

as a penal settlement for political offenders, who find an easy subsistence on the bananas, Indian corn, and sweet potatoes which readily grow in the black fertile mud of the higher parts, and on the large herds, now become wild, of cattle, swine, and goats. The principal settlement, founded by General Vilamil in 1832, is situated in Charles Island, and bears the name of La Floreana, in honour of Floris, the president of Ecuador. At one time it contained 200 or 300 inhabitants; but when the United States steamer "Hassler" visited the Galapagos in 1871, there were little more than a dozen. In 1872 about 2000 cattle had perished in the island. The archipelago was formerly a frequent resort of vessels in quest of turtle; and it is still visited by parties from Guayaquil in quest of a species of moss, which is sent to the English market under the name of *orchilla*.

Though the islands are under the equator, the climate is not intensely hot, as it is tempered by cold currents from the Antarctic Sea, which, having followed the barren coast of Peru as far as Cape Blanco, bear off to the N.W. towards and through the Galapagos. Very little rain falls, except during the short season from November to January. The clouds indeed hang low, and the nights are misty, but this benefits those districts only which attain a height of over 800 or 1000 feet and enter the moist upper air; so that there alone, and chiefly on the side from which the winds oftentimes blow, is there anything like a luxuriant vegetation. The low grounds are entirely parched and rocky, presenting merely a few thickets of Peruvian cactus and stunted shrubs, and a shore as uniniverting as it well can be.

The greatest interest attaches to the study of all the oceanic islands, for the elucidation of the origin and development of their fauna and flora has an important bearing on the question of the genesis of species. The Galapagos archipelago possesses in this respect a rare advantage from its isolated situation, and from the fact that its history has never been interfered with by any aborigines of the human race, and that it is only very lately that the operation of man or of animals introduced by his means have disturbed, and that to a very limited extent only, the indigenous life. Many of the more remarkable animal and vegetable forms are confined to one islet of the group, and are represented on the others by allied but different species. Of the indigenous gigantic tortoises there are five species at present known, each of which is an inhabitant of a different island, and it is believed that many others have become extinct. There are two species, one terrestrial, the other marine, of a peculiar genus of lizard. Nearly all the land birds are peculiar to the archipelago, and of these more than half belong to peculiar genera. The flora of the Galapagos is most remarkable; it differs by upwards of one half of its species from that of the rest of the globe. Both the fauna and flora indicate affinity with the South American continent; and the peculiarities of their distribution can be explained only by the supposition that species were transported to the islands by some accident at very rare and remote intervals, and have become changed through natural selection under the new conditions to which they have been exposed. That there should be so few species common to the different islands is accounted for by their separation from each other by deep channels scoured by rapid currents, the direction of which, and of the winds, rarely violent in this region, does not favour inter-migration. Many of the islands are yet but imperfectly known.

For more detailed information the following works may be consulted—Darwin, *Voyage of the Beagle*; O. Salvin, "On the avifauna of the Galapagos Archip.," *Trans. Zool. Soc.*, part ix., 1876, p. 447; Sir J. D. Hooker, "On the Vegetation of the Gal. Arch.," *Trans. Lin. Soc.*, vol. xx. p. 235; Dr A. Günther, "Description of the living and extinct races of Gigantic Tortoises of the Galapagos Islands," *Phil. Trans.*, vol. clxv. p. 251; A. R. Wallace, *Geographical Distribution of Animals*; Villavicencio, *Geografía de la Rep. del Ecuador*, 1858.

GALASHIELS, a parliamentary burgh and manufacturing town of Scotland, built on both sides of the river Gala, about a mile above its confluence with the Tweed, and 33 miles south of Edinburgh. It is situated partly in Roxburghshire and partly in Selkirkshire, but for all judicial purposes it is held, by special Act of Parliament passed in 1867, as entirely within the county of Selkirk. The "forest-steading of Galashiels" is first mentioned in history shortly after the beginning of the 15th century, when it was the occasional residence of the Douglasses, who at that time held the office of keeper of Ettrick forest. In 1599 it was erected into a burgh of barony, when it contained 400 inhabitants. For the next 200 years Galashiels remained a mere village, as the population in 1778 had only grown to 600. At that time, however, we find its inhabitants engaged—though in a limited way—in those manufactures by which it has since so greatly prospered. There were 30 looms and 3 waulk (or fulling) mills; and the cloth manufactured was a coarse woollen texture which sold at from 1s. 6d. to 2s. a yard. In 1790 the quantity of wool used annually was 2916 stones, and the value of goods manufactured was about £1000. In the same year the first factory was erected, and advantage taken of the Gala water as a motive power; and from this time forward the woollen trade in Galashiels underwent steady progress, until, in 1879, the town contains about 20 factories with 100 sets of carding engines, using annually 220,000 stones of wool, and producing goods to the value of £750,000.

The wool chiefly used is imported from Australia and the Cape of Good Hope. The manufacture was at one time of a more diversified character than now, and embraced tweeds, shawls, tartans, &c., but it is now almost exclusively devoted to the production of tweeds. The Galashiels manufacturers have long been united in a corporation called by their name, which was instituted in 1777, and of which the minutes during the whole intervening period are still preserved. In addition to its woollen trade Galashiels has also a large skinners, capable of manufacturing into leather 35,000 skins per week. In recent years the external aspect of the town has been very much improved by the erection of several handsome public buildings, and the introduction of a better style of architecture for shops and dwelling-houses. It was made a parliamentary burgh in 1868, and unites with Hawick and Selkirk in returning a member to parliament. Municipally, it is governed by a provost, four bailies, and ten councillors. In 1876 an Act was passed for the extension of the burgh and the introduction (since effected) of a water supply. As significant of the rapid growth of Galashiels it may be mentioned that, while in 1851 the population was only 5921, in 1871 it was 9678, and that of the extended burgh is now estimated to be nearly 15,000; while the annual assessable rental, which in 1864 was £21,000, is now £49,000.

GALATIA, afterwards called also GALLO-GRÆCIA, in ancient geography, an inland division of Asia Minor, bounded on the N. by Bithynia and Paphlagonia, E. by Pontus, S. by Cappadocia and Lycaonia, W. by Phrygia. These boundaries, however, varied at different periods in the history of Galatia. The river Halys flowed in a northerly direction through the centre of the province, the eastern half of which was watered by tributaries of that stream, while the Sangarius and its affluents traversed the western half.

Galatia originally formed a part of the extensive province of Phrygia; after its separation it was occupied by three Gallic tribes, who still continued distinct in the time of Strabo—the Trocmi, who dwelt in the east, the Tectosages in the centre, and the Tolistobogii in the west. Each of these tribes was subdivided into four parts, and these were ruled over each by a tetrarch of its own. The power of the tetrarchs was limited by a senate of 300, before which

also all capital cases were tried. Minor offences came under the cognizance of the tetrarchs and special judges appointed by them. The three tribes all spoke the same tongue; and though in course of time they became Hellenized, their original language was still in use among them as late as the time of Jerome.

The physical characters of Galatia are in great measure similar to those of the adjoining provinces of Phrygia and Lycaonia, the whole region being an elevated plateau or table-land, no part of which is less than 2000 feet above the sea, while the greater part exceeds 3000 feet in elevation. The southern portion, towards Lycaonia, is the most level, and is an almost perfect plain, passing gradually into the expanse of salt desert which occupies the frontier lands of the two provinces. The rest of the country consists for the most part of vast undulating downs, affording excellent pasture for sheep and goats, and capable of producing good crops of corn, though at present in great part uncultivated, and almost wholly devoid of wood. Towards the frontiers of Bithynia it becomes more broken, and is intersected by numerous valleys, as well as by several detached ranges of hills, none of them, however, attaining to any considerable height or importance. The lofty range of the Ala-dagh (6000–7000 feet), though frequently termed the Galatian Olympus, is not properly included within the limits of the province, but forms in part the natural boundary which separates it from Bithynia. From its elevated position, the climate of Galatia is naturally one of considerable extremes of heat and cold; and while the summers are burning hot, the winters at Angora are more severe than at Paris, and the snow often lies on the ground for a month together.

The only towns of importance in Galatia were Tavium, the capital of the Trocmi, a small town which speedily fell into decay; Ancyra, the capital of the Tectosages, which under the Romans became the capital of the country, and has ever since retained its importance as one of the principal cities of Asia Minor (see ANGORA); and Pessinus, the chief town of the Tolistobogii, where a splendid temple was consecrated to Agdistis, the mother of the gods, the divinity who was worshipped at Rome under the title of Rhea or Cybele.

Galatia took its name from a body of Gauls who invaded Asia Minor about the year 277 B.C. They had formed part of the army which invaded Greece under Brennus, but having quarrelled with that commander, had left his standard, and marching into Thrace under generals of their own choice, advanced to Byzantium, whence they were invited by Nicomedes, king of Bithynia, to cross into Asia, and help him in his struggle against his brother Zibetes. After performing the required services, they turned their arms against their employer, and ravaged the western half of Asia Minor. Their success allured other hordes of their countrymen, who readily took service with the Asiatic kings in their wars against each other. No Oriental prince was found able to check them, until Attalus, king of Pergamus, defeated them in a great battle, 239 B.C., and compelled them to settle in that part of the country which after them was called Galatia. They still remained independent, however, and proved a formidable foe to the Romans in their wars with Antiochus. It was found necessary to direct a special army against them, under Cn. Manlius, and the result of the campaign (189 B.C.) was their complete subjugation to the power of Rome. Galatia was not at this time reduced to a Roman province, but the Gauls were still allowed to retain their own government under their tetrarchs. This system, however, gradually gave way, and the whole country passed under the authority of one ruler. The first of these sole tetrarchs was Deiotarus, a contemporary of Cicero and Cesar, who, in return for the assistance which he gave the Romans in their wars against Mithridates, was rewarded with a part of Pontus and Armenia Minor, and was styled king by the senate. It was afterwards united with Lycaonia, Isauria, and several adjoining districts, under a king named Amyntas, at whose death, in 25 B.C., Galatia became a Roman province. Theodosius the Great subdivided it for purposes of government into Galatia Prima, of which Ancyra was the capital, and Galatia Secunda, with Pessinus for its chief town.

The antiquities of Galatia have in recent times been made the subject of special investigation by a French commission composed of MM. Perrot, Guillaume, and Delbet, and the result of their labours published in 2 vols. fol., Paris, 1872; but with the exception of those of Angora, they are not of much general interest.

GALATIANS, EPISTLE TO THE. *Origin*.—Although "Galatia," as a united kingdom under Amyntas, included Pisidia, as well as portions of Lycaonia and Pamphylia, and when constituted a Roman province was further enlarged so that it extended from Taurus to the Euxine (Ptol., v. 1), it may with safety be taken for granted that the name is never used in the New Testament except in its older colloquial sense as equivalent to "Gallogræcia" or "Eastern Gaul" (Γαλλία ἢ ἑσά, Appian, *De Bell. Civ.*, ii. 49), the country of those Galli (Ἰλλῆρες, Γαλάται, Κέλται) whose migrations and final territorial limits have already been indicated in the preceding article.¹ On this assumption, the history of the formation of the Christian "churches of Galatia" is very obscure. It is obvious enough, from the epistle itself, that they had been planted by Paul; but when, or under what circumstances, we are nowhere explicitly informed. In the Acts of the Apostles we read that, accompanied by Silas, he set out on what is generally known as his second missionary journey soon after the council of Jerusalem, which may be dated approximately as having occurred about the year 52 A.D.² After having traversed "Syria" and "Cilicia," strengthening the churches, they "passed through Phrygia and the region of Galatia (τὴν Γαλατικὴν χώραν), being forbidden of the Holy Ghost to preach the word in Asia; and after they were come to Mysia, they assayed to go into Bithynia, but the Spirit of Jesus suffered them not."³ The language here employed, even if, as Wieseler argues, it implies that preaching was engaged in, can hardly be said to suggest of itself that churches had been formed on the route, but rather appears to hint at a forced and rapid march. Acts xviii. 23, however, indicates that "disciples" at least had been made, and it is well known that in the narrative of the Acts many important passages in the eventful public life of the apostle have been passed with even less explicit allusion. Combining then the meagre facts which that narrative in this instance affords with inferences derived from incidental expressions made use of in the epistle itself, we conjecture the apostle to have been detained by ill-health (see Gal. iv. 13, "because of bodily weakness"), probably in the western district of Galatia (that of the Tolistobogii), though not at the capital Pessinus itself, but nearer the borders of Asia and Mysia; and there, in the *προσευχαί* or synagogues, to have addressed his message to Jews,⁴ proselytes, and as many of the native

¹ See Strabo, xii. p. 566 (where the words are τὴν νῦν Γαλατικὴν καὶ Γαλλογραικίαν λεγομένην); and compare Pliny (*H. N.*, v. 25), who continues to distinguish Lycaonia from Galatia. The later historian Memnon also incidentally mentions that the Galatæ had taken possession of τὴν νῦν Γαλατικὴν καλομένην. Renan (*Saint Paul*, p. 48) and, latterly, Hausrath (*NTliche Zeitgeschichte*, ii. 258), however, uphold the theory that Paul when he uses the word Galatia intends the Roman province, and that by the Galatians we are to understand chiefly the Christians of Antioch, Iconium, Derbe, and Lystra. Their arguments are drawn from the ordinary *usus loquendi* of Paul (by Asia, Macedonia, Achaia he invariably means the provinces bearing these names); from the analogy of 1 Pet. i. 1, where all the districts mentioned happen to be "provinces"; from such considerations as the inaccessibility of Galatia proper; from inferences based on Acts xviii. 23, Gal. ii. 5, and other texts; and from the admittedly perplexing fact that unless the churches of Derbe, Lystra, &c., be regarded as Galatian, we are left in ignorance of the names, localities, and histories of the churches addressed. But, as has been seen, the ancient *usus loquendi* appears on the whole to have disregarded the Roman division of provinces in this case at least; moreover, Iconium was never a part of the Roman Galatia; and in any case there would have been an inappropriateness in addressing Lycaonians and Pisidians by a title so rich in ethnological and historical suggestion as that of "Galatians" is.

² The full consideration of the chronology of this period of sacred history must be postponed to the article PAUL.

³ So Acts xvi. 6, 7, according to the oldest texts. See Lachmann, Tischendorf, Tregelles.

⁴ For the fact of the prevalence of Jews in Galatia reference may be made to the Monumentum Ancyranum (Joseph. *Ant.*, xvi. 6. 2; *cf.* xii. 3, 4); compare 1 Pet. i. 1.

pagan population as could be induced to hear. The Galatians, although in their intercourse with one another they still continued to make use of their ancient dialect, were quite able to understand the then almost universally diffused Greek;¹ and some of them, both Jews and Gentiles,² almost immediately began to receive Paul's doctrine with favour and even with enthusiasm (Gal. iv. 14). How long this visit continued we are not told; but most of the chronological evidence goes to show that it cannot have lasted more than six months, and that it probably came to an end within a much shorter interval. Resuming the journey by Mysia and the Troad, Paul and his companion proceeded to "Macedonia" and "Achaia," spending in the latter province at least eighteen months, and finding no opportunity of revisiting Galatia for a space of at least three years. During this interval several causes must have been quietly but constantly working with a tendency to alienate the Galatian converts from the new "gospel of the uncircumcision" (εὐαγγέλιον τῆς ἀκροβυστίας, ii. 7), and induce them to that conformity with certain parts of Jewish ceremonial which was even at that time described by the word "Judaizing" (ἰουδαῖζειν, Gal. ii. 14). Even among those whose leanings were towards the spiritual religion of the Old Testament, Jewish habits of thinking and feeling could never fail to assert themselves with considerable strength; and there were also elements peculiar to the old pagan religion of the district which were fitted to predispose even the heathen mind towards that ceremonialism and "making a fair show in the flesh" (εὐπροσωπῆσαι ἐν σαρκί) which the apostle deprecated.³ How or when these tendencies had first begun to manifest themselves in the way of deliberate rebellion against the teachings which Paul had left behind him, can only be a matter of pure conjecture; but it would appear that, even if the revolt had been originated by Palestinian Jews, it had at least been fomented by other agitators who were Gentiles by birth (v. 12; vi. 13); nor does it seem improbable that they had begun their work very soon after the time of the apostle's first visit. The second visit, mentioned in Acts xviii. 23, which must have taken place about 55 A.D., and have occupied very little time, appears to have been on the whole a pleasant one; the apostle was still received with due respect (iv. 12, 18), and may well have left Galatia with the impression that the disciples had been "strengthened" by him, and that they "were running well" (v. 7). But shortly after his departure tidings reached him that, though the influence of the Judaizers had for the time been neutralized by his presence, it had begun to reassert itself with greater force than ever almost immediately after he had gone, and that his disciples had been so "bewitched" that, after "having begun in the spirit," they were now endeavouring to be "made perfect by the flesh." He also learned that the reactionary doctrines had been supported by a suggestion that he himself was no teacher of independent authority, but merely a subordinate, and that a treacherous one, of the original apostles and pillars of the church, whose "gospel" was emphatically "of the circumcision." Immediately on receipt of this intelligence, he wrote the present epistle.

Contents.—It consists of three parts, in which the personal, the doctrinal, and the practical elements respect-

¹ See Jerome's often-quoted *Prolog. in Epist. Gal.*, "Galatos, excepto sermone Greco quod omnis oriens loquitur, propriam linguam eandem habere quam Treviros." Philologists have hardly any doubt of the essentially Celtic character of this dialect; though many German theologians still maintain it to have been Teutonic. See Lightfoot (*Galatians*), and Grimm in the *Studien u. Kritiken* for 1876.

² That there were any Jews among Paul's converts here has sometimes been doubted, but unreasonably. See Gal. iii. 23, 25; iv. 3. It seems probable, however, that the Gentiles were in the majority.

³ Galatia, and particularly Pessinus, was famed for its worship of Cybele. See Livy, xxxviii. 18; Strabo, xii. p. 567.

ively predominate. (1.) After an expression of surprise at the instability displayed by his Galatian converts, the author proceeds to establish the divineness of his message by an historical proof of the wholly divine character of his commission to be its messenger. He urges that he had received his apostleship directly from God; and that, far from proceeding from men, it had been tardily, and so far reluctantly, acknowledged by them only after it had become an altogether patent and undeniable fact. His first visit to Jerusalem had been three years after his conversion. If it had not resulted in his recognition as on a footing of equality with the apostles, it at least had not led to his taking any position of subordination; while on his second visit to Jerusalem he had met the apostles and deliberated with them on terms of undisputed parity. On the third occasion of his coming into contact with an apostolic person so distinguished as Peter, he had openly withstood him and vanquished him in argument, thereby even establishing a superiority. (2.) He proceeds to state and defend the doctrine of justification by faith in the crucified Christ. After alluding to it as a truth already established in their Christian consciousness (iii. 1-5), he proceeds to show that the same truth had been embedded in the whole Old Testament revelation, and was capable of being deduced from the entire course of the past history of the church. The religion of Abraham had been a religion of faith, and his justification had not been a justification by works (iii. 6-18). The law which came later is misunderstood if it be regarded as superseding the promise which had been the foundation of the religion of the patriarch. Its relation to the promise was manifestly of a subordinate and temporary kind. To regard it as having been otherwise would be as absurd as to suppose that a Hagar and an Ishmael could ever have taken that place in the family which belonged of inalienable right to Sarah and to Isaac (iii. 19-iv. 31). (3.) He exhorts to a continuance in the life of faith which is also the life of freedom, and warns against any relapse under the yoke of Judaism (v. 1-12). He explains that Christian freedom is a freedom conditioned by morality (v. 13-vi. 10), and concludes with a recapitulation and the benediction.

Genuineness, Date, and Place.—The genuineness of this epistle has never been disputed. The external evidence is remarkably clear and continuous, while the internal has been such as to satisfy even the most negative school of modern criticism.⁴ Its autographic character, also, is inferred by many, including Hilgenfeld, Holzmann, and other moderns, from the expression used in vi. 11; but it is at least possible that the word *ἔγραψα* may refer only to vi. 11-18. The question as to its date has given occasion for considerable diversity of opinion. It has been seen that the apostle wrote immediately after he had heard of the change that had come over the Galatian churches, and that this change occurred "soon" (ταχέως) after his second visit. These facts favour a date not much later than 55 A.D. Further, a comparison of the epistle to the Galatians with those to the Romans and Corinthians results, on the whole, in favour of the opinion that it was the earliest of the four, or at all events not much later than the latest, in other words, not later than 59 A.D. It is probably idle to attempt to fix the date much more precisely. The reference in 1 Cor. xvi. 1, which may mean either that friendly relations with the Galatians had been until then uninterrupted, or that they had been already restored, have determined the critics, according to the interpretation adopted, in placing it either early in the Ephesian sojourn or late in the Corinthian. The majority of the moderns is in favour of the former date (55-57 A.D.), but the latter still continues

⁴ The only dissenting voice has been that of Bauer (1851).

to find supporters. Reference has already been made to the theory of Renan and Hausrath, which leads them to assign this epistle to the period of the second missionary journey. Apart from the considerations which have been indicated in a preceding note, this view is open to the objection that it raises new and gratuitous difficulties in connexion with the history and chronology of the Acts; it has accordingly met with comparatively little acceptance. According to some older writers, such as Michaelis, Koppe, Borger, the supposed absence of any reference to the council of Jerusalem implies a very early date; English readers, on the other hand, are familiar with the statement derived from some of the later Greek MSS., and supported by the Syriac and Arabic versions, as well as by the weighty authority of Eusebius, Jerome, and Theodoret, that the epistle was "written from Rome." This view has been advocated in modern times also by C. Schrader; but the general verdict will probably continue to be, as it has for some time been, adverse to a theory which would group this among the letters of the captivity rather than among those of an earlier period.

On the relation of Galatians to the book of the Acts of the Apostles, see vol. i. pp. 124, 125.

Literature.—For an interesting and detailed account of the patristic commentaries on this epistle reference may be made to an excursus by Bishop Lightfoot (*Saint Paul's Epistle to the Galatians*, 1865, 2d ed. 1874). Those belonging to the Reformation period are sufficiently well known, particularly Luther's, Calvin's, and Beza's. Of modern English commentaries the most exhaustive is that of Dr Lightfoot, already referred to; but those of Ellicott (1854), Jowett (1855), and Alford (1857) are also of great value. In Germany one of the latest is that of Wieseler (*Commentar über den Galaterbrief*, 1859); and among those who preceded him in this field, Winer (*Pauli ad Galatas Epistola lat. versa et perpetua annotatione illustrata*, 1829, 4th ed. 1859), Usteri (*Comm. u. d. Galaterbrief*, 1833), Rückert (1833), Olshausen (1840), De Wette (1845, 3d ed. 1864), Meyer (1851, 5th ed. 1870), Hilgenfeld (1852), and Ewald (*Die Sendschreiben des Apostels Paulus übersetzt und erklärt*, 1857) are all worthy of particular mention. Windischmann's *Commentar* (1843) is an able and learned exposition from the Roman Catholic point of view. See also Holsten (*Inhalt u. Gedankengang des Br. a. d. Galater*, 1859), Hofmann (*Die heilige Schrift Neuen Testaments zusammenhängend ausgelegt*, 1863), Brandes (*D. Ap. P. Sendschreiben a. d. Galater*, 1869), Sanday (in vol. iii. of the *Speaker's Commentary*), and Venn (*On the Epistle to the Galatians*, 1878). Much help in the interpretation of the epistle is to be derived from the various works on the apostle Paul and the apostolic period of church history; also from those on New Testament Introduction, such as Hilgenfeld's (*Einl.*, 1875) and Bleek's (*Einl.*, 1875).

GALATINA, a town of Italy, in the province and circondario of Lecce, on the road from Otranto to Taranto. It still preserves its ancient walls and towers, and possesses an interesting Franciscan church and monastery (St Catharine's), founded in the 14th century by Raimondo Orsini del Balzo, prince of Taranto. The frescos with which the church is richly decorated are of no small historical value. For a long time the inhabitants were attached to the Greek Church. In 1871 they numbered 7873.

GALATZ, or **GALACZ**, a town and port of Roumania, principality of Moldavia, chief town of the district of Covurlin, on the left bank of the Danube (there 2000 feet wide), between the mouths of the Pruth and Sereth, about 85 miles from the Sulina mouth of the Danube, and 130 miles N.E. of Bucharest, with which it is connected by rail, lat. 45° 26' 12" N., long. 28° 3' E. Galatz is said to have got its name from a colony of the same Galatians who invaded Asia Minor in 278 B.C., though this seems doubtful. The town stands on a level plateau, and consists of two portions, an old and a new. The former, which is nearest to the river, is irregularly and badly built, with crooked streets paved with wood, some of them being regular sewers. This part of the town is liable to be flooded, and, as in the greater part of Roumania, the sanitary conditions are bad. The new town, which has rapidly extended

during the past few years, is built on the rising ground towards the north-west. It is partly paved, is much more open and comfortable than the old town, and contains most of the public buildings, consulates, &c. Galatz is now to a considerable extent lighted with gas, and some time ago a regular system of water-works was commenced to supply the town with purified and filtered water. There are several Roman Catholic and Greek churches, educational institutions, a hospital, a quarantine building, &c. In the church of St Mary is the tomb of Mazepa, said, however, to have been rifled of its contents by the Russians. Galatz is the seat of the international commission instituted by the treaty of Paris, 1856, to insure the free navigation of the mouths of the Danube; and by the treaty of Berlin, 1878, Roumania is to be represented on this commission, which exercises its duties as far as Galatz independently of all territorial rights. Galatz has been a favourite place for crossing the Danube with military expeditions since the time of the Roman emperors, though during the war of 1877-78 the Russians did not adopt it except for parties of reconnaissance. There are very few strictly Roumanian industries carried on at Galatz. There are several flour-mills, saw-mills, and breweries, extensive cooperage works, and soap and candle-manufactories to a small extent; light wines are also made. Galatz is an important free port, and shares with Ibraila most of the trade of the lower Danube. The navigation of the Sulina mouth of the river has so improved that steamers of 850 tons can sail up to Galatz. There are French, Austrian, Russian, and British steamboat companies that carry on a regular trade with Galatz, and attempts have been made by the municipality to construct solid stone wharfs. For the traffic generally much inconvenience is felt from want of adequate quay and warehouse accommodation; but now that Roumania is an independent state, improvements may be made in this and other directions. A considerable proportion of ships unload at Sulina and send their cargoes up to Galatz in lighters. The river is generally frozen over for a few weeks during winter.

The staple article of export from Galatz is grain, of various kinds, of which large quantities are grown in all the districts situated on the Danube. In 1876 281 sailing ships, 157 steamers, and 873 lighters, of an aggregate tonnage of 258,391 tons, cleared from the port of Galatz. The lighters had a total of 102,564 tons, while of the remainder 13 sailing ships and 70 steamers of 49,779 tons were British. In the same year the principal articles of export were—wheat, 313,673 qrs.; maize, 423,775 qrs.; barley, 160,443 qrs.; oats, 421,457 qrs.; rye, 167,840 qrs.; flour, 391,657 cwt.; fir planks, 766,869; besides considerable quantities of linseed, rape seed, beans, and small quantities of millet, wool, hides, cheese, and dried prunes. Of wheat 8000 qrs. went to Britain and 19,549 tons to Holland; maize, 71,500 qrs. to Britain, 21,000 to Malta; rye, 58,485 qrs. to Holland; barley, 37,347 qrs. to Britain. The total value of exports from Galatz in 1876 was £1,215,621, being a considerable increase over 1875. There does not seem to be any return of exports by rail, though Galatz is now connected with the general European railway system. The imports for 1876 were valued roughly at £1,750,000, among which manufactured goods figured at £354,000; sugar, £117,000; coal, £112,000; iron, £80,000; caviare, £66,000; oil, £65,000; rice, £58,000; coffee, £32,000; leather, £28,000; sacking, £29,000; soap, £28,000. Galatz is to cease to be a free port on 13th January 1880, after which import duties will be imposed. Constant steam communication is maintained between Galatz and Constantinople, and regular lines of steamers sail from London, Liverpool, and Hull. There is a British consulate at Galatz. The population in 1873 was estimated at 80,000; if this is correct, it has more than doubled itself in ten years; it was only 8000 in 1835.

GALBA, **SERVIUS SULPICIUS** (3 B.C.—69 A.D.), a Roman emperor. He came of a noble family, being sixth in direct descent from the great orator of the same name, though unconnected either by birth or adoption with the line of the first six Cæsars. He owed his elevation to the growing power of the prætorians and the discontent of the provincials, weary of Nero's rule, and beginning to assert

their independence. As Tacitus justly remarks, the death of Nero divulged that secret of the empire, that emperors could be made elsewhere than at Rome. From the little we know of his earlier years he appears as a young man of remarkable gifts and even fascination—a strange contrast to his weak and unlovable old age. His biographer, Suetonius, relates that both Augustus and Tiberius prophesied to him his future rise. The story is improbable, though in part borne out by Tacitus, and rests on the authority of a credulous gossip, who inserts an omen or a prodigy at every turn of his hero's fortunes; but it helps to show, what we learn from other sources, that while still a youth he was regarded as one who was capable of great things. He resisted the solicitations of the empress Agrippina, and refused the rich legacy of Livia Augusta. Rising through the various grades of office to the consulship in 33 A.D., he acquired a high and well-merited reputation both as a general and an administrator in the provinces of Gaul, of Africa, and of Spain, which he successively held. For the first half of Nero's reign he lived in retirement, till, in 61, the emperor bestowed on him the province of Hispania Tarraconensis.

The first years of his rule were marked by rigorous discipline and strict justice, which sometimes degenerated into cruelty. We are told how he nailed the hand of a cheating money-changer to his bench, and how, when a guardian who had murdered his ward appealed to his Roman citizenship, he allowed him the honour of a higher gallows. It is true that during the later period of his administration he was indolent and apathetic, whether it was that he sought to elude the jealousy of Nero, or, as is more probable, felt the growing infirmities of age. Yet his career, taken as a whole, shows the justice of the common judgment, as reported by Tacitus, that all would have pronounced him fit for empire had he not been emperor indeed. In the spring of 68 Galba was holding an assembly at New Carthage when the news reached him of the insurrection in Gaul. The appeal of Vindex urging him to assume the championship of the oppressed human race placed Galba in an awkward dilemma, and his decision was prompted not so much by ambition as by fear of Nero, whom he knew to be plotting his death. The fall and suicide of Vindex renewed his hesitation, when the news that Nymphidius Sabinus, the prefect of the prætorians, had declared in his favour, and by large promises in his name carried the troops with him, revived his spirits. Before, he had only dared to call himself the minister of the senate and Roman people; he now assumed the title of Cæsar, and marched straight for Rome.

At first he was welcomed by the senate and the party of order, but he was never popular with the soldiers or the people, and he soon forfeited the regard even of his few supporters. He was ruined by his virtues no less than by his vices. To the prætorians who claimed their promised largess he replied that he chose his soldiers and would not buy them. The mob was disgusted at the moroseness and niggardliness of a prince who hated all display, and rewarded a popular singer with a paltry present of five denarii. But the respectable classes had graver causes of discontent. They soon found that the government was wholly in the hands of three favourites—two of them officers, and one a freedman who had followed Galba from Spain. Thus the worst abuses of the last reign were revived, without any of its brilliance and gaiety.

Galba was first made aware of the general discontent by an outbreak among the legions of Germany. He sought to avert the rising storm by an act which, if better timed and performed in a more popular way, might have saved him. He adopted as his coadjutor and successor Piso Frugi Licinianus, a man in every way worthy of the honour. The speech in which he announced to Piso his election has a

genuine ring, and convinces us that his choice was wise and patriotic; but by the populace it was attributed solely to fear, and the prætorians were indignant at it because unaccompanied with the usual donative. When the elements of a revolution are all in train a leader is not far to seek. Salvius Otho, a disappointed candidate for the office of Pise, entered into communication with the discontented prætorians, and was by them adopted as their emperor. Two soldiers from the ranks undertook to transfer the empire of Rome, and actually transferred it. Galba, on his way to meet the rebels, was met by a troop of cavalry and butchered near the Lacus Curtius. A common slave severed the bald head from the body, and thrusting it inside his toga presented the bloody offering to Otho. Thus perished, unwept and unpitied, a man who, had he died a proconsul instead of an emperor, would have left as fair a fame as any Roman of the first century.

GALBANUM (Hebrew, *Chebbenah*; Greek, *χαλβάνη*), a gum-resin, believed to be the product of *Ferula galbaniflua*, Boiss. et. Buhse, and *F. rubricaulis*, Boiss., indigenous to Persia, and perhaps also of other umbelliferous plants. From the stems of these it is said to exude as a milk-white juice, which is rendered yellow by exposure to light and air. It occurs usually in hard or soft, irregular, more or less translucent and shining lumps, composed of agglutinated drops or tears, or occasionally in separate tears, and is of a light-brown, yellowish, or greenish-yellow colour, and has a disagreeable bitter taste, a peculiar, somewhat musky odour, and a specific gravity of 1.212. Exposed to cold, it becomes brittle, and may be reduced to powder (Pereira). To separate the vegetable and other impurities commonly present in it, galbanum is melted at 100° C., and strained. On analysis 100 parts yield about 65 of resin soluble in ether and alkaline liquids, 20 to 25 of gum, and about 7 of volatile oil. The last furnishes a colourless crystallizable substance, *umbelliferone*, $C_9H_6O_2$, which may be recognized by its formation of a blue colour with ammonia, destroyed by acids. Galbanum oil has been shown by J. Kachler (see *Journ. Chem. Soc.*; xxiv., 1871, p. 258) to contain a colourless limpid oil, boiling at 160° to 165° C., and a blue oil, of boiling point 240° to 250° C., varying in quantity with the temperature of distillation, which is isomeric with oil of turpentine, and identical with the oil of *Matricaria Chamomilla*, L. Galbanum is one of the oldest drugs. In Exodus xxx. 34 it is mentioned as a sweet spice, to be used in the making of a perfume for the tabernacle. Hippocrates employed it in medicine, and Pliny (*Nat. Hist.*, xxiv. 13) ascribes to it extraordinary curative powers, concluding his account of it with the assertion that "the very touch of it mixed with oil of spondylium is sufficient to kill a serpent." By Arabian and Persian authors it was termed *barzud*, the plants producing it being known as *kinneh* and *nafel* (Royle, *Man. of Mat. Med.*). Avicenna extols the drug for its emmenagogue, diuretic, and various other virtues, and as an antidote "for all poisons." In Chinese writings galbanum, *O-yü*, is not met with as a distinct drug (F. Porter Smith). It is now administered for its antispasmodic, expectorant, and stimulant properties. As an antispasmodic it is considered inferior to asafoetida, but superior to ammoniacum, which, however, is more efficacious as an expectorant in asthma. Galbanum (German, *Mutterharz*) has been supposed to have a stimulating effect upon the uterus, and has been given, combined with salts of iron, in amenorrhœa, and also is recommended in hysteria and neuralgia accompanied by uterine affections. It is an ingredient in the *pilula asafetidee composita* of pharmacy, and in a plaster, *emplastrum galbani*, which has been found serviceable in cases of indolent tumours and chronic arthritic swellings. Galbanum is imported to some extent from the Levant, but chiefly from India, through Bombay

See Waring, *Manual of Practical Therapeutics*, 3d ed., 1871, p. 311; Flückiger and Hanbury, *Pharmacographia*, p. 285, 1874; Bentley and Trimen, *Medicinal Plants*, No. 128.

GALE, THEOPHILUS (1628–1678), a distinguished divine, was born in 1628 at King's Teignmouth, in Devonshire, of which place his father was vicar. In 1647 he was entered at Magdalen College, Oxford, where he took his B.A. degree in 1649, and M.A. in 1652. In 1650 he was made fellow and tutor of his college. He remained five years at Oxford, discharging actively the duties of tutor, and was then appointed to a church at Winchester. After the restoration he refused to submit to the Act of Uniformity, and was ejected from his parish. In 1662 he accepted the post of tutor to the sons of Lord Wharton, whom he accompanied to the college of Caen, in Normandy. He returned to England in 1665, and spent some years in literary work. The latter portion of his life he passed in London as assistant to the Rev. John Rowe, a dissenting minister, who had charge of an important church in Holborn. Gale succeeded Rowe in 1677, and died in the following year.

His principal work, *The Court of the Gentiles*, which appeared in parts in 1669, 1671, and 1676, is a strange storehouse of miscellaneous philosophical learning. It resembles the *Intellectual System* of Cudworth, though very inferior to that work both in general construction and in fundamental idea. Gale's endeavour is to prove that the whole philosophy of the Gentiles is a distorted or mangled reproduction of Biblical truths. Just as Cudworth referred the Democritean doctrine of atoms to Moses as the original author, so Gale tries to show that the various systems of Greek thought may be traced back to Biblical sources. Like most of the learned works of the 17th century, the *Court of the Gentiles* is chaotic and unsystematic, while its erudition is rendered almost valueless by the complete absence of any critical discrimination. The other writings of Gale are—*The Idea of Jansenism*, 1669; *Theophilus, or a Discourse of the Saint's Amity with God in Christ*, 1671; *Anatomy of Infidelity*, 1672; *Idea Theologiae*, 1673; *Philosophia Generalis*, 1676.

GALE, THOMAS (1636–1702), an eminent classical scholar, was born at Scruton, Yorkshire, in 1636. He was educated at Westminster School and at Trinity College, Cambridge, of which he became a fellow. In 1666 he was appointed regius professor of Greek, in 1672 headmaster of St Paul's School, in 1676 a fellow of the Royal Society, and also prebendary of St Paul's, and in 1697 dean of York. He died at York in 1702. Gale published a collection of *Opuscula Mythologica, Ethica, et Physica*, and editions of several Greek and Latin authors, but his fame rests chiefly on his collection of old works bearing on early English history, entitled *Historiæ Anglicanæ Scriptores* and *Historiæ Britannicæ, Saxonice, Anglo-Danicæ, Scriptores XV*. He is the author of the inscription on the London Monument in which the Roman Catholics are accused of having originated the great fire.

GALEN, CHRISTOPH BERNHARD VAN (1600–1678), prince-bishop of Münster, was descended from a noble family in Westphalia, and was born 15th October 1600. After attending the Jesuit college at Münster, and the universities of Cologne, Mainz, Louvain, and Bordeaux, he was engaged in several diplomatic missions. Subsequently he became colonel in the army of the elector Ferdinand of Bavaria, and took part in campaigns against the French and Swiss. On the death of Ferdinand he was chosen prince-bishop of Münster, but scarcely had he succeeded in restoring the internal prosperity of his territories, and freeing them from foreign invaders, when an insurrection arose in the city which he was unable completely to subdue till 1661. In 1664 he was chosen, along with the margrave Frederick of Baden, joint administrator of military affairs of the Rhenish alliance in its war against the Turks. After the peace that followed the victory of St Gotthard, he concluded an alliance with Charles II. of England against the Netherlands; but through the intervention of Louis XIV. an arrangement was made in 1666 by which the king of the Netherlands vacated all the territories of Galen, with

the exception of the town of Borkelo. In 1672, in conjunction with France, Galen renewed hostilities against the Netherlands, but in the same year suffered a severe defeat at Coevorden, and although, along with the French general Turenne, he afterwards obtained several successes, he concluded a peace in 1674, by which he resigned all the advantages he had gained. In the following year he entered into an alliance with the king of Denmark and the elector of Brandenburg against Charles XI. of Sweden, and in 1676 captured Stade, the capital of the duchy of Bremen, after which he took possession of that duchy and of several places in the duchy of Verden. Subsequently he became involved in a war with East Friesland, and only consented to evacuate that territory on payment of a large sum of money. He died at Ahaus, 19th September 1678.

The *Vie de Christophe Bernard de Galen, évêque de Münster*, was published at Rouen in 1679; J. Ab. Alpen's *De vita et rebus gestis Ch. Bern. de Galen* appeared at Koesfeld in 2 vols. in 1694, an abridgment of this work at Münster in 1790, and a more extended abridgment at Ulm in 1804; and Tucking's *Geschichte des Stifts Münster unter Galen* was published at Münster in 1865.

GALEN, or GALENUS, CLAUDIUS, called Gallien by Chaucer and other writers of the Middle Ages, the most celebrated of ancient medical writers, was born at Pergamus, in Mysia, about 130 A.D. His father Nicon, from whom he received his early education, is described as remarkable both for excellence of natural disposition, and for mental culture; his mother, on the other hand, appears to have been a second Xanthippe. In 146 Galen commenced the study of medicine, and in about his twentieth year he left Pergamus for Smyrna, in order to place himself under the instruction of the anatomist and physician Pelops, and of the peripatetic philosopher Albinus. He subsequently visited other cities, and in 158 returned from Alexandria to Pergamus. In 164 he went for the first time to Rome. There he healed Eudemus, a celebrated peripatetic philosopher, and other persons of distinction; and ere long, by his learning and unparalleled success as a physician, earned for himself the titles of "Paradoxologus," the wonder-speaker, and "Paradoxopœus," the wonder-worker, thereby incurring the jealousy and envy of his fellow-practitioners. Leaving Rome in 168, he repaired to his native city, whence he was soon sent for to Aquileia, in Venetia, by the emperors Lucius Verus and Marcus Aurelius. In 170 he returned to Rome with the latter, who, on departing thence to conduct the war on the Danube, having with difficulty been persuaded to dispense with his personal attendance, appointed him medical guardian of his son Commodus. In Rome Galen remained for some years, greatly extending his reputation as a physician, and writing some of his most important treatises. It would appear that he eventually betook himself to Pergamus, after spending some time at the island of Lemnos, where he learned the method of preparing a certain popular medicine, the "terra lemnia" or "sigillata." Whether he ever revisited Rome is uncertain, as also are the time and place of his death. According to Suidas, he died at the age of seventy, or in the year 200, in the reign of Septimius Severus. If, however, we are to trust the testimony of Abul-faraj, one of his Arabian biographers, his decease took place in Sicily, when he was in his eightieth year. Galen was one of the most versatile and accomplished writers of his age. He composed, it is said, nearly 500 treatises on various subjects, including logic, ethics, and grammar. Of the published works attributed to him 83 are recognized as genuine, 19 are of doubtful authenticity, 45 are confessedly spurious, 19 are fragments, and 15 are notes on the writings of Hippocrates.

Galen, who in his youth was carefully trained in the Stoic philosophy, was an unusually prolific writer on logic. Of the numerous commentaries and original treatises, a

catalogue of which is given in his work *De Propriis Libris*, one only has come down to us, the treatise on Fallacies in dictione (περὶ τῶν κατὰ τὴν λέξιν σοφισμάτων). Many points of logical theory, however, are discussed in his medical and scientific writings. His name is perhaps best known in the history of logic in connexion with the fourth syllogistic figure, the first distinct statement of which was ascribed to him by Averroes. There is no evidence from Galen's own works that he did make this addition to the doctrines of syllogism, and the remarkable passage quoted by M. Minas from a Greek commentator on the *Analytiques*, referring the fourth figure to Galen, clearly shows that the addition did not, as generally supposed, rest on a new principle, but was merely an amplification or alteration of the indirect moods of the first figure already noted by Theophrastus and the earlier Peripatetics.

In 1844 M. Minoides Minas published a work, avowedly from a MS. with the superscription *Galenus*, entitled *Γαλινοῦ Εἰσαγωγή Διαλεκτικῆς*. Of this work, which contains no direct intimation of a fourth figure, and which in general exhibits an astonishing mixture of the Aristotelian and Stoic logic, Prantl speaks with the bitterest contempt. He shows demonstratively that it cannot be regarded as a writing of Galen's, and ascribes it to some one or other of the later Greek logicians. A full summary of its contents will be found in the 1st vol. of the *Geschichte der Logik* (591-610), and a notice of the logical theories of the true Galen in the same work, pp. 559-577.

There have been numerous issues of the whole or parts of Galen's works, among the editors or illustrators of which may be mentioned Jo. Bapt. Opizo, N. Leonicens, L. Fuchs, A. Lacuna, Ant. Musa Brassavolus, Ang. Gadaldinus, Conrad Gesner, Sylvius, Cornarius, Joannes Montanus, Joannes Caius, Thomas Linacre, Theodore Goulston, Caspar Hoffman, René Chartier, Haller, and Kühn. Of Latin translations Choulant mentions one in the 15th and twenty-two in the following century. The Greek text was edited at Venice, in 1525, 5 vols. fol.; at Basel, in 1538, 5 vols. fol.; at Paris, with Latin version by René Chartier, in 1639, and in 1679, 13 vols. fol.; and at Leipzig, in 1821-33, by C. G. Kühn, considered to be the best, 20 vols. 8vo. An epitome in English of the works of Hippocrates and Galen, by J. R. Cox, was published at Philadelphia in 1846.

Further details as to the life and an account of the anatomical knowledge of Galen will be found in the art. ANATOMY, vol. i. pp. 802-804. See also René Chartier's Life, in his edition of Galen's works; N. F. J. Eloy, *Dictionnaire Historique de la Médecine*, s. v. "Galen," tom. i., 1778; F. Adams's "Commentary" in his *Medical Works of Paulus Aegineta*, London and Aberdeen, 1834; J. Kidd, "A Cursory Analysis of the Works of Galen, so far as they relate to Anatomy and Physiology," *Trans. Provincial Med. and Surg. Assoc.*, vi., 1837, pp. 299-336; C. V. Daremberg, *Exposition des Connaissances de Galien sur l'Anatomie, la Physiologie, et la Pathologie du Système Nerveux* (Thèse pour le Doctorat en Médecine), Paris, 1841; and J. R. Gasquet, "The Practical Medicine of Galen and his Time," *The British and Foreign Medical-Chirurgical Rev.*, vol. xi., 1867, pp. 472-488.

GALENA, a city of the United States, the capital of Jo Daviess county, Illinois, is situated on the Fever or Galena river, 6 miles above its junction with the Mississippi, and on the northern division of the Illinois Central Railroad, 180 miles W.N.W. of Chicago. The city winds around the base of rocky limestone bluffs, which spring rather abruptly from the river on both sides, and the streets rise above one another, and are connected by flights of steps. It is the commercial depôt of an extensive and fertile district, but owes its prosperity chiefly to the species of lead from which it takes its name, and the mines of which surround it in all directions, underlying, more or less densely, an area of over 1,500,000 acres. In these mines copper is also found in combination with the galena. In the earlier years the produce of the mines found its way by water to St Louis, but in 1829 the first load, 3000 lb, was conveyed overland to Chicago. In 1846 the yield reached its highest point of 50,000,000 lb; in 1852 it was 40,000,000; and in 1877 only 3,300,000. This diminution is due to the absence of the expensive appliances necessary for deep

mining. Meanwhile zinc ore has been discovered, of which 12,000,000 lb were mined in 1877. The lumber produce is also considerable, averaging 7,000,000 feet annually. The principal buildings are the German-English normal school, the high school, and the building in which are included the custom-house and post-office. Galena has an iron-foundry, flour-mills, woollen mills, saw and planing mills, besides furnaces and manufactories for lead, zinc, copper, and furniture. Mining commenced in 1820, and in 1822 the United States began to grant leases of the mineral lands. The first street was laid out in 1826; village government was legalised in 1837, and a city charter granted in 1839. Population in 1850, 6004; in 1860, 8196; and in 1870, 7019, of whom 2473 were foreigners.

GALESBURG, a city of the United States, the capital of Knox county, Illinois, is situated at the junction of the Burlington and Peoria branches of the Chicago, Burlington, and Quincy Railroad, 163 miles W.S.W. of Chicago, and is the centre of a farming district of great fertility. It has several extensive manufactories of agricultural implements, besides carriages and waggons, and also contains the machine-shops and car-works of the railroad company. It is the seat of two colleges, Knox College (Congregational), founded in 1841, and Lombard University (Universalist), founded in 1852, to both of which female students are admitted. Population in 1860, 4953; and in 1870, 10,158, of whom 3136 were foreigners.

GALIANI, FERDINANDO (1728-1787), one of the most celebrated, if not one of the soundest, political economists of Italy, was born at Chieti on the 2d of December 1728. For his early education and opportunities of advancement in life he was less indebted to his parents than to his uncle, Monsignor Celestino Galiani. By his care, and at his expense, Galiani received the best education which Naples and Rome could then furnish, becoming qualified for an ecclesiastical career at a time when a clever abbé might hope to fill with profit and reputation important offices in the state as well as in the church. Galiani gave early promise of distinction as an economist, and even more as a wit. At the age of twenty-two he had produced two works by which his name became widely known far beyond the bounds of his own Naples. His taste for economic studies had been developed in the society of such men as Genovesi and Intieri, and prompted the composition of his *Trattato della Moneta*, in which many aspects of the question of exchange are set forth, always with a special reference to the state of confusion then presented by the whole monetary system of the Neapolitan Government. Galiani's fame as a humorist dated from the appearance of the *Raccolta in Morte del Boia*, a work as popular in Italian literary circles during the last century as the *Rejected Addresses* and *Lon Gaultier Ballads* have been in our own. In this volume Galiani parodied with exquisite felicity, in a series of discourses on the death of the public hangman, the style of the most pompous and pedantic Neapolitan writers of the day. Galiani's political knowledge and social qualities now pointed him out to the discriminating eye of Charles III., and his liberal minister Tanucci, as one eminently fitted to serve the Government as a diplomatist in France. He was therefore attached in the character of secretary to the Neapolitan embassy at Paris. Thither he repaired in 1759, at a time when a change in the relations between the courts of Paris and Vienna was about to exercise an influence on the course of the Seven Years' War, when the different Bourbon courts were engaged in a common action against the Jesuits, and when economic science held a foremost place in the speculations of the most eminent French writers. Galiani is chiefly remembered by posterity by the part which he took in these economic discussions. His *Dialogues sur les blés*, though published after his return to Naples, produced on its appearance a great

impression, and has again and again furnished to future controversialists arguments more specious than solid against the liberty of exporting corn. The criticism of Voltaire, that Galiani's volume united the wisdom of Plato and the wit of Molière, will not be accepted as a decisive judgment on the merits of the treatise; but it may be viewed as a tolerably fair test of the regard in which it was held by Galiani's contemporaries. Galiani returned to Naples after a ten years' residence in Paris, where his reputation as a wit had long surpassed that of an economist or a statesman. Until his death at Naples, on October 30, 1787, he kept up with his old Parisian friends a correspondence, of which the tone on his side can only be compared to the wailing and howling sent forth by Ovid during his banishment to the shores of the Euxine. Absence from Paris was with him the synonym of social and literary death.

To the common editions of Galiani which are found in great public libraries must be added the essay recently published at Naples, *L'Abate Galiani*, by Alberto Margheri, 1878, and the copious extracts from his correspondence with Tanucci, likewise published very recently in the new series of Viessesux's *L'Archivio Storico*, Florence, 1878.

GALICIA, in German *Galizien*, and in Polish *Halicz*, a crown-land of Austria which comprises the old kingdoms of Galicia and Lodomeria, the duchies of Auschwitz and Zator, and the grand-duchy of Cracow. Towards the N. and E. it has an extensive and irregular frontier continuous with the Russian empire; in the S.W. it meets the Hungarian territory along the ridge of the Carpathian Mountains; its western borders, which are of small extent, touch both Austrian and Prussian Silesia; and in the S. it is bounded by the province of Bukowina, which was separated from it in 1849. As its area is 30,299 square miles, or more than 10,000 square miles greater than that of Bohemia, it is the largest of all the crown-lands of Austria. The population in 1869 was 5,418,016, which showed an increase since 1857 of 785,150. Of the whole 2,660,518 were males, and 2,757,498 females. The density was greatest in the circles of Biala, Tarnow, and Cracow, and least in the circle of Radworna. In 1876 the total was 6,000,326.

About a third of the whole area of Galicia is occupied by the Carpathians, and the greater proportion of the remainder consists of the terraces by which the mountain system gradually sinks down to the great eastern plains of Russia. Only a very small district near the Vistula can properly be described as lowland. The two most prominent summits of the Galician Carpathians are the Babia Gora or Women's Mountain, 5648 feet above the level of the sea, and the Waxmundska, 7189. Of the famous massif of the Tatra, hardly a fourth is within the Galician boundaries.

By its rivers Galicia belongs partly to the basin of the Baltic and partly to the basin of the Black Sea. The Dunajec, the San, and the Premsza, tributaries of the Vistula, are the navigable streams of the western region; and the Dniester, which is the principal river of the east, is navigable as far as Czartoria. There are few lakes in the country except mountain tarns; but considerable morasses exist about the Upper Dniester, the Vistula, and the San, and the ponds or dams in the Podolian valleys are estimated to cover an area of 208 square miles. Of the 35 mineral springs which can be counted in Galicia, the most frequented are Konopowka, south of Tarnopol, and Lubian and Sklo, west of Lemberg. The last is a good example of the intermittent class. The Galician climate is exceedingly severe, the range of temperature being nearly 145°. In July and August the mean temperature is 66° or 67° Fahr.; in March it is 32° or 33°. Winter is long, and the snowfall, which often begins in the early part of October, is very abundant. At Cracow the annual precipitation is

about 23 inches, and at Lemberg about 28. Rather more than 6 per cent. of the surface of Galicia is unproductive. Forests occupy upwards of 4 million acres, but they are so badly managed that in some districts straw has to be used as fuel; 1,550,128 acres are devoted to pasture, 8,486,358 are under tillage, and 3,007,024 are under gardens and meadows. Barley, oats, and rye, are the prevailing cereals; but wheat, maize, and leguminous plants are also cultivated, and hemp, flax, tobacco, and hops are of considerable importance. In 1873 the whole crop of cereals amounted to 9,878,563 bushels; and there were 2,016,326 bushels of pulse, and 65,581,331 bushels of potatoes. In 1869 the number of horses in the crown-land was 695,610; of asses and mules, about 2000; of cattle, 2,070,572; sheep, 966,763; goats, 35,825; and swine, 734,572. The stocks of bees were upwards of 257,490, and the yearly produce of honey and wax is about 18,300 and 7166 cwt. respectively. In West Galicia there are mines of coal, ironstone, and zinc ore; and in Eastern Galicia a certain quantity of lignite is obtained. The iron ore is poor, containing only 10 or 11 per cent. of metal; and in 1873 the out-put did not exceed 108,546 cwt. Salt is procured both from mines and from salt-springs in sufficient abundance to make it an article of export to Russia. The great factory at Kalusz for the making of potash was closed in 1875, the company having failed; and the exploitation of the rich petroleum springs of East Galicia languishes for lack of capital. Cracow is the centre of the iron manufacture, but it is of comparatively small development. Tile works are very numerous; stoneware is produced in a few establishments; and the glass works number about 15. In 1874 there were 237 breweries, 598 distilleries, and 3746 mills,—no fewer than 3524 of the mills being driven by water and 172 by wind. Cigars are manufactured at Monasteryska and Winniki, Cracow, Jupielnica, and Zablotow. The textile industries are for the most part very slightly developed, but the linen trade employs 11,255 looms. Railway traffic is rapidly increasing. There is a large transit trade down the river Dniester to Russia by means of light boats built at Zuravero, Halicz, Marianpol, &c., which are usually broken up for firewood when they reach Odessa; and all the navigable streams, both north and south, are used for the transport of wood from the forests. Large quantities of Galician timber thus find their way to Dantzic, Stettin, Hamburg, and Berlin. The country is divided into the eight districts of Lemberg, Zloczow, Tarnopol, Stanislawow, Sambor, Przemysl, Tarnow, and Cracow, which altogether comprise 74 administrative circles. There are in all 83 towns, 230 market villages, and 11,000 hamlets, the most populous places being Lemberg, 87,109; Cracow, 49,835; Tarnow, 21,779; Tarnopol, 20,087; Brody, 18,890; Kolomiya, 17,679; Drohobiez, 16,888; Przemysl, 15,185; Stanislaw, 14,479; Sambor, 11,749; Jaroslau, 11,166; Rzesznaw, 10,090; and Sniatyn, 10,305. The chief town is Lemberg, which is the seat of the royal imperial lieutenantcy or K. K. Statthalterei. According to the laws of 1861 the diet of Galicia consists of the three archbishops (those of the Roman Catholic, the Greek Catholic, and Armenian Catholic Churches), the three Roman Catholic bishops, the rectors of the universities of Lemberg and Cracow, 44 representatives of the larger landowners, 4 representatives of the capital, 3 representatives of the chambers of trade and industry, 16 from the towns and industrial centres, and 74 from the rural communes. Sixty-three members are sent to the imperial diet, of whom 20 represent the landowners, 13 the towns, 27 the rural communes, and 3 the chambers of trade, &c. The two principal nationalities in Galicia are the Poles and the Ruthenians—the former predominating in the west and the latter in the east. The Poles who inhabit the Carpathians are distin-