

has been very commonly adopted by writers, to the exclusion of the older specific appellation. It seems to be peculiar to the island of Ceram, and was made known to naturalists, as we learn from Clusius, in 1597, by the first Dutch expedition to the East Indies, when an example was brought from Banda, whither it had doubtless been conveyed from its native island. It was said to have been called by the inhabitants "Emeu," or "Ema," but this name they must have had from the earlier Portuguese navigators.¹ Since that time examples have been continually imported into Europe, so that it has become one of the best-known members of the subclass *Ratitæ*, and a description of it seems hardly necessary. For a long time its glossy, but coarse and hair-like, black plumage, its lofty helmet, the gaudily-coloured caruncles of its neck, and the four or five barbless quills which represent its wing-feathers, made it appear unique among birds. But in 1857 Dr George Bennett certified the existence of a second and perfectly distinct species of Cassowary, an inhabitant of New Britain, where it was known to the natives as the *Mooruk*, and in

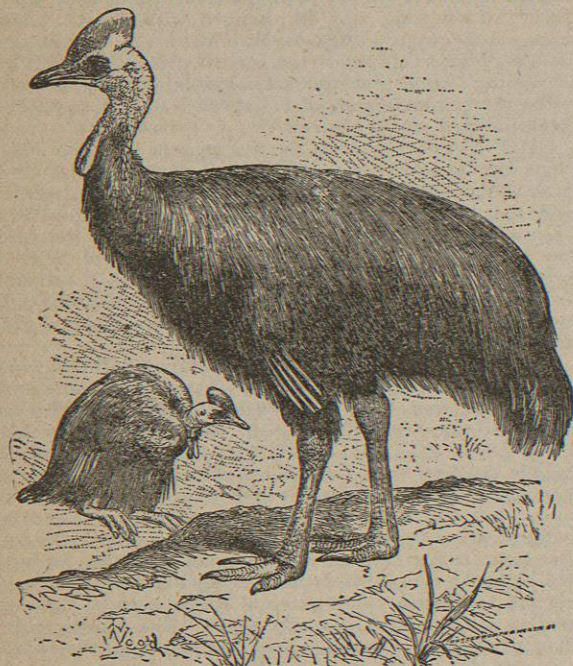


FIG. 1.—Ceram Cassowary.²

his honour it was named by Mr Gould *C. bennetti*. Several examples were soon after received in this country, and these confirmed the view of it already taken. Of late years a considerable number of other species of the genus have been described (see *BIRDS*, vol. iii. p. 740, note) from various localities in the same Subregion.³ Conspicuous among

¹ It is known that the Portuguese preceded the Dutch in their voyages to the East, and it is almost certain that the latter were assisted by pilots of the former nation, whose names for places and various natural objects would be imparted to their employers (see *Dopo*, vol. vii. p. 322).

² The figures are taken, by permission, from Messrs Mosenthal and Harting's *Ostriches and Ostrich Farming*, Trübner & Co., 1877.

³ The enterprise of travelling naturalists in New Guinea and its adjacent islands has recently been so great that the list given in the passage above referred to is already out of date, and it seems at present hardly possible to place the exact state of our knowledge of the species of *Casuarius* before the reader. Several of them have been described from immature examples living in menageries, which

them from its large size and lofty helmet is the *C. australis*, from the northern parts of Australia. Its existence indeed had been ascertained, by the late Mr T. S. Wall, in 1854, but the specimen obtained by that unfortunate explorer was lost, and it was not until 1867 that an example was submitted to competent naturalists.

Not much seems to be known of the habits of any of the Cassowaries in a state of nature. Though the old species occurs rather plentifully over the whole of the interior of Ceram, Mr Wallace was unable to obtain or even to see an example. They all appear to bear captivity well, and the hens in confinement frequently lay their dark-green and rough-shelled eggs, which, according to the custom of the *Ratitæ*, are incubated by the cocks. The nestling plumage is mottled (*Proc. Zool. Soc.* 1863, pl. xlii.), and when about half-grown they are clothed in dishevelled feathers of a deep tawny colour.

Of the Emeus (as the word is now restricted) the best-known is the *Casuarius novæ-hollandiæ* of Latham, made by Vieillot the type of his genus *Dromæus*,⁴ whence the



FIG. 2.—Emeu.

name of the family (*Dromæidæ*) is taken. This bird immediately after the colonization of New South Wales (in 1788) was found to inhabit the south-eastern portion of Australia, where, according to Hunter (*Hist. Journ.*, &c., pp. 409, 413), the natives call it *Maracry*, *Marryang*, or *Maroang*; but it has now been so hunted down that not a

have not always lived to assume the characteristics of the adult, and a comparison of such examples has not in every case been practicable. Moreover, the precise localities whence some of them have been brought have perhaps been wrongly assigned. The promised work of Prof. Salvadori on the ornithology of New Guinea will very likely clear up many points that are now open to doubt; and though it is probable that in some instances the same species has been designated by more than one name, it cannot be maintained that every existing species has been brought to our knowledge.

⁴ The obvious misprint of *Dromæus* in this author's work (*Analyse*, &c., p. 54) has been foolishly followed by many naturalists, forgetful that he corrected it a few pages further on (p. 70) to *Dromæus*—the properly latinized form of which is *Dromæus*.

example remains at large in the districts that have been fully settled. It is said to have existed also on the islands of Bass's Straits and in Tasmania, but it has been exterminated in both, without, so far as is known, any ornithologist having had the opportunity of determining whether the race inhabiting those localities was specifically identical with that of the mainland or distinct. Next to the Ostrich the largest of existing birds, the common Emeu is an inhabitant of the more open country, feeding on fruits, roots, and herbage, and generally keeping in small companies. The nest is a shallow pit scraped in the ground, and from nine to thirteen eggs, in colour varying from a bluish-green to a dark bottle-green, are laid therein. These are hatched by the cock-bird, the period of incubation lasting from 70 to 80 days. The young at birth are striped longitudinally with dark markings on a light ground. A remarkable structure in *Dromæus* is a singular opening in the front of the windpipe, communicating with a tracheal pouch. This has attracted the attention of several anatomists, and has been well described by Dr Murie (*Proc. Zool. Soc.* 1867, pp. 405-415). Various conjectures have been made as to its function, the most probable of which seems to be that it is an organ of sound in the breeding-season, at which time the hen-bird has long been known to utter a remarkably loud booming note. Due convenience being afforded to it, the Emeu thrives well, and readily propagates its kind in Europe. It is the only form of *Ratitæ* bird which naturally takes to the water, and examples have been seen voluntarily swimming a wide river.

The existence in Australia of a second species of *Dromæus* had long been suspected, and Broderip in 1842 stated (*Penny Cyclop.* xxiii. p. 145) that Mr Gould had even supplied a name (*D. parvulus*) for it; but there can be little doubt that this suggestion was founded on a mistake. However, in 1859 Mr Bartlett described, under the name of *D. irroratus*, what has since been generally admitted to be a good species, and it now seems certain that this fills in the western part of Australia the place occupied by the older-known form in the Eastern. It is a more slender bird, and when adult has the feathers barred with white and dark-grey ending in a black spot which has a rufous margin, while those of *D. novæ-hollandiæ* are of a uniform blackish-grey from the base to near the tip, which is black with a broad subterminal rufous band. Both species have been figured by Mr Sclater from admirable drawings by Mr Wolf (*Trans. Zool. Soc.* iv. pls. 75, 76), and interesting particulars as to their domestication in England are given by Mr Harting (*Ostriches and Ostrich Farming*, pp. 131-174). (A. N.)

EMIGRATION, now one of the most constant and orderly movements of human society, must have been one of the earliest, however irregular, of human impulses. It is the act of men, families, tribes, or parts of tribes, leaving the place of their birth with the view of settling in some other place. They are emigrants in the country they leave, and immigrants in the country they pass into. But this converse nomenclature describes an identical class of persons and the same kind of adventure, more necessary now than ever to be distinguished from migrations within a given territory, or the frequent travellings between distant countries in which many engage, whether on purposes of business or pleasure. Emigration is a going out with a design of permanently settling in new seats of residence, labour, trade, and society. It is the practical response which mankind have given in all ages to the command to "multiply, and replenish the earth, and subdue it;" or, in other words, it is a necessary result of the increase of population within a limited though cherished space, and of the appointed destiny of our race to people and develop the world.

The natural law of population, though probably the deep underlying force of all emigrations, is not the only force at work in the general movement by which people, and races of people, have migrated from one part of the world to another. Not only famines, which may be said to present the pressure of population in its intensest form, but wars of official conquest and ambition, religious persecutions and religious phantasies, civil broils and political revolutions, the discovery of gold and silver mines, the envy of more genial climes and fertile lands than people have been born to, the individual love of change and adventure and pushing one's fortune, have considerable power in promoting emigrations, apart from the rude pressure of physical wants. Famines in India, for example, do not result in much emigration; and yet the Irish famine in 1846-7 led immediately to one of the most remarkable removals of persons and families from one hemisphere to another in modern times. It would be difficult to account by the law of population for the successive immigrations of Saxons, Danes, and Normans into England, or to maintain that it was a force of hunger only which impelled the Northern barbarians to attack the Roman Empire. In the invasion of Turkey in 1877 the Russian soldiers are said to have been surprised at the plenty of the Bulgarian towns and villages, and to have had curious reflections why they should have been led so far afield to battle for the relief of a population so much more comfortably bestowed than themselves. Yet when the Russian soldiers return to their comparatively sterile homes, having seen the abundance of grain and fruits and flowers on the slopes of the Balkans, their accounts will probably only increase the Muscovite passion to penetrate by force of arms into more productive regions than those of Northern Europe and Asia. We must allow, in short, for many causes of emigration, as well as many wrong views of the means by which the advantages of emigration are to be realized.

The passage of Scripture which relates what took place between Abraham and Lot in the plains of Bethel, adduced by J. R. M'Culloch in the article "Emigration" in the last edition of this work, will always remain a strikingly natural and suggestive picture of the outward movement of society in its primitive elements. There was no want apparently of material resources. "Is not the whole land before thee," were the words of Abraham; and Lot, lifting up his eyes, saw the plain of Jordan unoccupied and well-watered. But there was strife among the servants, quarrels as to pasturings and waterings, with Canaanites and Perizzites dwelling in the land as an additional element of disorder. The kinsmen could not agree, or adjust their rule; and separation would be judicious, if not necessary. The narrative exhibits the influence of individualism on human affairs—on the affair of emigration as on others. In early times it was found difficult or impossible to make any important progress on the basis of social unity.

Nomads taking possession of vacant territory or invading the territory of others, victorious kings carrying whole tribes or nations into captivity, citizens driven out of civilized states by political rage, or attracted to adjacent lands by the promised wealth of agriculture or trade, and colonies more or less officially organized in the track of war and conquest, are the pictures we have of emigration in the ancient world.

"Many of the emigrants from the Greek States, as Mr M'Culloch wrote in the article above referred to, "consisted of citizens forced by the violence of contending factions to seek new settlements in other countries. But Greece also sent forth emigrants, impelled by the difficulty of maintaining themselves at home, or allured by the glowing descriptions of the comparative abundance they would enjoy in distant lands. Both these classes of emigrants established themselves, for the most part, either in countries with a scanty population, or whose inhabitants were in a decidedly lower state of civilization. And the greater refinement and ingenuity of the

Greeks, and their industrious habits, enabled them to make a rapid progress, so that several of these colonies became, in no very lengthened period, populous and powerful states.

"Few voluntary emigrants ever left Rome. The colonies which she sent forth were intended to bridle subjugated provinces, and should be regarded rather as the outposts of an immense army, the headquarters of which were at Rome, than as establishments of individuals who had bid adieu to their mother country, and who intended to maintain themselves in their new residence by their own industry."

"But in their wish to amend their condition, emigrants have not always been contented to establish themselves in unoccupied or thinly-peopled countries. Sometimes, as in the case of the irruption of the northern nations into the Roman empire, they have attacked countries that were densely peopled, and, having subdued the inhabitants, have seized upon the whole, or upon a greater or less proportion of their lands."

"Pastoral nations, inasmuch as they can carry with them the flocks and herds from which they derive their subsistence, may emigrate in very large bodies, and previously to the invention of gunpowder and other improvements in warfare were very dangerous neighbours. The danger was further increased, or rather was perpetually kept up, by the fact that the emigration of one tribe or nation, by making more room for those that remained behind, gave a corresponding stimulus to population, so that, the vacuum being soon filled up, the motive to fresh emigration became as great as ever. On this principle we are able to account satisfactorily for the successive swarms of barbarians that, issuing from the countries in the north of Europe, first attacked and ultimately overthrew the colossal fabric of Roman power. It admits of demonstration that these countries were then not nearly so populous as at present, that they had not more, perhaps, than a fifth or a sixth part of the inhabitants by which they are now occupied. But as they depended principally on pasturage, their numbers were often in excess compared with their means of support. And the pressure of want, that is, the necessity of finding additional room for their flocks and herds on the one hand, and, on the other, the prospect of vast wealth and riches of which they might hope to possess themselves, precipitated them into those expeditions in which, though often defeated, they were in the end successful."

A movement which is to be recognized as one of the necessary conditions of human progress is thus seen advancing in its early history from a collision of interests, and receiving both impulse and advantage from all the discords, wars, and difficulties of social and political life. It may be presumed, notwithstanding the imperfect civilization of many large regions of the world, that emigration has now attained so many ways and means, and so well-established an order, as to proceed more spontaneously and functionally, and be less indebted to violent forces for its impulsion, than in past times. The striking modern form of emigration is the removal of individuals and families from their native seats to distant countries, in large numbers, yet without concert and without apparent distress, silently and intelligently, the emigrants knowing what they are leaving and whither they are going. Emigration of this kind, like the commerce in commodities, does not advance rapidly for a long period. The first adventurers have often a rough experience, and do not invite others, but gradually the number who succeed increases, and in their letters home encourage relatives and friends to follow their example, and not infrequently supply the means of acting upon their advice. This, in a constant and cumulative form, comes to have more real and wholesome influence than all the emigration aid societies ever established, however useful these may have been in their place. The traffic of the steam navigation companies during the last twenty-five years would show how largely the volume of free and well-considered emigration has thus been increased; and, indeed, it may be observed that emigration of this kind has received much the same impetus as material commerce from the ocean steamers, railways, telegraphs, and other greatly improved means of transmission. The movement is liable to its own fluctuations; it ebbs and flows from one year to another; but of its permanence and extension there can be no reasonable doubt.

Trite as this may appear, it is worthy of being observed

now rapidly the change has been evolved. In the thirty years from 1815 to 1845 the annual emigration from the United Kingdom to all parts had not increased to 100,000 souls. The total number of emigrants in 1815 was only 2081, in the following year 12,510, and 20,634 in 1817. This was the starting-point on the close of the great European wars; and at the end of thirty years of peace, what progress had been made? In 1843 the total number of emigrants from the United Kingdom was 57,212; it was 70,686 in 1844, and 93,501 in 1845. Only in three years of the long interval, viz., 1832, 1841, and 1842, had the annual emigration risen to or above 100,000. But 1847, in which year the emigration rose to 258,270, marks the beginning of unwonted increase, sustained over many years in succession, and, with some exceptional years, sustained, indeed, to the present time. The average annual emigration in the five years ending 1853 was 323,002, whereas from 1815 to the same year 1853 it had only been 97,269. The Irish famine, ensuing on an almost total failure of the potato crops, was the first in the order of events to which this remarkable increase of emigration is to be ascribed; but the Californian and Australian gold discoveries, the political reaction caused by the *coup d'état* in France, the failure of the European revolutions of 1848, and the rising spirit of enterprise and growing prosperity following on the adoption of free trade in the United Kingdom, by which the industry and production of all the emigrant-receiving countries were largely promoted, prolonged the impulse which had first been given by a sharp distress affecting more parts of Europe than Ireland, and placed emigration on the more voluntary and substantial basis which has characterized it of late years. The way was made so plain by the ocean steamers and railways, which trade and capital were bringing into rapid action, that larger numbers of people saw the advantage of passing over great distances from one hemisphere to another. It was not till 1855 that any relapse occurred in the large annual totals of emigration from the United Kingdom; and so late as the five years 1869-73 the average number per year of emigrants from British ports was 274,645.

This increase of emigration was not confined to the United Kingdom. It was European; and, indeed, our emigration statistics always include some proportion of emigrants from neighbouring countries, who ship from British ports. But from the north of Europe—from Scandinavia and Germany—there has been a largely increased emigration during this period, proceeding under much the same incitements and facilities as from England, Scotland, and Ireland. From France the emigration has not been so marked as from many less populous countries. The German race have peopled the United States so largely as to have become a prominent element in the Transatlantic republic; but no one hears of the French as one of the constituents of a commonwealth which they helped materially to found, and where they must always be held in esteem. The emigration of France follows her own colonies and traditions chiefly; it is found in Louisiana and in Canada, and almost everywhere discursively and thinly; and in much the same way the Spaniards and Italians still lean in their emigration to La Plata and South America, where there is a trace of ancestry, and their language is spoken. The industrial motive and faculty, however, now draw emigrants from all the European nations into the most various parts of the New World. In Australia and other southern climes, where the grape has found an extended cultivation, Rhineland and Cisalpine vine-dressers are at work. The Highland Scotch cling to Canada, and prefer New Zealand to the Australian mainland; but the engineers of the Lowland Clyde, ubiquitous as their ships, are found

wherever a steamer plies or a hammer sounds on the sea-washed surface of the globe. To complete this sketch it must be added that the Chinese—the most numerous while the most isolated nationality in the world—have also become emigrants in large numbers, though it may be doubted whether the Chinese immigration to the Pacific coast of the United States has as its object a permanent change of country, or differs yet at least essentially from the coolie migrations from India and China to the Eastern Archipelago, or of South Sea Islanders to Queensland and other parts of Australia, which are more of the nature of a transfer of labour for a term of years than a definite emigration of both sexes and of families. The number of Chinese in the United States, according to the census of 1870, was 63,199, and in the Australian colony of Victoria at the same period 17,935—in both cases nearly all males. In an elaborate report on coolie emigration from India by Mr Geoghegan, presented to parliament in 1874, it appears—to take Ceylon as an example—that in the ten years ending 1869 the average annual number of persons removing from Madras to that island was 65,000 (of whom 50,000 were adult males), and that the average annual number who returned from Ceylon to Madras was 48,000. A constant coming and going is the feature of all coolie emigration, whether from India or from China. The Chinese have a superstitious desire to die within the borders of their own sacred land. Nevertheless, their strong and persistent movement to the Western world is a significant phenomenon. It has broken through all restraints at home, and it has held its ground, in the face of no little social hostility, from San Francisco to New York and other cities on the Atlantic seaboard.

Foreign and colonial emigration, in short, is now so widely practised, and has been rendered by improved means of transit so safe and expeditious, that its continued progress is not only sure, but one may foresee, from the various forces in play, that at no distant time it will have become, over the largest portion of the world, as familiar as migration from one province of the same country to another. The attitude and duties of states, and of the populations of states, towards a movement which comes into contact at many points with existing laws and interests—laws of naturalization, military conscription, and allegiance, with asserted rights of labour, and with social, religious, and international prejudices—have thus become questions of much importance.

Nothing is more certain than that nearly all the old countries suffered in past times from want of emigration, unless it be that all the new countries have greatly benefited by it. Leaving China out of view, where foreign immigrants have only been tolerated under treaties extorted by force of arms, there has been a general approval of emigration on the one hand, and of immigration on the other. In the United Kingdom the population are singularly free to choose either their own country or its colonies or other countries as the place of their abode. They are under no compulsory military service; and emigration has been actively encouraged by societies and protected by the Government for half a century. The greatest obstacle to free emigration from the Continent would appear to be the system of military conscription. Every German of twenty or twenty-one years is liable to personal service in the standing army for seven years—three of active service, four in the reserve—and to other five years in the landwehr, with the landsturm behind the landwehr making further demands on the time and liberty of the subject. In France a similar system is now enforced, though under more liberal exemptions. It is but fair to state that Germany, exclusive of Prussia, has up to this time been sufficiently free in its emigration to

have sent to the United States from 1820 to 1870 not fewer than 2,267,500 persons, which is nearly as many as have gone from Ireland to the United States in the same half century, viz., 2,700,493. But from Prussia, where the conscription has been longest in rigorous operation, the number of emigrants to the United States in the same period has been only 100,983, and from France 245,812. Though the conscription may not be the sole cause of this, yet the demands made by the great military powers on the drilling and fighting services of the whole youth and manhood of their populations are obviously obstructive to the pursuit of industry and fortune in foreign countries or in colonies. These demands may be relaxed from time to time, while the system itself is maintained; but they are relaxed with a grudge, and the Governments acquire inordinate ideas of the irrevocable allegiance of their subjects. If the latter are permitted to emigrate, it is under condition of being liable to recall on brief notice to the standards of their country; and an armed truce, such as has prevailed in the most civilized nations of the Continent of Europe during five or six years of peace, might soon be as detrimental to free emigration as war itself, under which it usually ceases for the time. From Russia none can emigrate without permission of the czar; and a similar despotism over the subject is the rule of the Ottoman empire. A state may be within its reasonable and proper line of duty in promoting and aiding either emigration or immigration. But that the permission of the state should be necessary to the one process or the other is inconceivable, save in some rare and dire emergencies of war or politics.

The duty of states in regard to emigration, viewed in what must now be the generally accepted light of a necessary and wholesome function of the general economy, thus resolves itself into a duty of regulation and guardianship under the two categories, always presented, of the countries which the emigrants leave, and the countries to which they go. The one are bound to see that emigrant ships are well found and not overcrowded, and that adequate arrangements are made for the provisioning, health, and safety of the passengers in their transit; while the other are bound to give them shelter and guidance on landing, to protect them from imposture, and to see that all pre-engagements made with them be fulfilled. The commission of emigration in the United Kingdom, early established as a branch of the colonial office, has laboured diligently in introducing care and order into the sphere of foreign and colonial emigration, as well as into the coolie immigration of the Eastern seas. The regulations in the British home and colonial ports are embodied in two Acts of Parliament, called the Passengers Acts 1855 and 1863, which contain the administrative code on this subject in its statutory detail—only for "Commissioners of Emigration" must now be read "Board of Trade," the supervision of emigrant ships having devolved on that department in connection with the general merchant shipping. Of the regulations for the reception of immigrants, on the other hand, the arrangements at New York afford probably one of the best examples. If no country has had more to do with the shipping of emigrants than the United Kingdom, no place has had more to do with their reception than the great American seaport; and measures have been adopted there by which the abuses once prevailing have been overcome, and at the same time all the arrangements for the comfort, security, and guidance of immigrants have been placed on a satisfactory basis. Emigrant ships are visited six miles from the port by health officers; and any who may be sick or diseased are removed to hospitals under the care of the commissioners of emigration or the quarantine commission. The others are required to land at Castle Garden, where there is a large rotunda capable of accommodating 4000

