on us by America, but still, being only a luxury of the rich, it is not for a moment to be compared in utility to the common fowl, the gift of India. It is one of the five great gifts, but the least of them, which the New has conferred on the Old World, the other four being—the potato, maize, the cinchona or Peruvian bark, and tobacco. For value the Peruvian bark is, I presume, at the head of the long catalogue of the *Materia Medica*. The potato, and now maize, contribute largely to the sustenance of the whole population of our own islands, while they form the main food of the people of one of them. Tobacco we find to be a very convenient machine by which we levy a kind of voluntary poll-tax, which puts between five and six millions sterling into the Imperial treasury.

THE PIGEON.—The Pigeons consist of a vast number of species, varying in size from that of a Thrush up to that of a Capercaillie, the magnificent Crown Pigeon of New Guinea being an example of the last. In colour they are of many hues—blue, brown, white, dun, and green, the last of these being the prevailing one in tropical and

sub-tropical countries. Pigeons belong to every quarter of the globe. Some are denizens of the woods, some of the open plains, some of the rocks, and some of the seashore.

Of this almost countless number, one species only, and that too among the wildest, has been domesticated. This is the blue rock-pigeon, the *Columba livia* of naturalists. This bird exists still in the wild state in all the temperate and sub-tropical regions of Europe, Asia, and Africa, but I believe not of America. It would seem to be the sole source of the almost infinite variety in form and colour of the domesticated varieties, all of which will pair among themselves to the production of a fruitful offspring partaking of the characters of both parents.

The pigeon, wild or domestic, is not represented on any Egyptian monument. A dove, or pigeon, however, is to be seen on Assyrian, Lycian, and Etruscan monuments, but in the absence of colour it is impossible to say whether wild or tame, both being commonly of the same size and form. Neither is the pigeon represented on any Hindu monument; and, indeed, this bird seems never to have had a place in the mythology of the Hindus. Birds of the pigeon family, translated by us "pigeons and turtle-doves," were early used by the Jews for food and sacrifice, but whether wild or domestic is not stated in Scripture. It seems most likely that they were wild, the mere produce of the fowler's art, and fed and kept after capture until wanted, as was found to be done in some of the Polynesian Islands when first discovered. By the Levitical law, pigeons were, indeed, the only birds that were lawful food, and, as sacrifices, they were the cheap substitutes of the lamb and goat. This view is corroborated by the pigeon being named along with doves, which are not amenable to domestication. The Greeks and Romans were early in possession of the domestic pigeon, using it for food and also for the transmission of messages; but when or by whom it was first domesticated is wholly unknown. The Arabs and Persians have been immemorially acquainted with the domestic pigeon, and with them, as with the Jews, its flesh is lawful food. The finest, indeed, are said to be bred in the mosques of Alexandria and Cairo. It is not, however, an improbable hypothesis that Egyptians, Persians, and Arabians may have acquired the tame pigeon from Greece and Rome.

It is probable that the domestic pigeon may have been introduced into Hindustan from Persia, and from thence spread to the Hindu-Chinese countries; for I have myself seen it in the half-domesticated state in great plenty in the temples of Birma and Siam down to the thirteenth degree of latitude.

Some light is thrown on the history of the domestic pigeon through the names by which it is known in the languages of the nations who possess it. In this inquiry, however, we encounter some perplexity owing to the number of species of the genus which everywhere exists, and the consequent difficulty in assigning its proper name to the domesticated bird. Thus, in Greek there are five names, and in French and English three each, while in the Malay language there are no fewer than ten, the names of as many distinct species.

In Sanskrit the name of the common blue pigeon is *kapota*, in the Hindi it is *parara*, and in the Tamil *pura*—three different names in as many Indian languages, but none of these is the one in common use, which is Persian. The blue pigeon, in a half-wild state, without in any way differing in plumage from the wild bird of Europe, except in the possession, according to my friend Charles Darwin, of a black bar across the tail feathers, is abundant in many parts of India. It breeds in the deep wells of the country, which have inside a casing of uncemented rough stones, allowing the birds to form their nests in the interstices. The usual name by which it is known in Upper India, as above stated, is Persian, *kabutar*, which leads to a suspicion that the bird, as thus described, was introduced by the Northern conquerors. The *kabutar* of the Persian may, however, be essentially the same word with the *kapota* of the Sanskrit, for the two languages have many words in common, easily detected, without recourse to the literal legerdemain practised on the European languages in the hope of tracing them to Sanskrit. The Arabic name for the wild bird is *hâmam*, and for the domestic *yâmam*. The Greek name which is supposed to refer to it is believed to be *peristera*, the Latin is *columbus*, the German *daube*, the source of our own “dove,” while in the Basque it is *usoa*. The Italian *colombo*, the Spanish *palomo*, and the Portuguese *pombo*, are all obvious corruptions of the Latin word. So is the Erse or Irish name, variously written *columan*, *calman*, *colman*, *colm*, and *colum*, from which it may be inferred that the domestic pigeon, before unknown to the Britons, was introduced by the Romans or by the foreign Christian priesthood.

The origin of the word pigeon, which we have taken from the Normans and substituted for the Saxon “dove,” still preserved in the compound words *dove-cot* and *dove-house*, for a pigeon-house, is, I believe, unknown. Some French etymologists have traced it to the Latin verb *pipio*, to pipe or chirp, which seems very unlikely indeed.

In the Malay and Javanese languages the name given to the rock-

pigeon, wild and domestic, is *dara*, while the name of the family of pigeons is *mârpati*, or, changing one labial for another, *pârpati*. Each species has a distinct name, and in framing a Malay dictionary I had to enumerate ten of them. It is the generic Malay name that is applied by the Philippine islanders to the domestic pigeon, with such corruptions as the following—*palapati*, *calapati*, and *salampati*.

THE GOOSE.—In the wild state, the number of species of the Goose is very great. Nearly the whole family consists of birds of passage. The genus belongs to temperate, and still more to cold regions extending north as far as the Arctic Circle, but never seen, I believe, within the 15th degree from the Equator. In the winter, geese are as numerous in Northern Hindustan as they are in spring on the shores of Hudson's Bay. The family belongs equally to Europe, Asia, Africa, and America, but is unknown in Australia.

Two of the wild species have been domesticated in Europe, the grey lag, *anas anser*, and the bean goose, *anas segetum*, the first being the source of our own domestic bird and the last of that of some countries of Southern Europe. The domestic goose of China had evidently a distinct source from these. The domestication of the goose is of very great antiquity, for the bird is frequently represented on the most ancient monuments of Egypt, and is probably of equal antiquity in China. It is not seen, however, on any Assyrian, Lycian, or even Hindu monument. In the domestic state, indeed, even now, the goose is of rare occurrence in all the countries between China and Egypt, and the probability is that the nations of Central and Western Asia had never domesticated it at all. No American nation had ever done so, although all the extra tropical parts of that continent are frequented by species apparently capable of domestication, and the same observation applies to the Negro nations of Africa.

As to the nations of Europe, to whom alone, the Chinese excepted, the goose is a frequent and familiar domestic bird, we find mention made of it in the Homeric poems, and the Roman legend which describes the Capitol to have been saved by its watchfulness, shows that it was familiar in Italy in the domestic state 390 years before the birth of Christ. It is one of the domestic animals named by Cæsar as being possessed by the Britons, and we thence infer that our forefathers were acquainted with it 2,000 years ago, although making little use of it.

The name of the goose is one of the class of words which some

learned men have adduced as evidence that the ancient and modern languages of Europe are essentially the same with the dead Sanskrit of India, and hence, although the inference does not seem very obvious or very natural, that the nations who spoke, or now speak them are of one and the same race of man, having issued, at a time far beyond the reach of history, from a mythical country of Central Asia, called Aryana. I shall briefly examine this hypothesis, in so far as the names given to the goose is supposed to afford evidence of it.

The name for the goose in Sanskrit is *hansa*, but it is not that of the goose alone, for it is equally that of the duck; indeed, it is alleged, even of the swan. To distinguish the goose, the epithet *raj*, that is royal, has to be prefixed. It is the same in the Persian language, in which the word *bât* equally expresses the duck and the goose; and so it is in the languages of Southern India, as in the Tamil, where the word is *vattu*, bearing no resemblance to the Sanskrit one. The words which the hypothesis supposes to have been derived from the Sanskrit *hansa* are, the Persian *bât*, the Greek *chen* or *chan*, the Latin *anser* and *auca*, the Scandinavian *gaas*, the Celtic *geadh*, and the English *goose*. I put, myself, no faith in the cunning alchymy that would assimilate such apparently heterogeneous and incongruous sounds. It appears to me that in the languages of people to whom the goose and duck are equally familiar, there will be found a specific name for each, while in those of nations among whom the domestic goose is a bird of rare occurrence, the two birds have a common name taken from that of the most familiar of them, always the duck. Had the theory any foundation, the same word would have equally expressed the duck and goose in the supposed derivative languages, as it does in the supposed parent tongue, the Sanskrit. This view seems to be corroborated by the names of the two birds in the Malay and Javanese languages, in which we find native names (disseminated from them over the other languages of the Malayan and Philippine Archipelagos) for the duck, while the Sanskrit one, with the change only of one nasal for another, is confined to the rare and hardly yet naturalised goose.

The names given to the goose in the modern languages of Europe have distinct sources: now Latin, now Teutonic, and now Arabic; and, as far as I can judge, not one of them traceable to Sanskrit. The Italian *oca* and the French *oie* come from the middle-age Latin *auca*. The Spanish has four names for the goose—*ansar* from classic Latin, *oia* from barbarous, *gansa* from the Teutonic, and *pato* from the Arabic. The

same words obtain in Portuguese. This last word, *pato*, is obviously the *bât* of the Arabic and Persian, one labial being exchanged for another, and a vowel added for euphony; and it is remarkable that in Spanish, as in Arabic and Persian, the term is applied equally to the duck as to the goose.

As to the names of Teutonic origin, the whole of them seem to be essentially one and the same—the *gaas* of the Scandinavian, the *gans* of the German, the *goose* of the English, and the *ganso* of the Spanish and Portuguese, the words in the Southern tongues being only softened in sound, and lengthened from monosyllables to bisyllables. It is curious to find our ingenious etymologists, on finding that the English word *goose* bore no very apparent resemblance to the Sanskrit *hansa*, having recourse to the name of the male bird, *gander*, because (and I can discover no better reason) that two out of its five letters are the same as those of the Sanskrit word. In the names of all the domesticated animals the males and females have, in the Teutonic tongues, distinct terms, as in our own—the *cock* and *hen*, *duck* and *drake*, *ewe* and *ram*, *bull* and *cow*, *horse* and *mare*, the most used of the two being applied generically. It is the same in the Celtic tongues; and indeed, for the most part, in the Latin and its derivatives; while in the Eastern languages the sexes are distinguished by an inflexion or an epithet. If the male of the *goose* is to be traced to the Sanskrit, so ought all the males of other animals, and the hopeless task of showing that such is the case is one that no etymologist has ventured to undertake.

In the Malay languages the Sanskrit name is that given to the *goose*, the original word *hansa* undergoing no other change than into *hangsa*, the mere change of one nasal for another, but the word is never applied to the *duck*, which has native names. But besides the Sanskrit name for the *goose* the Portuguese introduced their own *gansa*, which the Malays, by a similar alteration to that which they have made in the Sanskrit word, pronounce *gangsa*. In writing a Malay dictionary I had fancied that the Portuguese word thus introduced was a mere corruption of the Sanskrit one, and so marked it, but I am now satisfied that its origin is the same as that of the English word *goose*. In so far as the *goose* is concerned, the Aryan hypothesis seems to me to be grounded on no better foundation than the approximation in sound of the Sanskrit *hansa* and the Latin *anser*, while the names in the other supposed derivative languages, so utterly dissonant, are forced into some similitude. Had there been any foundation for the hypothesis, it would have been the *duck*; but, above all, the common fowl, an admitted

native of India, and not the goose, that would have borne names in the Western languages traceable to the Sanskrit, but no one pretends that such is the case.

The goose has been to man of far less value than the domestic fowl,—perhaps even than the duck, for it is more difficult to rear, and its flesh inferior in quality to that of the latter. It has, however, its own special utility in its quills and its down. The Eastern nations, since the invention of paper, have always written, some with a pencil as the Chinese, and some with a reed as the Arabs and Persians, but the nations of the West, whether on papyrus or paper, ever with the quills of a goose's wing. Without this flexible instrument, Virgil could not conveniently have written the *Æneid*, nor Shakespear Hamlet or Othello. Notwithstanding the large substitution at present of metallic pens, we are still great consumers of goose-quills, and some notion, although an inadequate one, may be formed of our consumption by the amount of our own importation of them, which in 1858 came to the number of near twelve millions and a half,—not, however, a quill a year for every two of us, man, woman, and child.

THE DUCK.—Of the almost innumerable species of this family but a small number has been found amenable to domestication. The most notable is the mallard, the *anas boschas* of naturalists, or common wild duck, which is the principal if not the sole source of the domestic duck of Europe. The family extends from the Arctic and Antarctic Circles to within about ten degrees of the Equator, when it becomes rare. In the Malayan islands, for example, there exists but one small teal, the *anas arcuata*. In the Philippines, wild ducks of several species are numerous, and in Lower Bengal they are very abundant, most of them birds of passage.

The duck, in the domestic state, is at present very widely spread over the world—probably fully as much so as the domestic fowl. In some countries, as China, the Hindu-Chinese countries and the Indian islands, it is much more so. It was wholly unknown throughout the whole continent of America when discovered, although in some of the northern parts of it the mallard, the source of the European domestic duck, is known as a bird of passage, from which it is to be concluded that the mere existence of an animal amenable to domestication is not enough: the people among whom it exists must also possess the intelligence and patience necessary to effect its domestication, and this, with the exception of the Mexicans, in the single case of the turkey,

and the Peruvians in the cases of the llama and paca, no American nation had ever possessed. In the northern parts of that continent, it is probable that the great abundance of wild fowl would, among rude people, prove a discouragement to their domestication.

The duck in the domestic state was as much a stranger in the islands of the Pacific Ocean as in America, although the domestic fowl was known to several of the tribes inhabiting them. To these, to America and to Australia, it has been conveyed by the nations of Europe, and in all of them, whatever the climate, it has, with its habitual hardihood, fecundity, and usefulness, invariably thriven and multiplied. It was the Malays, as the name of the bird (*itik*, corrupted *itig*) implies, who introduced the duck into the Philippines, and the extent to which it has thriven may be seen by the account which my friend Sir John Bowring gives of the manner in which it is there bred. "Tuig," says he, in his recent work on the Philippines, "is a pretty village with thermal baths and about 4,000 inhabitants; its fish is said to be particularly fine. Near it is the village of Pateras, which, no doubt, takes its name from the enormous quantity of artificially hatched ducks (*patos*), which are bred there, and which are seen in incredible numbers on the banks of the river. They are fed by small shell-fish found abundantly in the neighbouring lake, and which are brought in boats to the Paterias on the banks of the river. This duck-rearing is called *itig* (Malay, *itik*, a duck) by the Indians. Each Pateria is separated from its neighbour by a bamboo enclosure on the river, and at sunset the ducks withdraw from the water to adjacent buildings, where they deposit their eggs during the night, and in the morning return in long procession to the river. The eggs being collected, are placed in large receptacles containing warm rice-husks, which are kept at the same temperature, the whole is covered with cloth, and the young birds are removed by their owners as fast as they are hatched. We saw hundreds of the ducklings running about in shallow bamboo baskets, waiting to be transferred to the banks of the river."

The wild source of the domestic duck of China, Cochin-China, and Java, is most probably a different species from the mallard, that of Europe. This is to be implied by its sporting very little in colour, which is invariably a dusky brown,—never assuming the colours of the mallard, as does the European duck,—from its walking erect in the manner of a penguin, and from its flesh being of a very inferior quality.

In China, Tonquin, and Cochin-China, ducks form, after pork, the chief animal food of the people, and they do so also in the Malayan islands,

ranking after the buffalo. They are dried and smoked as we do the flesh of the hog, and their salted eggs make a large share of sea-stock.

The duck, in the domestic state, seems to have been unknown to the Egyptians, to the Greeks in the Homeric times, and to the Jews of the Old Testament. Cæsar does not enumerate it among the domestic animals of the Britons, and we conclude, therefore, that it was unknown to our ancestors some 2,000 years ago. That it was known in Italy for several centuries before the Christian era is certain, for we find itself and the goose very frequently represented on Etruscan vases. When or by whom the duck was first domesticated is unknown, and unknowable, but to judge by the variety which now exists, the useful discovery was probably made at several distant and independent points, and India and China would probably be among the foremost, as earliest in civilisation. That its first domestication is an affair of very remote times is, I think, to be inferred from the fact that the wild mallard, although easily tamed, has not been found to sport, by change of form, of colours, or loss of power of flight, in any length of time that the experiment has been tried.

That the art of domesticating the duck was discovered at several distant and independent points, is, I think, further to be inferred from the different and independent names given to it in the languages of several nations. The names, *hausā* in Sanskrit, *vuttu* in Tamil, and *bât* in Persian, now given in common to the duck and goose, were, I have no doubt, originally those of the duck only, and extended afterwards with an epithet to the goose, a less important and more recent introduction. In the languages of Eastern people, among whom the duck has been immemorially domesticated, while the goose is professedly but of comparatively recent introduction, and indeed little better than naturalised, there is always a specific name for the latter. Thus, in Malay it is *itik*, and in Javanese *bebek*, the goose, as already stated, going under the Sanskrit name of *hangsa*, with the Portuguese synonyme of *gansa*. The Malay name, I may notice, has been very widely disseminated, for it is to be found in nearly all the languages east of Sumatra to the Philippines, in which last it presents itself, having for a synonyme the Spanish *pato*, corrupted from the Arabic.

In the languages of European nations the duck and goose have always distinct names, and those for the former seem to be different in each class of tongues. Thus we have in the Greek *boschas*, in Latin *anas*, in German *ente*, in Erse *tunnag*, and in that singular and ancient tongue, the Basque *ataa* and *atea*. The *anitra* of the Italian and

the anade of the Spanish are corruptions of the Latin anas, taken from one of its oblique cases. The Portuguese adem may possibly be a still greater corruption of the same word. The origin of the English word duck and the French canard have not, I believe, been traced.

THE SWAN.—The Swan, far more ornamental than useful, can hardly be named among domesticated birds. All the species (and there are six of them) seem amenable to a certain amount of domestication, but that which has been long familiar to us is one species only, the *cygnus musicus* of the ancients. The white swans are natives of the colder regions of Europe, Asia, and America, visiting the more temperate in winter. The black swan, a creature of the imagination with the ancients, is confined to the southern parts of the continent of Australia.

The Sanskrit has no name for the swan, naturally enough, since the bird never visits even the most northerly parts of Hindustan. In the languages of the countries in which the bird is known it has distinct names. In Persian it is *chuchah*, in Greek *kukras*, in Latin *cygnus*, in German *schwan*, in Erse, or Irish, *aila*, and Basque, *belcharga*. The Italian *cigno*, the French *cigne*, and the Spanish *cisne* are corruptions of the Latin name: our own is a corruption of the German, or rather another orthography of the same word. Assuredly this diversity would not have existed had all the languages of Europe been derived from a common source, and that source the country of Transoxiana, the Aryana of Sanskrit scholars.

The flesh of the swan, even of the cygnet, is of very little value, but its down is valuable, and the quills, I find, are valued in the public returns at sixfold those of the goose.

GENERAL REMARKS.

I may conclude this Paper with a few general remarks. 1. Amidst the vast multitude of the feathered creation, the number amenable to domestication, or at all events which has been domesticated, is extremely small. 2. Within the historic period not one species has been domesticated, the domestication of all of them belonging to times too rude and remote for record. To this, the only exception that I am aware of is the musk-duck, a native of Equatorial America, of no great value, 3. Differing in this respect from the greater number of domesticated quadrupeds, all our domesticated or half-domesticated birds are traceable to their originals in the wild state, a fact, no doubt ascribable to their superior means of escaping pursuit through their power of flight. 4.

The domesticated are invariably larger than their wild originals. 5. The variety as to plumage, form, and size, differs in the different species, and is usually proportioned to the extent of domestication of which they are capable, and usually, also, to their utility to man. The variety is greatest in the common fowl, the turkey, and duck, less in the goose, but carried so far in all of these that they lose the power of flight. The least useful to man differ little in plumage, and not at all in size or form, from the wild birds from which they sprang, while they all preserve, to a greater or less degree, the power of flight, as in the examples of the Gallini, and the peacock. The pigeon sports, indeed, infinitely as to colours and form, but in magnitude it does not exceed the wild bird, and it preserves its power of flight entire. The pheasants have been only naturalized, not domesticated, and do not sport at all, or if they occasionally do so, perhaps not more frequently than the same birds in the absolutely wild state. 6. The number of the different domesticated birds in possession of different nations will be found proportioned to the extent of their civilization. Savages have none at all. The wild inhabitants of Borneo have but one, the common fowl. The Egyptians had but one, the goose. The early Greeks had but the duck and goose. The Chinese have only the common fowl, the duck, and goose. The Hindus, the Malays, the Persians, have, in common use, only the common fowl and duck. It is the more civilized nations of modern Europe alone that possess the whole number. 7. The domesticated birds are very far from having proved of equal utility to man as the domesticated quadrupeds. Their strength is nothing, their tegument of small comparative value, and their flesh more or less a luxury from the comparative cost of rearing them. "Henry the Fourth of France," says Burke, "wished that he might live to see a fowl in the pot of every peasant in his kingdom. . . . That sentiment of homely benevolence was worth all the splendid sayings that are recorded of kings, but he wished, perhaps, for more than could be obtained, and the goodness of the man exceeded the power of the king." Let us be satisfied so long as the humblest of our fellow countrymen shall have beef and bacon enough on week days, now and then a fowl or a duck on a Sunday, and always a goose at Christmas. This is far more than Frenchmen ever had, even in the happy days of Henry the Fourth—the father of his people.



John Campbell



Widdie Loage

Pensington

W. M.

W.

