

Alexander given in Pl. I., fig. 16, is not likely to represent the art of this time, but more probably belongs to the age of Augustus who used this design as a seal. On the other hand the ancient pastes (figs. 20-22) will convey a notion of the gem engraving of the time of Alexander. Still it should be observed that one of the special difficulties of the subject is to account for the scarcity of gems from this period of wealth, luxury, and artistic activity in all directions. Possibly not a few belong to it which it is thought safer to class as Roman. This much at least is certain, that Roman art altogether was a prolongation, hardly a development, of the Macedonian art. Those Roman engravers may have been conscious of this who boldly placed on their productions the names of celebrated Greek artists, as for instance on a garnet in the British Museum, having a figure perhaps of Jason and inscribed with the name of Phidias (ΦΕΙΔΙΑΣ ΕΠΟΙΕΙ); others elsewhere profess to be the work of Polycletus or of Scopas. The same effrontery was seen in sculpture, and unfortunately has revived again in the gem engraving of comparatively recent times, as may be seen in a calcedony intaglio of the head of Alexander the Great in the British Museum, which, though clearly modern, claims to be the work of Pyrgoteles.

From literary sources are known the engravers Apollonides, Chronius, Tryphon, Satyrius, and Dioscurides, but the date of the last-mentioned only is certain. He lived in the time of Augustus, whose portrait he executed, and did not, it may be supposed, inscribe his own name on it in full. On the other hand, if, as Pliny states, it became a custom afterwards to seal with this portrait of Augustus, it would be natural enough to place on the copies of it made for that purpose the name of Dioscurides. With this view of the case may be reconciled two gems bearing his signature in the British Museum—the one a jacinth, the other a sard—and both obviously portraits which, though more resembling Julius Cæsar than Augustus, might yet be regarded as unsuccessful portraits of the latter. Of the two the jacinth, which is from the Blacas collection, is doubted by Brunn; the other is a higher class of work, and yet even it presents some difficulties that require the theory of an imitator, most probably a Roman one. The obtrusive display of the wreath and the fringe of drapery round the bust are details which, apart from the style of workmanship, are objectionable. That the name of this engraver has been often added to modern gems is true enough, and in some cases also it may have been in modern times inscribed on perfectly ancient gems. Even among those which appear to be in all respects antique there are differences in the spelling and form of the letters not to be accounted for if they had come from his hand, but intelligible if they had been made by ancient copyists. Abbreviations such as ΔΙΟΣΚ for Dioscurides, or ΕΠΙΤ for Epitynchus, are always suspicious. ΕΠΙΤΥΧΑ, on a beautiful cameo of the young Marcellus, might seem to have been abbreviated by the accident which broke off the lower part of the gem, but the inscription does not bear examination except as the work of a modern hand. Not necessarily modern is the inscription ΔΙΟΣΚΟΥΡΙΑ, on a fragmentary amethyst, with a head which may perhaps have been meant for Alexander the Great, whose portrait, as has been said, was used as a seal by Augustus, and may have been executed for him by Dioscurides. It is possibly an ancient copy of this seal, with the addition of the name of the original artist to show that it is so. With regard to the question whether a name standing in the genitive case may indicate the engraver, the evidence is affirmative, if for no other reason than that the names are most frequently Greek, while the owners or collectors of gems in Italy were Romans. Collecting was a passion with wealthy Romans, but their names have not survived on gems. Names like

Aulus or Gnæus, written in Greek letters, cannot indicate a Roman of position, but on the contrary show that it was to the naturalized Greeks that the Romans looked for their engravers. When, for instance, one gem reads ΣΟΛΩΝΟΣ and another ΣΟΛΩΝ ΕΠΟΙΕΙ, it is fair to conclude that we have to do in both with an engraver named Solon, if the inscriptions are genuine. The former occurs on a gem found with jewellery at Pompeii (*Bullet. d'Inst. Arch.*, 1863, p. 91), so that if the other examples of it, e.g., on the Strozzi Medusa in the British Museum, and on the so-called head of Mæcenas, be inventions of the 16th or 17th centuries, they are at least correct in reproducing a name which is now seen on one undoubtedly ancient intaglio. Obviously one or more gems so inscribed must have existed in the 16th or 17th centuries, and this fact alone of the existence of several gems with the same name would suggest if not actually prove that it was the name of an engraver. The other inscription, ΣΟΛΩΝ ΕΠΟΙΕΙ, on an intaglio of Diomedes carrying off the Palladium, though known since the year 1660, has not always passed unchallenged. The Medusa just mentioned is a gem of extraordinary pretensions, but very unsatisfactory when compared with good Greek work. In the matter of names the evidence as to the Greek usage, though very slight, is not at variance with what may be gathered from the coins where the names of the die-sinkers appear either in the nominative or genitive case.

In the discussions as to what is or is not proper in the way of engravers' signatures, frequent reference is made to the inscription ΕΥΤΥΧΗΣ ΔΙΟΣΚΟΥΡΙΑΟΥ ΑΙΓΕΑΙΟΣ ΕΠΙ, which occurs twice—on a pale amethyst said last century to belong to the prince of Avella, and on an amethyst in the Marlborough collection. The design on the two is identical, consisting of a helmeted bust of Minerva in full face. Unless what was formerly the Avella gem is now the gem belonging to the Marchese Strozzi of Florence, then this again must be a third example. Professor Maskelyne in his *Catalogue* quotes Mr King as agreeing with him that the Marlborough gem (No. 81) is not a copy as Brunn supposed, but may be regarded as an original work of Eutyche till the Avella gem be proved to exist elsewhere. But Stephani insists on the inscription being a modern production, especially on account of the contraction ΕΠΙ for ΕΠΟΙΕΙ, which he says had arisen through the last letters ΟΙΕΙ being hidden from the modern copyist, either owing to the setting, or from some other cause. The gem which Cyriacus of Ancona and a contemporary of his saw and described in the early part of the 15th century had the full inscription, and possibly it was from an inexact impression of it that the Marlborough gem was made (*Compte-rendu*, 1861, p. 157). Another celebrated Marlborough gem with the head of the dog-star Sirius, inscribed ΓΑΙΟΣ ΕΠΟΙΕΙ, is condemned by Professor Maskelyne in his *Catalogue* (No. 270), as it deserves to be. Apparently meant for the same engraver, though written differently, is the ΓΝΑΙΟΣ on the beryl in the British Museum with the head of Hercules, as to which Köhler's adverse judgment appears to be entirely just. ΣΚΥΛΑΞ, which is found on an amethyst head of Pan in the British Museum executed with wonderful exactness of detail, is not disputed, except as to whether it is the name of the engraver or the owner. Among the other names which have been more or less the subject of discussion are those of Hyllus, who also claims to be a son of Dioscurides, Epitynchus, Agathopus, Euodus, Felix, Mycon, Allion, Admon, Onesas, Protarchus, and Alexas.

The habit of gem collecting is recorded first in the instance of Ismenias, a musician of Cyprus, who appears to have lived in the 4th century B.C. But though individual collectors are not again mentioned till the time of Mithradates, whose cabinet was carried off to Rome by Pompey, still it is to be inferred that they existed, if not pretty generally, yet in such places as Cyrene, where the

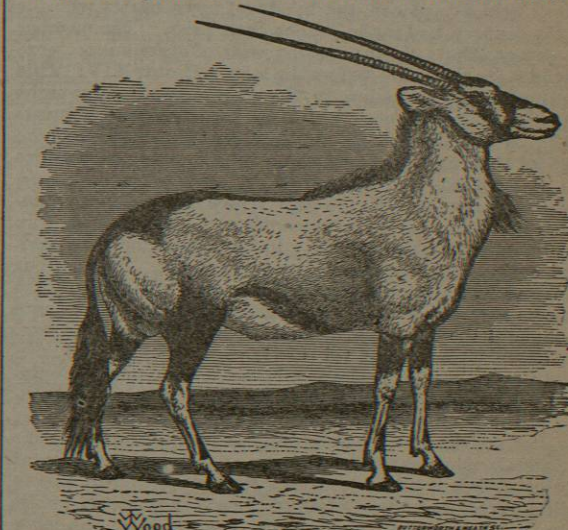
passion for gems was so great that the poorest person owned one worth 10 minas, and where, according to *Alian* (*Var. Hist.*, xii. c. 30), the skill in engraving was astonishing. The first cabinet (dactyliotheca) in Rome was that of Scæurus, a step-son of Sulla. Cæsar is said to have formed six cabinets for public exhibition, and from the time of Augustus all men of refinement were supposed to be judges both of the art and the quality of the stones. To this pretension is doubtless due most of the existing gems engraved on large beautiful jacinths, garnets, sards, beryls, and amethysts, leaving, as regards purely technical skill, nothing to be desired. Except in portraiture, and in grylli or conceits, in which various things are combined into one, often with much skill, the subjects were as a rule only variations or adaptations of old types handed down from the Greeks. When new and distinctly Roman subjects occur, such as the finding of the head on the Capitol, or Faustulus, or the she-wolf with the twins, both the stones and the workmanship are poor. In such cases, where the design stirs a genuine national interest, it may happen that very little of artistic rendering will be acceptable rather than otherwise, and much more is this true when the design is a symbol of some article of faith, as in the early Christian gems. There both the art and the material are at what may be called the zero of engraving; that is to say, it has reached the point beyond which barbarousness or folly sets in. The usual subjects on the early Christian gems are the fish, anchor, ship, dove, the good shepherd, and, according to Clemens, the lyre. Under the Gnostics, however, with whom there was more of speculation than of faith, symbolism was developed to an extent which no art could realize without the aid of writing. A gem was to them a talisman more or less elaborate, and the difficulty is to make out how they carried them. Many specimens exist, but none show signs of mounting. The materials are usually hematite or jasper. As regards the designs, it is clear that Egyptian sources have been most drawn upon. But the symbolism is also largely associated with Mithraic worship. The name Abraxas or Abrasax, which, from its frequency on these gems, has led to their being called also "Abraxas gems," is, when the Greek letters of which it is composed are treated as Greek numerals, equal to 365, the number of days in a year, and the same is the case with ΜΕΙΘΡΑΞ.

More interesting, from the occasionally forcible portraiture and the splendour of some of the jacinths employed, are the Sassanian gems, which as a class may be said to represent the last stage of true gem engraving in ancient times. In the middle ages and onwards metal stamps were found more serviceable for the purpose of sealing, and though engraved gems still continued to be a luxury of the great, the old traditions were broken through, as may be seen, for example, in the large crystal in the British Museum representing Susanna and the Elders, made by order of the French king Lothair, 954-986. With the revival of classical tastes under the patronage of popes and princes in the Cinquecento period, it was natural that this branch of art should have a new career of activity, which, after a lapse during the 17th century, again during the last century revived under an even greater amount of encouragement from men of wealth and rank. In this last period the names of engravers who succeeded best in imitating classical designs were Pichler (Pl. I., fig. 28), Natter, and the Englishmen Marchant (fig. 29) and Burch. Compared with the Greek gems on the same plate, it will be seen that what at first sight is attractive as refined and delicate is after all mere pretence of refinement, and entirely devoid of the ancient spirit. The success with which modern engravers imposed on collectors is recorded in many instances, of which one may be taken as an instructive type. In the Bibliothèque in Paris (Chabouillet's catalogue, No. 2337) is a gem familiarly known as the signet of Michelangelo, the subject being a Bacchalian scene. So much did he admire it, the story says, that he copied from it one of the groups in his paintings in the Sistine chapel. The gem, however, is evidently in this part of it a mere copy from Michelangelo's group, and altogether is a later production.

The gems engraved in Plate I. show a progressive development of the art from the earliest times down to last century. They are all in the British Museum, and are enlarged to about a half more than their real size. No. 1, Porcelain scarab, from Camirus in Rhodes; No. 2, Carnelian, lentoid gem, from Ialysus, in Rhodes; No. 3, Crystal, lentoid, also from Ialysus; No. 4, Paste scaraboid, from Tharras, in Sardinia; No. 5, Carnelian, head of a king; No. 6, Crystal scarab, Gorgon; No. 7, Carnelian scarab, Citharist; No. 8, Sard, female figure with water jar; No. 9, Steatite scaraboid, Citharist; Nos. 10-13, Four sides of an amethyst, Menads; No. 14, Agate, Eos; No. 15, Carnelian, unknown; No. 16, Carnelian, head of Alexander the Great, as Helios; No. 17, Sard, head of Zeus; No. 18, Sardonyx cameo, Actæon; No. 19, Sardonyx cameo, head of Athena; No. 20, Paste, Victory; No. 21, Paste, Menad; No. 22, Paste, Victory sacrificing bull; No. 23, Agate scaraboid, Priest; No. 24, Amethyst, head of Brutus (?) from Rhodes, inscribed C. I. Q.; No. 25, Jacinth, Sassanian portrait; No. 26, Gnostic gem; No. 27, Christian gem, the Good Shepherd; No. 28, Modern gem, by Pichler; No. 29, Modern gem, by Marchant.

Literature.—See M. A. Levy, *Siegel und Gemmen*, with three plates of gems having Phœnician, Aramaic, and old Hebrew inscriptions, Breslau, 1869; and, on the same subject, De Vogüé, in the *Revue Archéologique*, 1868 (xvii.), p. 482, pl. 14-16; De Saulcy, in the *Rev. Arch.*, 1869 (xx.), p. 101, "Recherches sur le costume chez les Juifs;" Victor Ancessi, *L'Égypte et Moïse*, Paris, 1875, giving on plate 7 a fanciful restoration of an Egyptian breastplate; Soldi, in the *Rev. Arch.*, 1874 (xxviii.), p. 147, on Babylonian cylinders; Count Gobineau, in the *Rev. Arch.*, 1874 (xxvii.), p. 111 and p. 179, on early Oriental gem engraving. Fr. Lenormant, in the *Rev. Arch.*, 1874 (xxviii.), pl. 12, gives five examples of early lentoid gems, and seven more gems of the same class are given by A. S. Murray in the *Rev. Arch.*, 1878, pl. 20. On Greek and Roman gems the principal authorities are Köhler, *Gesammelte Schriften*, iii. and v., and Stephani, in his notes to these volumes, and in the *Compte-rendu de la Commission Imperiale de St. Petersburg*, 1870-1, p. 215 and pp. 221-224. Opposed to them is Brunn, in his *Geschichte der Griechischen Künstler* (1859), ii. p. 443, where a full discussion of Greek and Roman gems will be found. See also Krause, *Pyrgoteles*, Halle, 1856, and *Bollettino dell' Inst. Rom.*, 1831, p. 105; 1834, p. 116; and 1839, p. 99. In England the authority is C. W. King, *Antique Gems*, 2d edit., London, 1866; *Handbook of Engraved Gems*, 1866; *Precious Stones*, 1865; *Gnostic Gems*, 1864; and appendix on ancient gems in Cesnola's *Cyprus*, which gives 11 plates of gems. Of special interest as regards the stones used by ancients, and valuable as a criticism of a single collection, is Prof. Maskelyne's *Catalogue of the Marlborough Collection*, privately printed in 1870. This collection is now the property of Mr Bromfielw. On Abraxas gems see Barzilai, *Gli Abraxas*, Trieste, 1873, and Matter, *Histoire du Gnosticisme*. An indispensable book of reference is Raspe's *Catalogue of Tassie's large series of Sulphur Casts*. Among catalogues of public collections are Tolken's *Verzeichniss d. preuss. Gemmen*, 1835; Chabouillet's *Catalogue des Camées et Pierres Gravées de la Bibliothèque Imperiale*, Paris, 1856; and Jansson's *Nederlandsch-Rom. Daktyliotheek*, Leyden, 1844. Older works are generally of small critical value, but the following may be mentioned:—Winckelmann, *Description des Pierres Gravées du Feu Baron de Stosch*, Florence, 1760; Visconti, *Opere Varie*, ii. p. 115-386; Mariette, *Traité des Pierres Gravées*; Millin, *Pierres Gravées*, and *Introduction à l'Étude des Pierres Gravées*, Paris, 1796. (A. S. M.)

GEMSBOK (*Oryx gazella*, Gray), a species of antelope, abounding on the dry yet fertile plains of South Africa, where it feeds on the bulbs of water-root and other kinds of succulent vegetation, by means of which the antelopes of those regions are able to subsist without water for



Gemsbok.

months together. It is a large and powerful animal, measuring about 5 feet in length and over 3 feet in height at the shoulders. Its horns, situated on the same plane with its forehead, exceed 2 feet in length, are almost straight, and are obscurely ringed throughout their lower

half. The colour of the upper part of the body is a rusty grey, and of the under part white, while these are separated from each other by a well-defined black band on each side. These bands unite on the breast, and are continued as a single black band until reaching the lower jaw, when they again divide and form two transverse bands on the head, terminating at the base of the horns. The head otherwise is white, as also are the limbs, with the exception of the thighs, which are black. The striking appearance presented by this antelope is in great part due to the absence of any blending in the different colours of its body. The gemsbok avoids the woods, living on the open plains in pairs or in small groups of four or five. Possessing powerful weapons of attack in its long spear-like horns, and with ample courage to use them, this animal, especially when wounded, is a formidable antagonist both to man and to the numerous beasts of prey which are attracted to the karroos of the Cape by the presence of this and other ruminant species. It is said to defend itself not unfrequently with success against the lion. Its flesh is esteemed as a delicacy, and its hide forms a valuable leather.

GENDARMERIE, a body of troops or police in France, composed of *gendarmes*, or men-at-arms. In the days of chivalry they were mounted and armed cap-a-pie, and attended each by five soldiers of inferior rank and more lightly armed. They were then furnished by the fiefs, and marched in the train of the knights and esquires. In 1439 this feudal gendarmerie was replaced by the *compagnies d'ordonnance* which Charles VII. formed when the English were driven out of France, and which were distributed throughout the whole extent of the kingdom for preserving order and maintaining the king's authority. These companies, fifteen in number, were composed of 100 lances or gendarmes fully equipped, each of whom was attended by at least three archers, one *coutillier* (soldier armed with a cutlass) and one *varlet* (soldier's servant). The states-general of Orleans (1439) had voted a yearly subsidy of 1,200,000 livres in perpetuity to keep up this national soldiery, which replaced the bands of mercenaries who for about a century had made France their prey. The number and composition of the *compagnies d'ordonnance* were changed more than once before the reign of Louis XIV. This sovereign on his accession to the throne found only eight companies of gendarmes; but after the victory of Fleurus (1690), which had been decided by their courage, he increased their number to sixteen. The four first companies were designated by the names of *Gendarmes écossais*, *Gendarmes anglais*, *Gendarmes bourguignons*, and *Gendarmes flamands*, from the nationality of the soldiers who had originally composed them; but at that time they consisted entirely of French soldiers and officers. These four companies had a captain-general, who was the king. The fifth company was that of the queen; and the others bore the name of the princes who respectively commanded them. This organization lasted till 1787, when Louis XVI. dissolved it, only retaining the *Gendarmes écossais* in his body-guard. The great Revolution swept away all these institutions of the monarchy, and, with the exception of a short revival of the *Gendarmes de la garde* at the Restoration, the word gendarmerie had thenceforth an altogether different meaning. It has been since that time employed to denote a military police, whose duties are to watch over the public safety, keep order, and enforce the execution of the laws. This police force superseded the old *maréchaussée*.

The law of the 28th Germinal, An VI. (17th April 1797), and the royal ordinance of the 29th October 1820, organized the gendarmerie, and laid down the general rules that are still in force, dividing it into legions and companies, and the latter into brigades. In time of war a colonel of gendarmerie, with the title of *grand-prévôt*, is attached to the army with a detachment of gendarmes, for maintaining discipline among the soldiers. Though placed

under the control of the minister of war, the gendarmerie is also at the disposal of the minister of the interior as a police force, of the minister of justice as agents to secure the execution of judicial sentences and police regulations, and also of the minister of marine and colonies for enforcing his authority over marines and sailors in the colonies and sea-towns of France. The gendarmerie of Paris constitutes a special corps established first in 1802, and successively called *Gendarmerie de Paris*, *Garde royale*, and *Garde municipale*. Suppressed by the provisional Government in 1848, the *Garde de Paris* was soon reorganized. It is now composed of 6 squadrons of cavalry and 24 companies of infantry, and is officially styled *Garde républicaine de Paris*. Both in the *Garde républicaine* and in the *légiions*, the gendarmes consist for the most part of deserving soldiers of the regular army, who have been drafted into this service, where, with other privileges, they have a much higher rate of pay than the soldiers of the line. Their total numbers are about 40,000, made up of the *Garde de Paris* as above, 31 provincial legions, 1 legion of gendarmerie mobile, and the *Gendarmerie coloniale*.

Russia also has a gendarmerie, a secret police appointed in all towns of the empire to watch over Russian subjects of all ranks and classes, and to report to the chancery office such information as they receive from their detectives and secret agents.

For the history of the old French gendarmerie before 1789 see Chéruel, *Dictionnaire historique des institutions de la France*, 2 vols., and Lacroix, *Vie militaire et religieuse au moyen âge et à l'époque de la Renaissance*; and for the present gendarmerie, *Réorganisation de la Gendarmerie*, 1871, and *Annuaire militaire*, 1877.

GENEALOGY. *Biblical*.—The word "genealogy" (*γενεαλογία*), which occurs twice in the New Testament (1 Tim. i. 4; Tit. iii. 9; compare also Heb. vii. 3, 6) in the ordinary concrete sense of "pedigree" or "list of ancestors," is of somewhat frequent occurrence in the authorized version of the Old Testament scriptures, but only in Chronicles-Ezra-Nehemiah, where the words *שֵׁנִי* and *שֵׁנִי*, which are peculiar to that work, are invariably rendered "genealogy" and "to reckon by genealogy." This translation, however, is of somewhat doubtful accuracy; for, whatever the original meaning of the root *שֵׁנִי* may have been,¹ there seems to be no room for doubt that the noun and the verb connected with it were used in later Hebrew simply to denote respectively the roll and the act of registration; and that the "book" alluded to in Neh. vii. 5 (in A. V. "register of the gensalogy") was genealogical only in so far as the individuals registered in it were classified according to their "houses," "families," and "tribes." While a catalogue of this sort was admirably fitted to be a permanent record of tribal relations in Israel, as these subsisted at the time of its compilation, there is not any reason to suppose that it made any attempt to trace them through previous generations.² The scripture genealogies, properly

¹ According to Ewald (*Gesch. d. V. Isr.* i. 261, cf. *All.* 363) it meant properly "to count." In the LXX, the *Hithpael* is rendered differently in each passage where it occurs; *ἐγενεαλογήθη* is only once given. In Ezra ii. 62 the translation is *γραφὴν αὐτῶν οἱ μετὰσεσέ* (Vulg., *scripturam genealogie suam*); in Neh. vii. 64 it is *γραφὴν αὐτῶν τῆς συνοδίας* (*scripturam suam in censu*). It may be added that the habit of taking a written census of sections of the population, or even of the entire nation, was obviously not unfamiliar to the Jews. This appears from numerous indications in the earlier historical books, e.g., Num. i. 18, where the word (used here only) is *שֵׁנִי*, as well as in Chronicles-Ezra-Nehemiah. Compare also Ezek. xlii. 9 and Is. lxxxvii. 6.

² When, for example, we read in 1 Chr. vii. 6, 7 that Benjamin had three sons (Bela, Becher, and Jediael); in viii. 1, 2 that he had: vi (Bela, Ashbel, Aharah, Nohah, and Rapha); in Numb. xxvi. 38 as if that he had five, but that their names were Belah, Ashbel, Ahiram, Shepham, and Hupham; and, finally, in Gen. xlii. 21 that they number ten "souls" (Bela, Becher, Ashbel, Gera, Naaman, Ehi, Rosh, Mupp, Huppim, and Ard); or when the descendants of Bela are variously given, in 1 Chr. vii. 7 as Ezbon, Uzzi, Uzziel, Jerimoth, and Iri; in 1 Chr. viii. 3-5, as Addar, Gera, Abihud, Abishua, Naaman, Ahah, Gera, Shephuphan, and Huram; and in Numb. xxvi. 40 as Addar and Naaman, the simple explanation (after all due allowance for corrections in the text has been made) seems to be, that in the course of a long history the Benjamite tribe included a varying number of families or clans with varying names. Similar instances might be indefinitely multiplied. It ought to be added, however, that criticism has not by any means completed its task on the book of Chronicles in its genealogical bearings. See Wellhausen, *Geschichte Israels*, i. 280 sq., 1871.

so called, are rather to be sought for in these *שֵׁנִי* (A. V. "generations;" Gen. ii. 4; v. 1; vi. 9; x. 1, &c.; Ex. vi. 16, 19, &c.; Num. iii. 1) so frequently met with in some other canonical books, and so specially characteristic of the first book of the Pentateuch as apparently to have suggested to the Alexandrian translators its distinctive name of *γενεαις*. These begin with the antediluvian period, and indeed with "the generations (or genealogy) of the heavens and of the earth." The descendants of Adam are traced through the lines of Cain and of Seth respectively to the seventh and to the ninth generation. In the two lists the frequent similarity of the names has not escaped observation; nor has the symmetry of the numbers (in one case, a series of seven, the seventh branching into three; in the other a series of ten, in which the seventh is peculiarly prominent, while the tenth branches into three). The very ancient tradition which they embody is not at present so generally believed to convey actual personal history as once it was, but by those who view them as more or less ideal in their character their significance has been very variously estimated,—some seeing in them the survival of ancient myths, perhaps solar in their character; others interpreting them as representing successive dynasties, or immigrations, or stages of culture within a given area in prehistoric times; while such interpreters as Philo allegorize them in a purely spiritual sense. The same differences of view find expression when the genealogies of the immediately post-diluvian period come to be considered. In Gen. xi. a series of nine generations (or, according to the LXX, ten) from Shem to Abraham is given; the symmetrical number again attracts notice, and in the list some names at least can be identified as having belonged to special nationalities; Arphaxad, for example, is probably equivalent to the Arrhaphachitis of Ptolemy (vi. 1). That this "genealogy" was in intention ethnographical rather than personal finds confirmation from the expansion which it receives in the very interesting sketch of a *genealogia universalis* in Gen. x., where the sons of Shem, besides Arphaxad, are said to have been Elam, Asshur, Lud, and Aram, while from Aram were descended Uz, Hul, Gether, and Mash or Meshech (compare 1 Chron. i. 17); and again, among the sons of Joktan, the (younger) brother of Peleg, are found Hazarmaveth, Sheba, Ophir, and Havilah. Throughout Gen. x., indeed, a thorough consciousness of a purely ethnographical purpose is manifest, and in many instances the device of using personal names to convey ethnological statements is entirely dropped (Gen. x. 13, 14, 16-18). Historians and critics are not yet entirely at one as to the view which ought to be taken of the genealogies which begin with Abraham. As is well known, these follow the line of Isaac, but give also the collateral lines of Ishmael and of the children of Keturah, and again trace the descendants not only of Jacob but also of Esau; and so much at least is unanimously held that, even if strictly historical so far as the children of Israel are concerned, they cannot be supposed to be complete for the centuries of the sojourn in Egypt. There seems no reason to doubt, however, that the distribution into tribes (*שֵׁנִי* or *שֵׁנִי*) families (*בְּיָדֵי*) and houses (*בְּיָדֵי*) lay at the basis of the organization of the Israelites from the earliest period of their independent national life, so that at any given time each man would be able to tell what house he belonged to, what other houses belonged to the same family, and what other families belonged to the same tribe with himself. There are indications of repeated censuses, in which the people were systematically enrolled for fiscal and military purposes; but, on the other hand, it must be said that there seems to be no adequate evidence that the *שֵׁנִי*, or "officers," so frequently mentioned in the Pentateuch, had functions at all corresponding to those of a heralds' college, if indeed it can be regarded as made out

that they were scribes at all. The statements which are continually made as to the unbroken continuity and exhaustive fulness of the genealogical records of the twelve tribes of Israel are not borne out by any sober reading of the facts of history, as these have come down to us; and, even in the case of the Aaronic and Davidic families, there are some circumstances that warn against too absolute confidence in the strict literality of the lists which have reached our hands. It is certain, indeed, that from the beginning of the post-exile period (Ezr. ii. 62, Neh. vii. 64) great importance was attached to purity of lineal descent in the case of priests; and even in the time of Josephus (*Cont. Ap.* i. 17) members of the priestly caste were in the habit of proving their legitimacy by means of public documents, which he refers to as *δημοσία δέδοται*. But a comparison of the pedigree (whether official or personal) of Jehosadak (1 Chr. vi. 3-15; cf. Ezra vii. 1) with the enumeration of Aaron's successors in the high priesthood, as given by Josephus and repeated in the *Seder Olam*, suggests that, for the period preceding the captivity at least, the materials for a complete list must have been somewhat defective. That in the case of the house of David, in like manner, some real uncertainty existed would seem to be a legitimate inference, not only from the Chronicler's obscurity, but also from the not easily reconcilable discrepancy between the genealogies given in Mat. i. and in Luke iii. And this is not inconsistent with the fact, of which there are many indications in the New Testament (and even, though more faintly, in the Mishna), that among the Jews the consciousness of tribal distinctions disappeared very slowly. When Anna is represented as belonging to the tribe of Asher and Elizabeth as a daughter of Aaron, Paul as a Benjamite and Barnabas as a Levite; or when, as is vouched for by a not very late tradition, the "desposyni" in the time of Domitian claimed to have the royal blood of David in their veins, it would obviously be just as rash to infer (as Jerome seems to have done) that every successive link in the long series of their genealogies was accurately known to the persons themselves, or recognized by their contemporaries, as it would be unscientific altogether to ignore the presumption arising out of the very fact that tribal distinctions were asserted. With reference even to the most undisputed of the Biblical genealogies, it is important to remember, in the first place, that in them phrases implying sonship are not to be interpreted so strictly as they would be with us; and, secondly, that, in order to aid the memory by means of successions of symmetrical numbers, it was quite usual to manipulate a long list by dropping or even by introducing names at discretion.

Classical.—A passing reference only is needed to the intricate genealogies of gods and sons of gods which form so conspicuous a feature in classical literature. In every one of the numerous states into which ancient Greece was divided there were aristocratic families who were accustomed to claim descent, through eponymous heroes, from the primitive deities. Many of these families were, as families, undoubtedly of great antiquity even at the beginning of the historical period; and in several instances they continued to maintain a conspicuous and separate existence for centuries. The element of family pride is prominent in the poetry of the Megarian Theognis; and in an inscription belonging to the 2d century B.C. we find a member of the Spartan family of Gytheates represented as the thirty-ninth in direct descent from the Dioscuri and the forty-first from Hercules. Even in Athens, long after the constitution had become thoroughly democratic, some of the clans continued to be known as *εὐαρπίδαι*; and Alcibiades, for example, as a member of the phratry of the Eurysacidae, traced his origin through many generations to Eurysaces, who was represented as having been the first of the *εὐαρπίδαι*

to settle in Attica. It is very doubtful, however, whether such pedigrees as this were very seriously put forward by those who claimed them; and it is certain that, almost along the whole line, they were unsupported by evidence. We have the authority of Pollux (viii. 111) for stating that the Athenian *γένεα*, of which there were thirty in each *φρατρία*, were organized without any exclusive regard being had to blood-relationship; they were constantly receiving accessions from without; and the public written registers of births, adoptions, and the like do not appear to have been preserved with such care as would have made it possible to verify a pedigree for any considerable portion even of the strictly historical period (see Schoemann, *Griechische Alterthümer*, i. 137, 338).¹

The great antiquity of the early Roman (patrician) gentes is indisputable; and the rigid exclusiveness with which each preserved its *hereditates gentilicia* or *sacra gentilicia* is sufficiently illustrated by the fact that towards the close of the republic there were not more than fifty patrician families (Dionys., i. 85). Yet even in these it is obvious that, owing to the frequency of resort to the well-recognized practice of adoption, while there was every guarantee for the historical identity of the family, there was none (documents apart) for the personal genealogy of the individual. There is no evidence that sufficient records of pedigree were kept during the earlier centuries of the Roman commonwealth. In later times, it is true, even plebeian families began to establish a prescriptive right (known as the *jus imaginum*) to preserve in their halls the busts of those of their members who had attained to curule office, and to exhibit these in public on appropriate occasions. Under these imagines majorum² it became usual to inscribe on the wall their respective tituli, the relationship of each to each being indicated by means of connecting lines; and thus arose the *stemmata gentilicia*, which at a later time began to be copied into family records. In the case of plebeian families (whose *stemmata* in no case went farther back than 366 B.C.), these written genealogies were probably trustworthy enough; but in the case of patricians who went back to *Aeneas*,³ so much cannot, it is obvious, be said; and from a comparatively early period it was clearly recognized that such records lent themselves too readily to the devices of the falsifier and the forger to deserve much confidence or reverence (Pliny, *H. N.*, xxxv. 2; Juv. viii. 1). The many and great social changes which marked the closing centuries of the Western empire almost invariably militated with great strength against the maintenance of an aristocracy of birth; and from the time of Constantine the dignity of patrician ceased to be hereditary.

Modern.—The passion for genealogizing, which has been and is a marked characteristic of all the aristocracies of

¹ All the earlier Greek historians appear to have constructed their narratives on assumed genealogical bases. The four books of Herodotus of Miletus dealt respectively with the traditions about Deucalion, about Hercules and the Heraclidae, about the early settlements in Peloponnesus, and about those in Asia Minor. The works of Hellanicus of Lesbos bore titles (*Δευκαλιόνηα* and the like) which sufficiently explain their nature; his disciple, Damastes of Sigeum, was the author of genealogical histories of Trojan heroes; Apollodorus Atheniensis made use of three books *γενεαλογικῶν* by Acusilaus of Argos; Pherecydes of Leros also wrote *γενεαλογίαι*. See Nicolai, *Griechische Literaturgeschichte*, i. 254 sq.; Schubart, *Quaest. geneal. historicae*, 1832; Marckscheffel, *De Genealogia Graecorum poesi*, 1840.

² The chief authority on this subject is Polybius (vi. 53).

³ At the funeral of Drusus the images of *Aeneas*, of the Alban kings, of Romulus, of the Sabine nobles, of Attus Clausus, and of "the rest of the Claudians" were exhibited.—Tac., *Ann.* iv. 9.

⁴ The Roman *stemmata* had, as will be seen afterwards, great interest for the older modern genealogists. Reference may be made to Glandorp's *Descriptio Gentis Antoniae* (1559); to the *Descriptio Gentis Juliae* (1576) of the same author; and to Hübnér's *Tabellen*. See also Rupert's *Tabulae Genealogicae sive stemmata nobiliss. gent. Rom.* (1794, 1811); Drumann's *Geschichte Roms* (1834); and Becker's *Handbuch d. röm. Alterthümer*, vol. ii.

modern Europe, can be directly traced to the influence of feudalism and the principles of hereditary privilege which that system, in its later phases at least, so peculiarly encouraged. Along with the sharp separation of those families which alone were regarded as capable of holding real property or filling the higher offices of state, or indeed of engaging in any of what were reckoned as the more ennobling pursuits of life, arose the necessity for being able to determine with accuracy who were and who were not the persons entitled by birth to take a place within the privileged caste. When, for example, the practice arose of holding tournaments, in which no one was allowed to take part who could not give evidence of gentle descent, the necessity for the professional genealogist became at once apparent. It was not, however, until about the end of the 15th century that the vanguard of the great army of writers upon this fertile subject began to appear. It was perhaps natural that, finding as they did the gulf of separation between noble and base to be so great as it was, they should have leapt to the conclusion that it had existed from the first; at all events their knowledge and their ignorance combined to support them in their conjecture. As they forced their way up the stream of time, indeed, they were met at a comparatively early stage by a great barrier—consisting less in the paucity and inaccessibility of authentic documents than in what one might almost call the fatal fact of the absence of family names. Prior to the middle of the 11th century these were entirely unknown; the documents speak merely of Eberhardus, Fridericus, Ernestus, and the like, with at most the addition of the title. About 1050 began the custom of using surnames, but it made way so very slowly that, even at the close of the 12th century, it had not diffused itself beyond the ranks of the higher nobility, and throughout the 13th the old habit of self-designation by the Christian name merely was still exemplified in a vast number of instances.⁵ The difficulty, however, in an age when the laws of evidence were so imperfectly understood, did not count for much with the courtly genealogists of the 15th and following centuries. The insuperable obstacle which barred their advance along the path of sober research only furnished them with a pretext for all the sooner making their escape into the region of imagination and conjecture, where no impediments occurred in tracing the ascending series until the name of the first created person was reached. The appended bibliography will help to make clear the degrees by which genealogists have gradually been brought to confine themselves to the limits of the verifiable. At present, if we understand by a genealogy a tabulated and, as far as possible, an exhaustive statement of all the ramifications of a series of human generations, and by genealogical science that branch of history which aims at securing fulness and accuracy in the accounts men give of the antecedents of families which have attained to distinction, the modern genealogist cannot but be conscious that he occupies a comparatively narrow field, and one from which the larger interests of mankind are daily further receding. In the more ancient meaning of the word genealogy indeed, when it is used to denote that grander task of the historian which consists in tracing the origin, not of privileged families or castes merely, but of races and groups of races, and even of the species itself, the subject is one that has an ever widening and deepening significance; but in this sense it does not call for treatment apart from the biological sciences.

Among the earliest of the genealogists of modern times may be mentioned Benvenuto de San Georgio (*Montisferrati Marchionum et Principum regiae propaginis successionumque series*, 1516), Phil-

⁵ Gatterer, *Abriss der Genealogie*, sec. 41 (1788). According to this author, there is only one class of cases in which it is possible to trace a pedigree beyond the 11th century,—those cases, namely, where a family happens to have established a fund for the deliverance of the souls of certain ancestors (Christian names specified) from purgatory.

bert Pingonius (*Arbor gentilitatis Sabaudiae Saxoniaeque Domus*, 1521), Gebwiler (*Epitome regii ac vetustissimi ortus Caroli V. et Ferdinandi I. omniumque Archiducum Austriae et Comitum Habsburgensium*, 1527), Meyer (*Flandriarum rerum tomus X. de origine, antiquitate, nobilitate, ac genealogia Comitum Flandriae*, 1531), and Du Boulay (*Généalogies des tres illustres et tres puissants Princes les Ducs de Lorraine*, 1547). Georg Ruxner's *Anfang, Ursprung, und Herkommen des Thurniers in Teutscher Nation* (1532) was also genealogical in its character. Later in the same century several works of a much wider scope than any of the preceding appeared, the list being headed by Reineccius or Reineck of Helmstadt, whose voluminous compilations include a *Syntagma de familiis quae in monarchiis tribus prioribus rerum potitae sunt* (4 vols. fol., 1574–80), and an *Historia Julia seu Syntagma heroicum* (3 vols. fol., 1594–97); this writer was followed by Hennings (*Genealogia Saxonica*, 1587, and *Theatrum genealogicum ostentans omnes omnium aetatum familias Monarchiarum, Regum, Ducum, Marchionum, Principum, Comitum, atque illustrium Heroum et Heroinarum; item Philosophorum, Oratorum, Historicorum quotquot a condito mundo usque ad haec nostra tempora vixerunt*, 1598), Reusner (*Opus genealogicum catholicum de praecipuis familiis Imperatorum, Regum, Principum, Comitum, &c.*, 1589–92, and *Stemma Wittichindeum*, 1592), Eytzing or Aitsingerus (*Paralipomena quibus Bavaria, Turcia, Anglica, Belgica, et Bohemica imperatorum, regum, ducum, marchionum, comitum, atque omniumque Europae procerum atque heroum stemmata continentur*, 1592), and others. In 1580 François de Rosières published at Paris the *Stemmata Lotharingiae ac Barri ducum*, in which he professed to have proved the direct descent of the princes of Lorraine from Charlemagne; for having in this instance indulged in convenient as well as unscrupulous falsehood, he was arrested by the parliament of Paris, and thrown into the Bastille, from which he was not released till 1583, the book meanwhile having been suppressed. The 17th century was extraordinarily prolific in genealogical literature; in England it produced, amongst many similar works, Milles's *Catalogue of Honor* (1610) and Dugdale's *Baronage* (1675–76); of Continental writers the following are probably the most worthy of notice:—Emmius (*Genealogia Universalis*, 1620), André Duchesne (whose writings include an *Histoire Généalogique de la Maison de Montmorency et de Laval*, 1624, and an *Histoire Généalogique de la Maison de Verri*, 1625), Pierre d'Hoziér (*Généalogie de la Maison de la Rochefoucauld*, 1654), Rittershusius (*Genealogia Imperatorum, Regum, Ducum, Comitum, atque omniumque Procerum ab anno MCCCC*, 1658, and *Brevis Ezegetis Historica genealogiarum praecipuorum orbis Christiani procerum*, 1674, continued by Imhoff in the *Spicilegium Rittershusianum*, 1683), Spener (*Theatrum nobilitatis Europaeae*, 1668, and *Insignium Theoria*, 1690), Lohmeier (*Historische Stammtafeln der kaiserlichen, königlichen, und fürstlichen Geschlechter*, 1690), Anselme de Sainte Marie (*Histoire Généalogique de la Maison de France*, 1694); but these, along with those of Bucelin, Dangeau, François Duchesne, Le Laboureur, Menestrier, Morgan, are only a few of the names which during the 17th century became associated more or less worthily with this branch of research. The pedigree of the Urquharts of Cromartie given by Sir T. Urquhart in his *Promptuary of Time* (1652) may perhaps be called an extreme specimen of the uncritical methods that characterized too much of the work of the genealogists of the period. Full bibliographies down to this date are given by J. F. Reimann, *Historia litteraria de fatis studii genealogici apud Hebraeos, Graecos, Romanos, et Germanos, in qua scriptores harum gentium potissimi enumerantur et totus Genealogia cursus ab orbe condito ad nostra usque tempora deducitur* (1702), and *Historia litterariae exoticae et acroamaticae particula, s. de libris genealogicis vulgariis et rariis commentatio; accedit disquisitio historica de necessitate Scepticismi in studio genealogico* (1710); also by Joh. Hübnér, *Bibliotheca genealogica; ein Verzeichniss aller alten u. neuen genealogischen Bücher von allen Nationen in der Welt* (1729). To the 18th century belong the *Peagee* (1709) and *Baronage* (1720) of Collins, the *Genealogische Tabellen* (1725–1733) of Hübnér, which in part were further elucidated by Lenzen (*Historisch-genealogische Untersuchungen und Erläuterungen der ersten 34 Hübnerischen Tabellen*, 1756), the works of J. L. L. Gebhard, especially his continuation of Lohmeier and *Der Mohammedanischen und Heidenischen hohen Häuser historische und genealogische Erläuterung* (1731), and those of Gatterer (*Handbuch der Genealogie und Heraldik*, 1761, and *Abriss der Genealogie*, 1788), the latter being the first and still a useful manual upon the theory of genealogy. Of works belonging to the present century, one of the earliest was the *Atlas historique, généalogique, chronologique, et géographique* (1803–4) of Le Sage; and one of the greatest, bearing upon the general subject, was the famous Benedictine *L'Art de vérifier les dates* (1820–38). During recent years the stricter principles of criticism which have become characteristics of all modern historical investigation have made themselves felt in a very marked manner in the field of genealogical research. A wise scepticism has been increasingly shown with regard to all assertions which had not the support of adequate "diplomatic" evidence; and with the increased desire have come enlarged facilities for con-

sulting ancient documents, either directly or by means of authentic reprints. So far as England is concerned, the improved arrangements with regard to the public records, and the various publications of the record commissioners, have brought the materials for a successful prosecution of this and cognate branches of antiquarian science within the reach of every zealous student; and although, in current *Peagees*, assertions which probably had no origin but in vanity, and certainly have no evidence except that of long unquestioned tradition, are still perpetuated, such statements can mislead none except the very unsophisticated. The principal and almost the only sources from which authentic family history can be drawn are such documents as the Domesday books; the chartularies, leiger books, registers, necrologies, calendars, and chronicles of the various monasteries, records which convey both directly and indirectly a vast amount of information as to the pedigrees of founders and patrons; also the tournament and crusade rolls sometimes found in these establishments; the various sorts of Charters Antiquae, such as title deeds and enrolments in Chancery and other courts of justice; the books and rolls which record the returns to the successive inquisitions made into the state of the "Knights' Fees" which were granted at the time of the Norman Conquest; the *Placita*, in which are recorded decisions of parliament and other courts; the *Rotuli*, including charter rolls, patent rolls, pipe rolls, and many others; the *Inquisitiones post mortem*, sometimes inaccurately termed *escheats*; the records of heralds' visitations; monumental inscriptions, coats of arms, seals, &c. These sources are indicated with considerable fulness and discrimination in Grimaldi's *Origines Genealogicae, or the Sources where English Genealogies may be traced from the Conquest to the Present Time* (1828), and, after him, by Sims in the *Manual for the Genealogist, Topographer, Antiquary, and Legal Professor*, 1856.¹

The earliest printed "British Peerage" was that of Milles, entitled *Catalogue of Honor*, published in folio in 1610; but Camden's *Britannia* (1586) also contained many genealogies. Among recent works the best known are those of J. and J. B. Burke (*A Genealogical and Heraldic Dictionary of the Peerage and Baronage of the United Kingdom*, 1822; 40th ed., 1877), of Lodge (*The Genealogy of the Existing British Peerage*, 1832–33; 48th ed., 1879), of Dod, and of Debreit; but the number of publications (inclusive of those of the London Genealogical and Historical Society) which have been, and continue to be, issued on this attractive subject is very great. For a bibliography approaching to completeness reference may be made to the privately printed *Catalogue of Works on the Peerage and Baronage of England, Scotland, and Ireland*, prepared by Sir C. G. Young (1827), to Moule's *Bibliotheca Heraldica* (1822), or to Sims's *Manual for Genealogists*. In any list, however brief, the names of Dugdale (*The Baronage of England*, 1675–76) and of Collins (*A Peerage of England*, 1709; *The English Baronage*, of which only the first volume was ever completed, 1727) deserve a special place. The works of Sir R. Douglas on *The Peerage of Scotland* and *The Baronage of Scotland* appeared respectively in 1764 and 1796; that of John Lodge, on *The Peerage of Ireland*, in 1754. On the knighthood of Great Britain and Ireland the most accessible writers are again Burke and Dod; but the work of Sir N. H. Nicolas (*A History of the Orders of Knighthood of the British Empire*, 4 vols. fol., 1842) is of more importance. As being somewhat of an innovation in genealogical literature, Burke's work on the commoners of Great Britain and Ireland may be mentioned here (*A Genealogical and Heraldic History of the Commoners of Great Britain and Ireland enjoying territorial possessions or high special rank but uninvested with heritable honours*, 1833–38).

For the purposes of genealogical research in the United States of America one society at least has been formed, "The New England Historical and Genealogical Society," under the auspices of which an annual *Register* is published. Among numerous other publications bearing upon this subject may be mentioned J. F. Holgate's *American Genealogy* (1851), Whitmore's *American Genealogy* (1868), Webster's *Genealogy* (1877), and Thomas's *Genealogical Notes* (1878). (J. S. BL.)

GENELLI, GIOVANNI BUONAVENTURA (1798–1868), was born at Berlin, September 28, 1798, and died at Weimar, November 13, 1868. He was the son of Janus Genelli, a painter whose landscapes are still preserved in

¹ According to Grimaldi, in 1828 there were 294 peers, exclusive of the royal family. Of these thirty-five claimed to have traced their descent to beyond the Conquest, forty-nine to a date prior to the year 1100, twenty-nine to the 12th century, thirty-two to the 13th, twenty-six to the 14th, seventeen to the 15th, twenty-six to the 16th, and thirty to the 17th. In the case of forty-five noblemen no satisfactory conclusion could be drawn as to the commencement of their pedigree. The pedigree of the Percys is one of the most full and complete genealogies of the kingdom. In Scotland the house of Mar is probably that which can at once carry its nobility to the remotest period (1093), and authenticate it by the best evidence.

the Schloss at Berlin, and grandson to Joseph Genelli, a Roman embroiderer employed to found a school of gobelins by Frederick the Great. Buonaventura Genelli first took lessons from his father and then became a student of the Berlin Academy. After serving his time in the guards he went with a stipend to Rome, where he lived ten years a friend and assistant to Koch the landscape painter, a colleague of Hähnel, Reinhard, Overbeck, and Führich, all of whom made a name in art. In 1830 he was commissioned by Dr Härtel to adorn a villa at Leipzig with frescos, but quarrelling with this patron he withdrew to Munich, where he earned a scanty livelihood at first, though he succeeded at last in acquiring repute as an illustrative and figure draughtsman. In 1859 he was appointed a professor at Weimar, where he ended his days. Genelli painted few pictures, and it is very rare to find his canvasses in public galleries, but there are six of his compositions in oil in the Schack collection at Munich. These and numerous water-colours, as well as designs for engravings and lithographs, reveal an artist of considerable power whose ideal was the antique, but who was also fascinated by the works of Michelangelo. Though a German by birth, his spirit was unlike that of Overbeck or Führich, whose art was reminiscent of the old masters of their own country. He seemed to hark back to the land of his fathers and endeavour to revive the traditions of the Italian Renaissance. Subtle in thought and powerfully conceived, his compositions are usually mythological, but full of matter, energetic and fiery in execution, and marked almost invariably by daring effects of foreshortening. Impeded by straitened means, the artist seems frequently to have drawn from imagination rather than from life, and much of his anatomy of muscle is in consequence conventional and false. But none the less Genelli merits his reputation as a bold and imaginative artist, and his name deserves to be remembered beyond the narrow limits of the early schools of Munich and Weimar.

GENERATION, a term in general biology or physiology synonymous with the Greek *βιογένεσις* and the German *Zeugung*, may comprehend the whole history of the first origin and continued reproduction of living bodies, whether plants or animals; but it is frequently restricted to the sexual reproduction of animals. The subject, in its most comprehensive aspect, would naturally be divided into the following branches, viz. :—(1) the first origin of life and living beings, (2) non-sexual or agamic reproduction, and (3) gamic or sexual reproduction. The first two of these topics have already been shortly treated of in the articles ABOGENESIS and BIOLOGY; the third and more extensive division, including (1) the formation and fecundation of the ovum, and (2) the development of the embryo in different animals, it has been deemed expedient to refer to the heading REPRODUCTION.

GENESIS. See PENTATEUCH.

GENET (*Genetta*), a genus of carnivorous mammals belonging to the *Viverridae* or family of civets. It contains six species, all of which are found exclusively in Africa, with the exception of the common genet (*Genetta vulgaris*), which occurs also throughout the south of Europe and in Palestine, where Tristram notes it as occurring on Mount Carmel. The fur of this species is of a dark grey colour, thickly spotted with black, and having a dark streak along the back, while the tail, which is nearly as long as the body, is prettily ringed with black and white. The genet is abundant in the south of France and in Spain, where it frequents the banks of streams, and feeds on the smaller mammals and on birds. In the vertically slit pupil of its eyes, and in the complete retractility of its claws, it approximates, along with the other species, to the cats, and correspondingly differs from the true civets, while the anal pouch which is so fully developed in the civet exists as a mere depression

in the present genus, and contains only a faint trace of the highly characteristic odour of the former. In south-western Europe and in Africa it is sought after for its soft and



Genet.

beautifully spotted fur, while in Constantinople it has been tamed and kept like a cat for destroying mice and other vermin.

GENEVA (in French *Genève*, in German *Genf*, in classical Latin *Geneva*, and in Low Latin, by metathesis, *Gebenna* or *Gevenna*), a city and canton of Switzerland,—the canton being, with one exception, the smallest, and the city, without exception, the largest within the limits of the confederation.

The canton of Geneva has an area of 279·4 square kilometres, or 107·8 square miles, considerably less than that of Rutland, the smallest of the English counties, and this includes 11½ square miles of water-surface belonging to the lake. The greater part of its frontier is coterminous with France, the department of Haute-Savoie lying to the south, and that of Ain to the west and north; while it is connected with the Swiss canton of Vaud (Waadt) along a line of not more than 3½ miles. The area belongs to the basin of the Rhone, which flows for about 4 miles through the canton, and then for nearly 2 miles forms the boundary towards France. With the exception of the Arve, the Rhone tributaries are mere mountain streams, of which the largest is the London in the extreme west. Market gardens, orchards, and vineyards occupy a large proportion of the soil, whose apparent fertility, however, is due not so much to its natural qualities as to the noble industry of the cultivators. Besides building materials such as sandstone, slate, &c., the only mineral to be found within the canton is bituminous shale, the products of which can be used for petroleum and asphalt (see *Les Gisements bitumineux du canton de Genève*, Paris, 1877). While Geneva is, as has been stated, almost the smallest of the Swiss cantons, the size of the city makes the density of its population far greater than that of any other. In 1870 it had, inclusive of strangers, 93,239 inhabitants, or 871 to the square mile; and this had increased by 1876 to 99,352 inhabitants, or 921 to the square mile. At the earlier date, 43,639 were Protestants and 47,868 Roman Catholics,—the remaining fraction comprising 961 Jews, and 771 of various Christian sects. The prevailing language is French; but

the German element, represented in 1870 by 978 households, is on the increase.

The city of Geneva is situated at the south-western extremity of the beautiful lake of the same name, whence the noble current of the Rhone flows westward under the five bridges by which the two halves of the town communicate with each other. To the south lies the valley of the Arve, which unites with that of the Rhone a little distance further down; and behind the Arve the grey and barren rocks of the Lesser Salève rise like a wall, which in turn is overtopped by the distant and ethereal snows of Mont Blanc. To the north-west the eye takes in the long line of the Jura, with a pleasant stretch of country between it and the lake. The actual site of the town, apart from

the river and the lake, is not so picturesque as that of many other places in Switzerland. Though the central plateau, crowned as it is by the cathedral, gives a certain relief to the general view from the water, a large proportion of the town is built on the alluvial flats along the river. But what Geneva lacks in picturesqueness it now makes up in an appearance of prosperity and comfort,—presenting fine quays, well-ordered pleasure grounds, good streets, and substantial houses, and, in the number and extent of its modern suburbs, giving evidence that its prosperity is not a thing of the past. Since the demolition of the fortifications in 1848, it has pushed eastward to Eaux Vives, and westward into Plainpalais, and an almost continuous succession of houses links it on the south with the village of Carouge beyond the Arve



Plan of Geneva.

In the strict sense of the words, Geneva is not a city of great buildings. It possesses, indeed, a great many edifices, both public and private, which may fittingly be described as handsome, elegant, or even beautiful, but it has almost nothing to which the memory reverts as to a masterpiece of architectural art. Being a favourite resort for wealthy foreigners from many lands, it has been enriched with a countless variety of hotels and villas, many of which are palatial in their dimensions, their construction, and their environment, and its principal institutions have been installed in buildings not unworthy of a modern capital; but none of these things compensate for the absence of the grander and more characteristic legacies of the Middle Ages and the Renaissance. The artistic blight of that Calvinism which was too sternly enamoured with the beauty of holi-

ness to be mindful of any other beauty has left indelible effects on the central city of the creed; though it is probable that all the blame does not lie at the door of Calvinism, which certainly did not find in the Genevese a people whose aesthetic faculties had been too strongly developed in the previous periods of their history. The cathedral itself is a second-rate building; and though, as Mr Freeman remarks, "it is an excellent specimen of a small cathedral whose style and plan are peculiarly its own, and which has undergone only very few alterations," its main interest is moral and historical. According to a tradition, at least as likely to be true as false, it occupies the site of a temple of Apollo; and the present building is the third church of St Peter which has been erected on the spot. As a foundation the cathedral is said to date from the middle of