

# Encyclopædia Britannica.

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# ENCYCLOPÆDIA BRITANNICA.

## G

**G** represents the sound of Gamma, the third letter of the Greek alphabet; but in the Latin alphabet, and in the alphabets derived from the Latin (including our own), it holds the place which Z held in the different Greek alphabets. The history of this remarkable change is well known. It has been already stated (see letter C) that in the 5th century before our era, the distinction between the *k*-sound and the *g*-sound became lost at Rome: apparently the surviving sound was *g*; but, at all events, the symbol K went out of use, being retained only in a few familiar abbreviations, and C (which was the Latinized form of the Greek Γ) remained. Thus in the column of Duillius we find C representing the original surd in *castreis, cepet, &c.*, but the sonant in *macistratos, leciones, ceset (i.e., gessit), &c.* When, in the 3d century, the two sounds were again distinguished, two symbols were again required; but the K was not taken again to represent the surd; C, the old symbol for the sonant, was put to that use. A new symbol was therefore necessary for the sonant *g*-sound, and it was found by modifying C into G. This G should then have replaced C as the third letter of the alphabet, where it would have stood, as before, between B and D, the sonants of the labial and dental classes respectively. But this was not done. The symbol C was left in its old place with its new value of *k*. The new symbol G was set in the seventh place of the alphabet, which had been vacated by Z, the representative of a sound not used by the Romans of that day. G is found for the first time in the inscription on the tomb of Scipio Barbatus. Its invention is attributed to Spurius Carvilius.

There can be no doubt that the sound of G in Latin, as of Γ in Greek, was always the sonant guttural—which we hear in *gate, &c.* It was not the sonant palatal, which it represents in *gem* or *gin*. This sound began to supplant it about the 6th century of our era, but only when it preceded *e* or *i*—the two vowels which require a position of the tongue nearer to the palatal than to the guttural consonants. We find this change of sound in French and in Italian. In the Latin part of our vocabulary there is naturally the same weakening; whereas, in words of English origin, the original guttural is generally preserved, even before *e* or *i*, as in *get* and *give*. Sometimes it has been weakened at the end of a word, as in *bridge* and *ridge*, which were

originally *brigg* and *rigg*, and are still so in the north of England.

It is noteworthy how a *g*-sound made its appearance in French at the beginning of words which originally began with the *w*-sound. An example is *guerre*, a borrowed word from the Teutonic; we see it in Old High German as *werra*, a quarrel. The Gauls apparently found a difficulty in producing the initial German sound, and (there being no difference in the position of the back of the mouth for *g* and *w*, except that the passage between the back-palate and the tongue is entirely closed for *g*, but left slightly open for *w*) they did not keep the *w* pure, but sounded a *g* before it by unintentionally closing the oral passage for a moment. The same thing is seen in *guérir*, which corresponds to Gothic *varjan*; in *garant*, which we have in English *warrant*; *garnir* corresponds to Anglo-Saxon *warnian*. In a few instances the word so modified seems to have been originally Latin, as *gaine*, a sheath, the Latin *vagina*.

This French change has led to a curious result in England. Many words were introduced by the Normans into England in their French form, which were already existent there in their Teutonic form. Thus we have such pairs as *wile* and *guile*, *wise* and *guise*, *warranty* and *guarantee*, *wager* and *gage*, and many others. It is strange that in so many cases each of the pair of words should have remained in use, and with so little change of meaning.

GABELENTZ, HANS CONON VON DER (1807-1874), a distinguished linguist and ethnologist, born at Altenburg, October 13, 1807, was the only son of Hans Karl Leopold von der Gabelentz, chancellor and privy-councillor of the duchy of Altenburg. From 1821 to 1825 he attended the gymnasium of his native town, where he had Matthiæ (the eminent Grecist) for teacher, and Hermann Brockhaus and Julius Löbe for schoolfellows. Here, in addition to ordinary school-work, he carried on the private study of Arabic and Chinese; and the latter language continued especially to engage his attention during his undergraduate course, from 1825 to 1828, at the universities of Leipzig and Göttingen. In 1830 he entered the public service of the duchy of Altenburg, where he attained to the rank of privy-councillor in 1843. Four years later he was chosen to fill the post of "landmarschall" in the grand-duchy of Weimar, and in 1848 he attended the Frankfort parliament, and represented

the Saxon duchies on the commission for drafting an imperial constitution for Germany. In November of the same year he became president of the Altenburg ministry, but he resigned office in the following August. From 1851 to 1868 he was president of the second chamber of the duchy of Altenburg; but in the latter year he withdrew entirely from public life, that he might give undivided attention to his learned researches. He died on his estate of Lemnitz, in Saxe-Weimar, on the 3d of September 1874. In the course of his life he is said to have learned no fewer than eighty languages, thirty of which he spoke with fluency and elegance. But he was less remarkable for his power of acquisition than for the higher talent which enabled him to turn his knowledge to the genuine advancement of linguistic science. Immediately after quitting the university, he followed up his Chinese researches by a study of the Finno-Tataric languages, which resulted in the publication of his *Elémens de la Grammaire Mandchoue* in 1832. In 1837 he became one of the promoters, and a joint-editor, of the *Zeitschrift für die Kunde des Morgenlandes*, and through this medium he gave to the world his *Versuch einer nordwinischen Grammatik* and other valuable contributions. His *Grundzüge der syrjänischen Grammatik* appeared in 1841. In conjunction with his old school friend, Julius Löbe, the Germanist, he brought out a complete edition, with translation, glossary, and grammar, of Ulfilas's Gothic version of the Bible (Leipsic, 1843-46); and from 1847 he began to contribute to the *Zeitschrift der deutschen morgenländischen Gesellschaft* the fruits of his researches into the languages of the Suahilis, the Samoyeds, the Hazaras, the Aimaks, the Formosans, and other widely-separated tribes. The *Beiträge zur Sprachenkunde* (Leipsic, 1852) contain Dyak, Dakota, and Kiriri grammars; to these were added in 1857 a *Grammatik u. Wörterbuch der Kassiasprache*, and in 1860 a treatise in universal grammar (*Ueber das Passivum*). In 1864 he edited the Manchou translations of the Chinese Sse-shu, Shu-king, and Shi-king, along with a dictionary; and in 1873 he completed the work which constitutes his most important contribution to philology, *Die melanesischen Sprachen nach ihrem grammatischen Bau und ihrer Verwandtschaft untersucht und mit den malaisch-polynesischen Sprachen untersucht* (Leipsic, 1860-73). It treats of the language of the Fiji Islands, New Hebrides, Loyalty Islands, New Caledonia, &c., and shows their radical affinity with the Polynesian class. He also contributed most of the linguistic articles in Pierer's *Conversations-Lexicon*.

**GABII**, an old, and at one time important, city of Latium, on the Via Prænestina, or road to Præneste, between 12 and 13 miles E. of Rome. Long before the foundation of Rome, Gabii appears to have been one of the largest of the Latin cities; and, according to an old tradition noticed by Dionysius and Plutarch, Romulus and Remus were educated there. During the greater part of the regal period of Rome Gabii maintained its ground, and it only fell into the hands of Tarquin the Proud through a stratagem contrived by his son Sextus, who was afterwards slain by the inhabitants, when, on the expulsion of his family from Rome, he sought refuge in the town. After this period Gabii always appears in history as the ally or dependent of its more powerful neighbour, and it gradually fell into such a state of decay as to become a proverb of desolation—*Gabiis desertior*. The fame of its cold sulphurous waters gave new life to the place in the reign of Tiberius; and the emperor Hadrian, one of whose favourite residences was not far distant, at Tivoli, appears to have been a very liberal patron, building a town-house (*Curia Elia Augusta*) and an aqueduct. After the 3d century Gabii practically disappears from history, though its "bishops" continue to be mentioned in ecclesiastical documents till the close of the 9th. The

principal relic of the ancient city is a ruined temple (probably of Juno) on a hill now crowned by the ruins of the mediæval fortress of Castiglione. It is a hexastyle structure of uncertain date, uniting the characteristics of Greek and Italian architecture; but the fragments of the pillars are not sufficient to show whether it belonged to the Ionic or the Corinthian order. Its length is about 48 English feet. Since 1792, when explorations were commenced by the Prince Borghese, a large number of minor antiquities have been discovered at Gabii, and the sites of the forum and a theatre have been ascertained. The statues and busts are especially numerous and interesting; besides the deities Venus, Diana, Nemesis, &c., they comprise Marcus Agrippa, Tiberius, Germanicus, Caligula, Claudius, Nero, Trajan and Plotina, Hadrian and Sabina, Aurelius Antoninus, L. Septimius Severus, Septimius Geta, Gordianus Pius, &c. The inscriptions relate mainly to local and municipal matters. In the neighbourhood of Gabii were valuable and extensive quarries of an excellent building stone, known as the *lapis Gabinus*, which was largely used by the Romans. It was a hard and compact variety of volcanic tufa, and closely resembled the *lapis Albanus*, to which, however, it was superior. The name of *cinctus Gabinus* was given by the Romans to a peculiar method of girding the toga, with one end thrown over the head and the other fastened round the waist, which was employed by the founder of a new town, or by the consul when he "declared war in the name of the Roman people, or devoted himself to death for his country."

See Ciampini, *Monumenta Vetera* (which contains a plan and elevation of the temple); Gallati, *Gabii antica città di Sabina scoperta*, 1757; Fea, *Lettere sopra la scoperta delle rovine della città di Gabio*, 1792; Visconti, *Monumenti Gabini della villa Pinciana*, Rome, 1797, new edition, Milan, 1835; Gell, *Rome and its vicinity*; Nibby, *Contorni di Roma*; and Canina, *Storia e topografia di Roma antica*. An interesting comparison of the temple of Juno with the similar building at Aricia was contributed by Abeken to the *Annali dell. instit. di corr. arch.*, Rome, 1841.

**GABLER**, GEORG ANDREAS (1786-1853), a German philosophical writer of the school of Hegel, was born at Altdorf, in Bavaria, where his father was professor, on the 30th of July 1786. In 1804, when his father was translated to Jena, he accompanied him to that university, where he completed his studies in philosophy and law, and became one of the most enthusiastic of the hearers and disciples of Hegel. After holding successive educational appointments at Weimar, Nuremberg, and Ansbach, he, in 1817, became one of the masters in the gymnasium at Baireuth. In 1821 he was appointed rector, and in 1830 general superintendent of schools. In 1827 he brought out the first volume of a *Lehrbuch der philosophischen Propädeutik als Einleitung zur Wissenschaft*, in which his design was to give a popular exposition of the Hegelian philosophy, which he himself regarded as fitted to give "absolute satisfaction to the faculties of thinking and knowing." In 1835 he succeeded Hegel in the Berlin chair. His other works were a treatise *De veris philosophicæ erga religionem Christianam pietatis* (1836), and *Die Hegel'sche Philosophie*, a defence of the Hegelian philosophy against Trendelenburg, which was published in 1843. He died at Teplitz, September 13, 1853.

**GABLER**, JOHANN PHILIPP (1753-1826), a learned Protestant theologian of the school of Griesbach and Eichhorn, was born at Frankfort-on-the-Main, June 4, 1753. He had already acquired an extensive acquaintance with the ancient languages and their literatures, as well as with the philosophy of Wolf and the theology of Baumgarten, when, in his nineteenth year, he entered the university of Jena as a divinity student. In 1776 he was on the point of abandoning theological pursuits, when the arrival of Griesbach inspired him with new ardour. After having

been successively repetent in Göttingen and teacher in the public schools of Dortmund (Westphalia) and Altdorf (Bavaria), he was, in 1793, appointed second professor of theology in the university of the last-named city, whence he was translated to a chair in Jena in 1804. At Altdorf he published (1791-93) a new edition, with introduction and notes, of Eichhorn's *Urgeschichte*; this was followed, two years afterwards, by a supplement entitled *Neuer Versuch über die mosaische Schöpfungsgeschichte*. He was also the author of several original works which were characterized by much critical acumen, and which had considerable influence on the course of German thought on theological and biblical questions. From 1798 to 1811 he was editor of the *Theologisches Journal*, first conjointly with Hänlein, Ammon, and Paulus, and afterwards unassisted. He died at Jena, February 17, 1826.

**GABLONZ**, the chief town of a circle in Bohemia, is situated in a hilly country on the river Neisse, about 6½ miles S.E. of Reichenberg. It possesses a Catholic and a Protestant church, a city school, a hospital, and a fine new town-house. Its principal industry is the manufacture of glass, the export of which reaches an annual value of over 6 million guilders. It has also net and cloth factories. The population in 1869 was 6752.

**GABOON RIVER**, or **RIO DE GABÃO**, called Olo' Mpongwe by the Mpongwe natives, and Aboka by the Fan, is, in reality, not a river but an estuary on the west coast of Africa. It lies immediately north of the equator, disem-boguing in 0° 21' 25" N. lat. and 9° 21' 23" W. long. At the entrance, between Cape Joinville, or Santa Clara, on the N., and Cape Pangara, or Sandy Point, on the S., it has a width of about 18 English miles. It maintains a breadth of about 7 miles for a distance of 40 miles inland, when it contracts into what is known more correctly as the Rio Olambo, which is not more than 2 or 3 miles from bank to bank. Two rivers, the Nkomo or Como and the Mbokwa or Bokoe, discharge into the upper portion of the Rio Olambo, both taking their rise in the country of the Sierra dal Crystal. The former, which far exceeds the other in the length of its course, has its head waters, according to M. Genoyer (1862), in that part of the range which is known to the natives as Anenguenpala, or the "Water-jug." Mr Winwood Reade reached the rapids in 1862, and Mr R. B. N. Walker, one of the traders in the Gaboon, has ascended for about 30 miles up the river, which had still 2 fathoms of water. Captain Burton, who in 1870 sailed up the Mbokwa as far as Tippet Town or Mayyan, a little way beyond the confluence of the Londo, found it there "some 50 feet broad," with a tidal rise of nearly 7 feet. There are a great number of other streams that fall into the Gaboon, but only two are worthy of special mention,—the Remboa, which, rising like the Nkomo and Mbokwa in the Sierra dal Crystal, enters the estuary at its south-east corner, and the Eko or Cohit, which is the largest of the right hand affluents. Though the whole estuary is studded with islands, reefs, and shoals, none of the islands are of great extent except Coniquet, or King's Isle, at the mouth of the Cohit, and Embeneh, or Parrot Island, in the middle of the channel.

The four principal tribes in the country of the Gaboon are the Mpongwa, the Fan, the Bakalai, and the Boulous. The first of these tribes, usually called *Gabons* or *Gabonese* by French writers, is distributed along both banks of the "river," occupying the villages of Kringér, Quaben, Louis, Libreville, and Glass on the right side, and those of George Town and Denis on the left. According to Captain Burton, they are now one of the most civilized of African tribes, displaying a keen interest in trade, and great ease and urbanity of manner. There are three grades or quasi-castes among them—1st, those of pure blood, who rejoice in the title of Ongwá Ntye or "sons of the soil"; 2d, the children of freemen by slaves; and, 3d, the slaves themselves. Marriage is by purchase, and polygamy is the rule, but the women

hold a position of considerable social influence, and maintain a secret society of their own. The men are excellent makers of canoes, and, within the present generation, they have learned to build boats of considerable size after the European model. From childhood both sexes are habitual smokers of tobacco or hemp—the tobacco being imported from America, although it might be readily cultivated in the country. A baptismal rite, almost identical with the Christian ceremony, is administered to the new-born child. The language of the Mpongwa has been reduced to writing by the American missionaries. As early as 1847 they published a grammar and vocabulary at New York; and in 1859 the American Bible Society brought out a Mpongwa translation of the books of Proverbs, Genesis, part of Exodus, and the Acts. The language belongs to the same family as the Sechwana, the Zulu, &c., and is characterized, says Captain Burton, by inflexion, by systematic prefixes, a complex alliteration, and the almost unparalleled flexibility of the verb, which can be modified in several hundred different ways. M. Catteloup describes it as "riche, criard, imagé, et compliqué." It has been adopted by the Pahouins, the Bakalai, and the Boulous as a kind of commercial *lingua franca*, and bids fair to become the dominant language of the coast, if it does not give way before English or French, which have both become familiar in a corrupted form to a large number of the maritime population.

The Fan, whose name appears under the various forms of Fanwe, Panwe, Phaouin, and Paouen, are new comers to the Gaboon district, having, it is said, appeared there for the first time in 1842. They are described as of mean height, chocolate complexion, and remarkably regular features. Their reputation as cannibals is evidently well founded; but they seem to partake of human flesh rather as a ceremonial observance than as an ordinary means of nourishment, and both Winwood Reade and Captain Burton speak in favourable terms of their general characteristics. They are skilful workers in iron, and manufacture cross-bows which discharge poisoned darts 40 or 50 yards. Tattooing is practised by both sexes, and the women often stain the whole body red or yellow. The tribe has come very little into contact with Europeans, but it is moving towards the coast, and will probably before long be the dominant race in the Gaboon.

The Gaboon was early visited by the Portuguese explorers, and it became one of the chief seats of the slave trade. It was not, however, till well on in the present century that Europeans made any more permanent settlement than was absolutely necessary for the maintenance of their commerce. In 1839 Captain Bouet of the "Malouine" obtained for France the right of residence on the left bank, and in 1842 he secured better positions at Louis and Quaben on the right bank. The chief establishment, called Le Plateau, at Libreville, was founded in 1845, and gradually acquired considerable importance. In 1867 the troops numbered about 1000, and the civil population about 5000, while the official reports about the same date claimed for the whole colony an area of 8000 square miles, and a population of 186,000. A large building with arcades at Libreville served as Government house, and there were pretty extensive warehouses, a hospital, and a small dockyard, as well as gardens, and a nursery for coffee plants and fruit trees. At some little distance off a convent was founded in 1844 by Mgr. Bessieux. In consequence of the war with Germany the colony was practically abandoned in 1871, and the establishment at Libreville is now maintained only as a coaling depôt. There are numerous English trading ports along the shores of the estuary, as at Glass Town and Olemi; and even when the French influence was at its greatest almost the whole commerce of the Gaboon was in English hands. The chief articles of export are ivory and beeswax; to which may be added caoutchouc, ebony, and camwood. Mission stations are maintained by French, English, American, German, and Portuguese societies.

See Bowditch, *Mission from Cape Coast Castle to Ashantee*, &c., 1819; E. Bouet-Willamez, *Descr. nautiques des côtes de l'Afrique Occidentale*, 1846; Pigard "Rapport adressé à M. Montagnies de la Roque," in *Annales maritimes*, 1847; J. L. Wilson, *Western Africa*, 1856; Winwood Reade, *Savage Africa*, 1863; *Annales des Voyages*, 1866; Du Challu, *Journey to Ashangoand*, 1867; "Notice d'une Carte," in *Bull. de la soc. géogr.* 1869; Catteloup, in *Revue maritime et coloniale*, 1874; Burton, *The Trips to Gorilla Land*, 1876; Coelho's map in *Boletim de la soc. geogr. de Madrid*, 1878.

**GABRIEL** (**אֱלִיָּא** i.e., man of God, **Γαβριήλ**) is the name of the heavenly messenger (see ANGEL) who was sent to Daniel to explain the vision of the ram and the he-goat, and to communicate the prediction of the Seventy Weeks (Dan. viii. 16; ix. 21). He was also employed to announce the birth of John the Baptist to Zechariah, and that of the Messiah to the Virgin Mary (Luke i. 19, 26). Both Jewish and Christian writers generally speak of him as an archangel—a habit which is readily accounted for when Luke i. 19 is compared with Rev. viii. 2, and also with Tobit xii. 15. In the apocryphal *Book of Enoch* (c. ix.) he is spoken of as one of "the four great archangels," Michael,

Uriel, and Suriel or Raphael being the other three. His name frequently occurs in the Jewish literature of the later post-Biblical period. Thus, according to the Chaldee paraphrase of Pseudo-Jonathan, the man who showed the way to Joseph (Gen. xxxvii. 15) was no other than Gabriel in human form; and in Deut. xxxiv. 6 it is affirmed that he, along with Michael, Uriel, Jophiel, Jephthiah, and the Metatron, buried the body of Moses. In the Targum on 2 Chr. xxxii. 21 he is named as the angel who destroyed the host of Sennacherib; and in similar writings of a still later period he is spoken of as the spirit who presides over fire, thunder, the ripening of the fruits of the earth, and similar processes. In the Koran great prominence is given to his function as the medium of divine revelation, and, according to the Mahometan interpreters, he it is who is referred to by the appellations "Holy Spirit" and "Spirit of Truth." He is specially commemorated in the calendars of the Greek, Coptic, and Armenian churches.

GAD (גַּד) in Hebrew and Chaldee means "luck"; hence, in the Phœnician and Babylonian cultus, the god of luck, who is mentioned in Isa. lxxv. 11 (where for "that troop" should be read "Gad"), and whose name appears in several names of places, such as Baal-Gad (Josh. xi. 17, xii. 7); possibly also in Dibon-Gad, Migdol-Gad, and Nahal-Gad. Gad was the name given by Leah, the wife of Jacob, to the patriarch's seventh son, the first-born of Zilpah, her maid; see Gen. xxx. 11, where the Hebrew קַיִב is גַּד, and the K'ri גַּד נָשָׂא. The former is adopted by the LXX, and rightly rendered ἐν τῷ ἔργῳ (*Vulgate feliciter*); the latter reading is adopted in the Targums and Peshito, which translate "luck is come," and by the Samaritan and Ven., which interpret the expression as meaning "a troop (or army) is come." This last rendering has doubtless been influenced by Gen. xlix. 19, where the name is played on as if it were גַּדָּי, "a plundering troop"; "Gad, a plundering troop shall plunder him, but he shall plunder at their heels." Of the personal history of Gad nothing is related. According to Gen. xli. 16, he had seven sons when he went down to Egypt along with Jacob; and in Num. xxvi. 15 these appear as seven families, one of the names, however, being changed (Ozni for Ezbon). At the Exodus the tribe numbered 45,650 fighting men (Num. i. 25); but they declined to 40,500 during the forty years' wandering in the wilderness (Num. xxvi. 18). During the subsequent period the fortunes of this tribe were very closely connected with those of the tribe of Reuben. At the division of the country a portion in the trans-Jordanic territory was, at their special request, allotted to them by Moses (Num. xxxii. 33), and this arrangement was carried out by Joshua; but considerable difficulty arises when the attempt is made to define the precise limits of the district thus assigned. It is certain that Gad never extended further west than the Jordan; but in different passages we find its northern, eastern, and southern boundaries stretched as far as to the Sea of Galilee, Salkah in the desert, and the river Arnon respectively. In the book of Numbers (xxxii. 34) the cities of Gad appear to lie chiefly to the south of Heshbon; in Joshua xiii. 24-28 they lie almost wholly to the north; while other texts present discrepancies that are not easily reconciled with either passage. That Gad, at one time at least, held territory as far south as Pisgah and Nebo would follow from Deut. xxxiii. 21, if the rendering of the Targums, revived by Ewald and Diestel, were to be accepted—"and he looked out the first part for himself, because there was the portion of the buried law-giver;" it is certain, however, that, at a late period, this tribe was localized chiefly in Gilead, in the district which now goes by the name of Jebel Jilad. Possibly some cities were common to both Reuben and Gad, and perhaps others more than once changed hands. Both tribes were pastoral

and warlike; but the latter seems to have excelled in bravery and force of character, and indeed there are indications that the tribe of Reuben had been absorbed, or become extinct, at a somewhat early date. David's men of Gad (1 Chr. xii. 8) are famous, and Jephthah and Elijah seem to have belonged to that tribe. It followed Jeroboam in the great revolt against the house of David; and a genealogy, as at the time of Jeroboam II., is given in 1 Chr. v. 11-16, where the names are in every case different from those in Numbers. The tribe was "carried into captivity" by Tiglath Pileser in the 8th century B.C. (1 Chr. v. 26; comp. 2 Kings xv. 29), and at this point it wholly disappears from history.

GAD is also the name of a "prophet" or "seer," who was probably a pupil of Samuel at Naioth, and a companion of David, to whom he early attached himself. It is not known to which tribe he belonged. He is first mentioned in 1 Sam. xxii. 5 as having joined David while he was "in the hold;" and he afterwards became a member of his regal court, where he seems to have held an official position, being occasionally designated as "the king's seer." He assisted in organizing the musical service of the "house of God" (2 Chr. xxix. 25), and also wrote a "book of the acts of David," which is referred to in 1 Chr. xxix. 29.

GADĀMES, GHADĀMES, or RHADĀMES, the chief town of an oasis of the same name, in that part of the Sahara which belongs to the regency of Tripoli, not far from the frontier of Algeria. According to Dr Rohlfis, the last form of the word more correctly represents the Arabic pronunciation; but the other forms are more usual in European books. The whole oasis is surrounded by a dilapidated wall varying in height from 12 to 20 feet, and it requires about an hour and a half to make the circuit of the enclosure at an ordinary walking space. In the town proper the streets are narrow and tortuous, and they are usually covered in overhead to keep out the heat. Its public buildings comprise six mosques and seven schools; and it is worthy of note that all the inhabitants can read and write, and that those who cannot pay for their children are allowed to send them to school free of charge. The Gadamsi merchants have been known for centuries as keen and adventurous traders, and their commercial establishments are to be found in many of the more important cities of northern and central Africa, such as Kano, Katsema, Timbuctoo. Gadames itself is the centre of a large number of caravan routes, and it is calculated that, on an average, about 30,000 laden camels enter its markets every year. At the time of Richardson's visit in 1845 the total population was estimated at 3000, of whom about 500 were slaves and strangers, and upwards of 1200 children; but it now amounts in round numbers to 7000 or even 10,000. The natives are mainly of Berber descent, although their blood has from generation to generation been mingled with that of Negro slaves from various parts of Africa. It is evident, from the remains that are still extant, that the oasis of Gadames was formerly inhabited by people whose architecture was of Roman origin; and it is not unlikely that the Romans themselves may have been attracted to the spot by the presence of the warm springs which still rise in the heart of the town, and spread fertility in the surrounding gardens. An identification has been made with Cydamus, a town mentioned by Pliny. See Largeau in *Bull. de la soc. géogr. de Paris*, 1877.

GADARA, an ancient city of Syria, in the Decapolis, about 6 miles S.E. of the Sea of Galilee, on the banks of the Hieromax. The site, now called Um Keis, is marked by extensive ruins, which are quite in keeping with the statements of Josephus and Polybius that Gadara was the capital of Peræa, and one of the most strongly fortified places in the country. The walls can still be traced in a

circuit of about 2 miles; one of the principal streets—a *via recta*, or straight street—has evidently been bordered on both sides by colonnades; and two theatres are the most noticeable of the ruined edifices. The cliffs round the town are full of tombs excavated in the limestone rock, and by a curious irony of fate these chambers of the dead are the only places where a living inhabitant of Gadara is to be found. According to Josephus, Gadara was a Greek city, and it appears at least not improbable that it was a foreign settlement. The name does not occur in the Scriptures; but in the New Testament, the phrase "the country of the Gadarenes" is used more than once, and there is no reason to doubt that the vicinity of the town was the scene of the healing of the demoniacs by the Saviour, recorded in Matt. viii. Mark v., and Luke viii. Josephus informs us that Gadara was captured by Antiochus in 218 B.C., and about 20 years afterwards, stood a ten months' siege by Alexander Jannæus. It was twice taken by Vespasian, though, on the first occasion, the Jewish inhabitants offered a stout resistance. At a later period it recovered from the injuries he inflicted, and was one of the most beautiful and flourishing cities of Syria; and it was not till after the Mahometan conquest that it fell again into decay. Its archæon or prefecture is mentioned in the Midrash Rabba (*circa* 278) and other Jewish writings. According to Dr O. Blau the town was also known as the Arabian Antioch. To the literary student it is interesting as the birthplace of Meleager the anthologist.

See Porter in *Journ. of Sacred Literature*, vol. vi.; *Journ. Asiatique*, 1867, p. 191; *Zeitsch. d. D. Morg. Ges.*, 1869.

GADDI. Four painters of the early Florentine school—father, son, and two grandsons—bore this name.

1. GADDO GADDI (1239 to about 1312) was, according to Vasari, an intimate friend of Cimabue, and afterwards of Giotto. He was a painter and mosaicist, is said to have executed the great mosaic inside the portal of the cathedral of Florence, representing the coronation of the Virgin, and may with more certainty be credited with the mosaics inside the portico of the basilica of S. Maria Maggiore, Rome, relating to the legend of the foundation of that church; their date is probably 1308. In the original cathedral of St Peter in Rome, he also executed the mosaics of the choir, and those of the front, representing on a colossal scale God the Father, with many other figures; likewise an altarpiece in the church of S. Maria Novella, Florence; these works no longer exist. It is ordinarily held that no picture (as distinct from mosaics) by Gaddo Gaddi is now extant. Messrs Crowe & Cavalcaselle, however, consider that the mosaics of S. Maria Maggiore bear so strong a resemblance in style to four of the frescos in the upper church of Assisi, representing incidents in the life of St Francis (frescos 2, 3, 4, and especially 5, which shows Francis stripping himself, and protected by the bishop), that those frescos likewise may, with considerable confidence, be ascribed to Gaddi. Some other extant mosaics are attributed to him, but without full authentication. This artist laid the foundation of a very large fortune, which continued increasing, and placed his progeny in a highly distinguished worldly position.

2. TADDEO GADDI (about 1300-1366, or later), son of Gaddo, was born in Florence, and became one of Giotto's most industrious assistants for a period (as usually stated) of 24 years. This can hardly be other than an exaggeration; it is probable that he began painting on his own account towards 1330, when Giotto went to Naples. Taddeo also traded as a merchant, and had a branch establishment in Venice. He was a painter, mosaicist, and architect. He executed in fresco, in the Baroncelli (now Giugni) chapel, in the Florentine church of S. Croce, the Virgin and Child between Four Prophets, on the funeral monument at the entrance, and on the walls various incidents in the

legend of the Virgin, from the Expulsion of Joachim from the Temple up to the Nativity. In the subject of the Presentation of the Virgin in the Temple are the two heads traditionally accepted as portraits of Gaddo Gaddi and Andrea Tafi; they cannot, at any rate, be portraits of those artists from the life. On the ceiling of the same chapel are the Eight Virtues. In the museum of Berlin is an altarpiece by Taddeo, the Virgin and Child and some other subjects, dated 1334; in the Naples Gallery, a triptych, dated 1336, of the Virgin enthroned along with Four Saints, the Baptism of Jesus, and his Deposition from the Cross; in the sacristy of S. Pietro a Megognano, near Poggibonsi, an altarpiece dated 1355, the Virgin and Child enthroned amid Angels. A series of paintings, partly from the life of S. Francis, which Taddeo executed for the presses in S. Croce, are now divided between the Florentine Academy and the Berlin Museum; the compositions are taken from or founded on Giotto, to whom, indeed, the Berlin authorities have ascribed their examples. Taddeo also painted some frescos still extant in Pisa, besides many in S. Croce and other Florentine buildings, which have perished. He deservedly ranks as one of the most eminent successors of Giotto; it may be said that he continued working up the material furnished by that great painter, with comparatively feeble inspiration of his own. His figures are vehement in action, long and slender in form; his execution rapid and somewhat conventional. To Taddeo are generally ascribed the celebrated frescos—those of the ceiling and left or western wall—in the Cappella degli Spagnuoli, in the church of S. Maria Novella, Florence; this is, however, open to considerable doubt, although it may perhaps be conceded that the designs for the ceiling were furnished by Taddeo. Dubious also are the three pictures ascribed to him in the London National Gallery. As a mosaicist, he has left some work in the baptistery of Florence. As an architect, he supplied in 1336 the plans for the present Ponte Vecchio, and those for the original (not the present) Ponte S. Trinita; in 1337 he was engaged on the church of Orsanmichele; and he carried on after Giotto's death the work of the unrivalled Campanile.

3. AGNOLO GADDI, born in Florence, was the son of Taddeo; the date of his birth has been given as 1326, but possibly 1350 is nearer the mark. He was a painter and mosaicist, trained by his father, and a merchant as well; in middle age he settled down to commercial life in Venice, and he added greatly to the family wealth. He died in October 1396. His paintings show much early promise, hardly sustained as he advanced in life. One of the earliest, at S. Jacopo tra' Fossi, Florence, represents the Resurrection of Lazarus. Another probably youthful performance is the series of frescos of the Pieve di Prato—legends of the Virgin and of her Sacred Girdle, bestowed upon St Thomas, and brought to Prato in the 11th century by Michele dei Dagomari; the Marriage of Mary is one of the best of this series, the later compositions in which have suffered much by renewals. In S. Croce he painted, in eight frescos, the legend of the Cross, beginning with the Archangel Michael giving Seth a branch from the tree of knowledge, and ending with the Emperor Heraclius carrying the Cross as he enters Jerusalem; in this picture is a portrait of the painter himself. Agnolo composed his subjects better than Taddeo; he had more dignity and individuality in the figures, and was a clear and bold colourist; the general effect is laudably decorative, but the drawing is poor, and the works show best from a distance. Various other productions of this master exist, and many have perished. Cennino Cennini, the author of the celebrated treatise on painting, was one of his pupils.

4. GIOVANNI GADDI, brother of Agnolo, was also a painter of promise. He died young. (W. M. R.)

GADIATCH, a town of Russia, at the head of a district in the government of Poltava, situated on the elevated banks of the Grun and the Psel, 73 miles N.N.W. of Poltava, in 50° 22' N. lat. and 34° 0' E. long. It is a plain wood-built town, with four Greek churches and two synagogues, deriving its main importance from its four annual fairs, one of which, lasting for three weeks, was, up to 1857, held at the Hermitage of the Transfiguration (*Skeet Preobrazhenski*). In 1860 the population was 7263, 1213 of the number being Jews. According to W. Struve's *Calendar* for 1878, it was 8425. Gadiatch was the place where the assembly was convoked by the hetman Vigofski in 1658, for the publication of the treaty contracted between the Ukrainians and the Poles. During the hetmanate it had fortifications of which traces are still extant, ranked as a garrison town, and was the residence of the hetman. At first it was included in the military district of Luben, but after 1650 in the district to which it gave its name. Along with 13 large villages it was bestowed by the empress Elizabeth on Count Razumofski, but it was afterwards purchased from him by the empress Catharine II. In 1771 the town and district were incorporated with the province of Kieff, and in 1802 they obtained their present position in the government of Paltowa.

GADWALL, a word of obscure origin,<sup>1</sup> the common English name of the Duck, called by Linnæus *Anas strepera*, but considered by many modern ornithologists to require removal from the genus *Anas* to that of *Chauleasmus* or *Ctenorhynchus*; of either of which it is not only the typical but the sole species. Its geographical distribution is almost identical with that of the common Wild Duck or Mallard (see DUCK, vol. vii. p. 505), since it is found over the greater part of the Northern Hemisphere; but, save in India, where it is said to be perhaps the most plentiful species of Duck during the cold weather, it is hardly anywhere so numerous, and both in the eastern parts of the United States and in the British Islands it is rather rare than otherwise. Its habits also, so far as they have been observed, greatly resemble those of the Wild Duck; but its appearance on the water is very different, its small head, flat back, elongated form, and elevated stern rendering it recognizable by the fowler even at such a distance as hinders him from seeing its very distinct plumage. In coloration the two sexes agree much more than is the case with any of the European Freshwater Ducks (*Anatina*)—one only, the *Anas marmorata*, excepted; but on closer inspection the drake exhibits a delicate ash-coloured breast, and upper wing-coverts of a deep chestnut, which are wholly wanting in his soberly clad partner. She, however, has, in common with him, some of the secondary quills of a pure white, presenting a patch of that colour which forms one of the most readily-perceived distinctive characters of the species. The Gadwall is a bird of some interest, since it is one of the few that have been induced, by the protection afforded them in certain localities, to resume the indigenous position they once filled, but had, through the draining and reclaiming of marshy lands, long since abandoned. In regard to the present species, this fact is due to the efforts of the late Mr Andrew Fountaine, on whose property, in

<sup>1</sup> Webster gives the etymology *gad well*—go about well. Dr R. G. Latham suggests that it is taken from the syllables *quedul*, of the Latin *querquedula*, a Teal. The spelling "Gadwall" seems to be first found in Willughby in 1676, and has been generally adopted by later writers; but Merrett, in 1667, has "Gaddel" (*Pinax Rerum naturalium Britannicarum*, p. 180), saying that it was so called by bird-dealers. The synonym "Gray," given by Willughby and Ray, is doubtless derived from the general colour of the species, and has its analogue in the Icelandic *Gráund*, applied almost indifferently, or with some distinguishing epithet, to the female of any of the Freshwater Ducks, and especially to both sexes of the present, in which, as stated in the text, there is comparatively little difference of plumage in Drake and Duck.

West Norfolk and its immediate neighbourhood, the Gadwall has now, for nearly thirty years, annually bred in constantly increasing numbers, so that it may again be accounted, in the fullest sense of the word, an inhabitant of England; and, as it has been always esteemed one of the best of wild fowl for the table, the satisfactory result of its encouragement by this gentleman is not to be despised. (A. N.)

GAELIC LANGUAGE AND LITERATURE. Until recently there was doubt as to the family of languages to which the Gaelic belonged; indeed, with many scholars the impression existed that it belonged to the Semitic branch, and that its relations must all be traced among some one or other of its varieties. This view arose very much from the neglect with which the language had been treated by scientific men. Comparative philology is itself a modern subject of study. Naturally, in its progress, the more prominent languages came first, while the more obscure were passed over as of comparatively subordinate importance. The study is one so comprehensive, and requiring so large an amount of acquirement of various kinds, that it is no real reproach to modern scholarship that the study of such languages as the latter should have been postponed in favour of that of languages more generally known. Their turn, however, gradually came, and no one can complain now that they have not received the attention of very competent scholars. It is doubtful whether a higher class of scholarship has been nurtured anywhere than in the study of the Celtic languages, as exhibited by such men as Zeuss, Dieffenbach, Ebel, Whitley Stokes, the Chevalier Nigra, Henri Gaidoz, and others who have devoted their strength to their exposition. The result has been the complete establishment of the fact that this class of languages belongs to the Indo-European or Aryan stock, and is closely related to the classical branch of those tongues.

The first who brought real scholarship to bear upon the question of the family to which the Celtic dialects belonged was Dr Cowles Pritchard. His *Eastern Origin of the Celtic Nations* is a work of the highest value, distinguished by its erudition, and the sound judgment it displays. He was one of the most remarkable men whom Britain has produced in the field of comparative philology. No doubt it is with the Welsh he chiefly dealt, but, in discussing such questions as he had to deal with, it mattered little which of the Celtic tongues was made use of. Many writers followed Dr Pritchard, and there is now, as has been said, no question about the Aryan source of the Celtic languages. It is not that the words are to a large extent analogous, but the grammatical structure and the idioms correspond to such an extent that the question is put beyond a doubt; while, with the exception of a few common vocables, there is little that is analogous between the Celtic and the Semitic languages.

The territory once occupied by the Celtic race is a question of much interest. Now they are confined within well-known limits. On the European continent they occupy that part of France usually called Brittany, the most westerly portion of the country terminating in Cape Finistère. They occupied this territory so early as the days of Julius Cæsar, although it has been said that they were emigrants from Britain at a later period. The topographical terms given by Cæsar in describing the Roman invasion all indicate that the language of the natives of Brittany used then, and for a long time before, was as much Celtic as it is now. Opposite to Brittany lies British Cornwall, a region with a Celtic tongue until about 100 years ago. The two Cornwalls—one in Britain and the other in France—terminated, one on each side, the territory occupied by the Celt. The dialects spoken in these stood in the closest relationship. To the north of this lies the greatest of all the modern sea-

tions of the Cimbrian Celts. Wales, occupied by about a million inhabitants, is nearly Celtic, and uses the ancient tongue of Wales, Cumbria, and Strathclyde. Across the sea from Wales lies the Isle of Man, where the Gaelic branch of the Celtic held sway, and does to some extent still. In Ireland the Gaelic also prevailed, and is still spoken by about a million people. And lastly, in the Scottish Highlands about 300,000 people still use, less or more, the old Gaelic tongue of Scotland. Thus Brittany, Wales, Man, western Ireland, and the Scottish Highlands are now the territory of the Celtic languages. That they once occupied a wider sphere is beyond a doubt. There are traces of the tongue, in one form or other, to be found all along southern Europe. Topography is a valuable source of evidence, and one that will be made to serve purposes it has never served as yet; and it furnishes us—in Italy, France, Switzerland, Spain, and Portugal—with relics which, like animal fossils dug from the depths of the earth, speak unmistakably of what formerly existed there. How far the Gaelic form of Celtic speech prevailed it is difficult to say, or whether it existed alongside of the Cimbric on the continent of Europe. But the name Gallia is significant as applied to France; and it is a suggestive fact that, to this day, the Bretons call France Gaul, as distinguished from their own country, and in like manner call the French language Gallic, as distinguished from the Breton. In Scotland the Gaelic and Cimbric races long dwelt together, distinct and yet nearly related. When they separated, either as to race or language, is not easily settled. There are indications on the Continent which rather throw doubt on the idea maintained by some writers that the divergence took place after the settlement of the race in Britain, and farther inquiry as to these indications is essential ere a satisfactory conclusion can be reached. But within the historic period the two races existed side by side in Scotland, the Cimbric occupying the region called Strathclyde, with their separate government and laws, and the Gael at least occupying the Dalriadic kingdom of Argyll. The people called by the Romans Picts occupied the north and east of Scotland. That these were the same people with the Dalriadic Scots is somewhat questionable. That they were closely related to them is beyond doubt, but that they had linguistic and other peculiarities is manifest. Their topography proves it, being different from that of either Ireland or Argyll, and, so far as the historic relations of both are concerned, they indicate a state of chronic war. For centuries there were mutual raids of Scots on Picts, and Picts on Scots, until finally, under Kenneth MacAlpine, king of Dalriada, the Picts were overcome in the year 843, and they and the Scots became united under one monarchy. The tradition is that the Picts were annihilated,—meaning, in all likelihood, their power,—and there arose one great united kingdom. The united people are the ancestors of the present Scottish Highlanders, and the Gaelic language has come down from them to us, influenced as to structure by the dialect spoken and written by the victors.

The Gaelic language, as now in use in Scotland, resembles closely in its structure both the Irish and the Manx. They form one family, and yet it has its own distinctive features. Irish scholars maintain that it is a modern and corrupt offshoot of the Irish, and account in this way for these peculiarities. They say, for example, that the absence of the present tense in the Gaelic verb is a mere instance of decay, and proves the modern character of the dialect. But the Welsh is no modern and corrupt form of Irish, but an ancient distinct tongue, so far back as history carries us. And yet it wants the present tense, indicating that this peculiarity is distinctive of some of the Celtic tongues, and that what is cited as a proof of recency may in reality be a proof of priority. The present tense may be called an

Irish addition made to the verb in the process of culture. At the same time it must be allowed that there is a difficulty in proving from any literary remains existing that the present Scottish form of the language is of great antiquity. All the literary relics that have come down to us are written in what is usually called the Irish dialect. The present tense is in universal use, as well by Scottish as by Irish writers. This arose from the identity of the Irish and Scottish churches. The dialect in which all theological treatises were written was one, and this dialect extended from the clergy to bards, and sennachies, and medical men. There is not a page of Gaelic written in any other dialect before the middle of last century. But as in other countries there was both a spoken and a written dialect in use, so in both Scotland and Ireland there appears to have been a dialect in use among the people as their common speech, and another used by their scholars,—the former varying according to locality, and the latter being identical throughout. Some of the features that distinguish the Gaelic language, partly in common with the other Celtic tongues, and partly not, are the following:—

1. The aspiration of consonants. This is accomplished by the change of *m* into *v*, of *b* into *v*, of *d* into *g*, of *g* into a broad *y*, of *p* into *f*, and *s* and *t* into *h*. As appearing in the initial articulations this presents a peculiar difficulty to the learner of Gaelic. He has been accustomed, in learning other tongues, to observe the changes required by inflexion, and other requirements of correct grammatical structure. But he has not been familiar with changes in the initial letters of words. In English these letters never undergo any change; but in Gaelic he meets with such changes at once. He finds *mac*, a son, becoming in certain circumstances *vac*, and he is ready to doubt whether both forms belong to the same word. To make the difficulty as little formidable as possible to the reader, the authors of the Gaelic orthography fell upon the method of using the letter *h*, which, though hardly a letter in Gaelic, and never used to begin a word, is now used more than any other letter. The Irish use a dot. The use of the *h* serves to preserve to the reader the original form of the word. Hence *mac* becomes by aspiration, or *adoucissement* as the French call it, *mhac*, pronounced *vac*. These initial changes of certain consonants are made for the purpose of euphony, to which Gaelic makes large sacrifices, and also for the purpose of distinguishing gender. An aspiration converts the feminine into the masculine, and, *vice versa*. *An ceann* is the head, masculine, *a' chos* the foot, feminine. So *a chos* is his foot, *a cos* is her foot; *a cheann* is his head, *a ceann* is her head, the pronoun undergoing no change, although its gender is indicated by the change. There are other purposes served by aspiration of considerable importance. The Gaelic learner makes a large acquisition when he masters the principles of aspiration, and inquirers into the characters of the language will cease to blame the frequency with which *h* appears in Gaelic writing when they come to see how important a purpose it serves.

2. Another peculiarity of the Gaelic language is to be found, as already said, in the want of a present tense in the verb. The verb "to do" is *dean*, the theme of the verb being in the imperative mood. There is no tense expressing simply I do, the form in use being I am doing, *tha mi a' deanamh*. The Irish say *deanam*, I do, but that is not the Scottish form of the expression. In this Gaelic is not only at one with several of the Celtic branches, but with some of the Semitic tongues. And it has this further in common with these last, that the future is used to express present time. This occurs frequently in the Gaelic version of the Bible, where we have *an tì a' chreideas anns a' Mhac*, he that will believe in the Son, for he that believeth. And yet occasionally a true present tense appears in Gaelic:—*an cluinnidh thu sin?* Do you hear that? *cluinnidh*, I do hear it; *am faic thu sin?* Do you see that? *faic*, I do see it. In those cases and some others there is no doubt a distinct present tense. The cases are, however, few, and occur in peculiar circumstances.

3. Another feature peculiar to Gaelic is that there is no real infinitive in the verb. The infinitive in use is a noun which may appear either in the form of a participle or an infinitive, according to the effect of the preceding preposition. I am going to strike, *tha mi 'dol do bhualadh*, I am going to striking; I am striking, *tha mi a' bualadh*, I am at striking,—the preposition *do*, to, in the one case giving the noun the force of an infinitive, and the preposition *ag* or *a'*, at, giving the same noun the force of a participle. The Gaelic infinitive is thus identical with the Latin gerund, and is one of the points where the classical and the Celtic tongues meet and touch.

In the article CELTIC LITERATURE reference is made to some of those cases in which the Irish dialect of the