

grand total, 447,601: total of males of all denominations, 299,857; females, 147,744; average number of persons per house, 11; number of persons per square mile, 55,950. The length of the roads in the town is about 120 miles. The present governing body was created in accordance with the provisions of Act 6 of 1863 (Bengal Council). It consists of the justices of the peace for Calcutta, with a salaried chairman, who is a member of the civil service. All the members are nominated by the Government, but a deputy chairman is chosen by the justices out of their own body. As the justices are not in any sense representative, the power and responsibility are to a great extent centred in the chairman; but of late years, by means of departmental committees, the co-operation of the ordinary members has been enlisted. Out of about 100 justices who are resident in Calcutta exactly one-half are Europeans. In 1874 the ordinary revenue of the municipality amounted to £240,656, of which £160,000 was raised by rates, and £37,000 by licences. The ordinary expenditure for the same year amounted to £233,374, of which £80,000 was devoted to interest on loans and sinking fund, £32,000 to general expenses, £30,000 to roads, two items of £22,000 to lighting and water supply, and £13,000 to conservancy. Including capital account, receipts, loans, suspense account, and cash balances, the total amount at the disposal of the justices during the year was £433,938. The aggregate expenditure under both revenue and capital account amounted to £382,823. The total loan liabilities of the corporation are £1,466,060, and the total of interest and sinking fund payable yearly is £100,474. The average rate of municipal taxation per head of the population is about 10s. 8d. The most important undertaking under the care of the municipality is the water supply. The present system dates from 1865, when the sanction of Government was given to the construction of works which now pour upwards of 6 million gallons a day of filtered water into the city. The source of supply is from the Húglí at Palta, about 16 miles above Calcutta. The works there consist of two large suction pipes, 30 inches in diameter, through which the water is drawn from the river by three engines, each of 50 horse power nominal; the water is then passed into six settling tanks, each 500 feet long by 250 feet wide. Here it is allowed to stand for 36 hours, when it is permitted to run off to the filters, eight in number, the area of each being 200 by 100 feet. After filtration the water is made to flow over a marble platform, where its purity can be observed. It is then conducted to Calcutta by a 42-inch iron main. These works cost £525,432. They were finished in 1870, and connected with pipes laid under 100 miles of streets. The total number of house connections up to December 31, 1874, was 8159. The total quantity of water delivered during that year amounted to 2,524,566,300 gallons, being considerably over the estimated average of 6 million gallons daily, or about 13 gallons per head of the population. The total cost for the same year of the water-supply (inclusive of interest) was £55,547, or about 5d. per 1000 gallons.

The drainage works are on an equally effective scale. The main sewers are underground, and for the proper discharge of their contents in the direction of the Salt Lake, a pumping station is maintained at an annual cost of £3000. The system of underground drainage, although not entirely completed, had cost in 1874 a capital sum of £620,000. In 1863, on the constitution of the present municipality, a health officer with an adequate establishment was appointed. The practice of throwing corpses into the river has been put down, and the burning gháts and burial-grounds have been placed under supervision. All refuse and night-soil are removed by the municipality, and conveyed by a special railway to the Salt Lake. The town is lighted by a private gas company, 2723 gas lamps and 730 oil lamps being paid for at the public expense. The fire brigade consists of 2 steam fire-engines, and 5 hand engines, its annual cost being about £2000. The police of Calcutta is under the control of a commissioner, who is also the chairman of the justices. Beneath him there is a deputy-commissioner. The force consists of 4 superintendents, 155 subordinate officers of various grades, 1292 constables, and 6 mounted constables, maintained in 1873 at a cost of £41,227, of which Government contributed one-fourth. Several minor bodies, such as the river police, Government guards, &c., bring the entire strength of the force in the town and on the river to 2313 men. The great majority are natives, the number of European sergeants and constables being only 50.

In 1872-73 the statistics of education in Calcutta were as follows:—There were 3 Government colleges, namely, the Presidency College, founded in 1855, and attended by 709 pupils; the Sanskrit College, established in 1824, attended by 26 adult pupils, of whom 17 are Bráhmans; the Calcutta Madrasá or Mahometan College founded in 1781, number of pupils 528. There are also five colleges mainly supported by missionary efforts, aided by Government, and attended by 305 pupils. The total number of schools in Calcutta reported on by the Educational Department is 260, with 19,445 scholars; 157 of them are male schools, teaching 16,155 boys; the remaining 103 are for girls, and teach 3290 pupils. According to a different principle of classification, 36 schools teach English to 9445 boys, 121 teach the vernacular only to 6620 boys, 99 are vernacular

schools for girls with 3244 pupils, and 4 are normal schools, instructing 90 male teachers and 46 female. Of the total number of pupils in these schools, 47.7 per cent. are ascertained to be Hindus, 13.5 Christians, 2.6 Musalmáns, and the remaining 36.2 per cent. are of unascertained religions. The total ascertained expenditure was £25,011, of which sum the Government contributed £9160. The Government School of Art was attended in 1872-73 by 94 students, of whom 88 are Hindus, 4 Musalmáns, and 2 Eurasians. Calcutta has also an important school of medicine, or medical college, with a large hospital attached and every facility for a thorough scientific training.

The medical charities of Calcutta comprise the Medical College Hospital, just named the General Hospital, the Native or Mayo Hospital, the Municipal Pauper Hospital, and minor dispensaries. Of these the General Hospital is confined almost solely to Europeans. The total amount contributed by Government to these institutions is £30,000. The number of persons treated during the year 1872-73 was 251,039, of whom 20,805 were indoor patients. Of these 64.9 per cent. were men, 16.3 women, and 18.8 children. The rate of mortality in cholera cases was 454.3 for every thousand treated.

Mortuary returns are collected in Calcutta by the police inspectors, and compared with the registers kept by paid clerks of the municipality at the burning gháts and burial-grounds. In 1873 the total number of deaths thus ascertained was 11,557, or 25.82 per thousand. The death rate among the Christians was 31.5, among the Hindus 26.1, and among the Mahometans 24.7. The highest death rate was in January, November, and December, and the lowest in June and July.

The mean temperature of Calcutta is about 79° Fahr. The highest temperature recorded during the last 13 years is 106° in the shade, and the lowest 52° 7'. The extreme range is therefore a little over 53°, while the mean temperatures of December and May, the coldest and hottest months, are 68° 5 and 85° respectively. The average rainfall during 36 years has been 66 inches,—the highest rainfall on record being 93.31 inches in 1871, and the lowest 43.61 inches in 1837. By far the greater part of the rain falls between the months of June and October.

Like the rest of the seaboard of the Bay of Bengal, Calcutta is exposed to periodical cyclones, which do much mischief. The greatest pressure of the wind registered is 50 lb to the square foot. In the storms of 1864 and 1867 the anemometer was blown away. A great loss of life and property was caused along the Húglí by the storm of October 5th 1864. In Calcutta and its suburbs 49 persons were killed, and 16 wounded, 102 brick houses were destroyed, and 533 severely damaged; 40,698 tiled and straw huts were levelled with the ground. The destruction of shipping in the port of Calcutta appears greatly to have exceeded that on record in any previous storm. Out of 195 vessels only 23 remained uninjured, and 31, with an aggregate tonnage of 27,653 tons, were totally wrecked. On November 2, 1867, the force of the wind was not less violent, but there was no storm wave, and consequently the amount of damage done was much less.

THE PORT OF CALCUTTA, extending 10 miles along the Húglí, with an average width of working channel of 250 yards, and with moorings for 169 vessels, is under the management of a body of 9 European gentlemen styled "Commissioners for making Improvements in the Port of Calcutta." This body was constituted in 1870, and has since that date received considerable additions to its powers. In 1871 they were appointed "Bridge Commissioners," to take charge of the floating bridge over the Húglí, and to work it when completed. This bridge, finished in 1874, now supplies a permanent connection between Calcutta and the railway terminus on the Howrah side of the river. It is constructed on pontoons, and affords a continuous roadway for foot passengers and vehicles. The traffic returns for 41 weeks in 1875 were £7593; the cost of the bridge has been £220,000. The main duty of the Port Commissioners has hitherto consisted in providing accommodation, by jetties and warehouses, for the shipping and native boats, which carry on the great and increasing trade of Calcutta.

In the year 1873-74 the income of the commissioners from all sources was £114,709, and the expenditure £78,260. The total amount of capital expended up to that year was £580,339, including a debt of £400,123. The number of vessels arriving and departing in 1861-62 was 1793, with an aggregate tonnage of 1,337,632 tons; in 1873-74, the number of vessels was 1927, tonnage 2,437,447. The number of steamers, and especially of steamers passing through the Suez Canal, is greatly on the increase.

The growth of the commerce of Calcutta may be seen from the following figures:—In 1820-21 the total value of the exports and imports, including treasure, was £10,454,910; in 1830-31, £8,756,382; in 1840-41, £15,202,697; in 1850-51, £18,754,025; in 1860-61, £31,794,671; in 1870-71, £49,316,738. The value of the customs duties (including salt) was in 1820-21, £151,817; 1830-31, £121,321; 1840-41, £495,515; 1850-51, £1,038,365; 1860-61, £2,270,654; 1870-71, £3,548,926. Cotton goods first became an important article of import in 1824; oil seeds were first exported in 1835; the exports of jute on a large scale date from 1860, those of tea from 1864. Among the chief articles of import in 1870-71 were—apparel, value £186,767; beer, £140,859; coal, £109,185; cotton manufactured, £11,624,712; machinery, £194,198; metals, £1,311,547; railway materials, £710,357; salt, £652,632; spices, £150,150; spirits, £162,635; wine, £214,191; wood, £156,903; woollen manufactures, £347,116; treasure, £2,255,244. Government shipments, £981,557; total value of imports, £21,198,478. Among the chief articles of export in 1870-71 were—cotton raw, £2,020,159; cotton manufactured, £811,825; dyeing materials, £153,113; grain and pulse, £2,630,451; hides and skins, £1,573,655; indigo, £2,255,202; jute, £2,585,390; jute manufactured, £664,898; lac, £184,576; metals, £215,920; opium, £5,490,395; saltpetre, £440,133; seeds, £2,921,117; silk, £1,508,801; silk manufactured, £244,076; spices, £215,018; sugar, £674,149; tea, £1,117,712; tobacco, £152,716; woollen manufactures, £136,652; bullion and treasure, £1,021,638; Government treasure, £228,534; total value of exports, £28,118,260.

The internal trade of Calcutta is conducted partly by railway, and partly by water traffic. There is no railway station within the limits of the municipality, but three separate railways have their terminus in the immediate neighbourhood. The East Indian Railway, whose terminus is across the river at Howrah, brings down the produce of the North-Western Provinces and Behar, and connects Calcutta with the general railway system of the Peninsula. The Eastern Bengal Railway and the South-Eastern Railway have their terminus at Sialdah, an eastern suburb of Calcutta. The former is an important line running across the Delta to the junction of the Ganges and Brahmaputra at Goalandá. The latter is a short railway, intended to connect the metropolis with Port Canning, in the Sundarbans. The three chief lines of water traffic are—(1), the Calcutta canals, a chain of channels and rivers passing round and through the Sundarbans, open at all seasons of the year, and affording the main line of communication with the Ganges and the Brahmaputra; (2), the Nadiyá rivers, three in number, which branch off in a more directly southern course from the Ganges, above its junction with the Brahmaputra, and ultimately become the Húglí—these are with difficulty navigable during the dry season; (3), the Midnapur and Hijili canals, leading south towards Orissa.

(w. w. h.)
CALDANI, LEOPOLD MARCO ANTONIO (1725-1813), a distinguished Italian anatomist and physician, was born at Bologna in 1725. After holding various minor appointments, he was chosen assistant to the celebrated anatomist Morgagni at Padua; but disgusted with the envy which his distinguished position drew upon him, he removed to Venice. Soon after, however, he was appointed to the professorship of the theory of medicine, with the promise of being elected to succeed Morgagni, who was then old and infirm. In 1772 he published his *Elements of Pathology*, and soon afterwards the *Elements of Physiology*. In the same year he took possession of the chair of anatomy, vacant by the death of Morgagni, and endeavoured, though without success, to found an anatomical museum. At the age of seventy-six, though threatened with blindness, he published, with the assistance of his nephew, a valuable series of anatomical plates. He died in 1813, at the age of eighty-eight.

CALDER, SIR ROBERT (1745-1815), Baronet, was born at Elgin, in Scotland, July 2, 1745 (o. s.). He belonged to a very ancient family of Morayshire, and was the second son of Sir Thomas Calder of Muirton. He was educated at the grammar school of Elgin, and at the age

of fourteen entered the British navy as midshipman. In 1766 he was serving as lieutenant of the "Essex," under captain the Honourable George Faulkner, in the West Indies. Promotion came slowly, and it was not till 1782 that he attained the rank of post-captain. He acquitted himself honourably in the various services to which he was called, but for a long time had no opportunity of distinguishing himself. In 1796 he was named captain of the fleet by Sir John Jervis, and took part in the great battle off Cape St Vincent (February 14, 1797). He was selected as bearer of the despatches announcing the victory, and on that occasion was knighted by George III. He also received the thanks of parliament, and in the following year was created a baronet. In 1799 he became rear-admiral; and in 1801 he was despatched with a small squadron in pursuit of a French force, under Admiral Gantheaume, conveying supplies to the French in Egypt. In this pursuit he was not successful, and returning home at the peace, he struck his flag. When the war again broke out he was recalled to service, was promoted vice-admiral in 1804, and was employed in the following year in the blockade of the ports of Ferrol and Coruña, in which (amongst other ports) ships were preparing for the invasion of England by Napoleon I. He held his position with a force greatly inferior to that of the enemy, and refused to be enticed out to sea. On its becoming known that the first movement directed by Napoleon was the raising of the blockade of Ferrol, Rear-admiral Stirling was ordered to join Sir R. Calder and cruise with him to intercept the fleets of France and Spain on their passage to Brest. The approach of the enemy was concealed by a fog; but on July 22, 1805, their fleet came in sight. It still outnumbered the British force; but Sir Robert entered into action. After a combat of four hours, during which he captured two Spanish ships, he gave orders to discontinue the action. He offered battle again on the two following days, but the challenge was not accepted. The French admiral, Villeneuve, however, did not pursue his voyage, but took refuge in Ferrol. In the judgment of Napoleon, his scheme of invasion was baffled by this day's action; but much indignation was felt in England at the failure of Calder to win a complete victory. He was, nevertheless, again sent out in August, and prevented Villeneuve from effecting a junction with the French fleet at Brest. In consequence of the strong feeling against him at home he demanded a court-martial. This was held on the 23d of December, and resulted in a severe reprimand of the vice-admiral for not having done his utmost to renew the engagement, at the same time acquitting him both of cowardice and disaffection. False expectations had been raised in England by the mutilation of his despatches, and of this he indignantly complained in his defence. The tide of feeling, however, turned again; and in 1815, by way of public testimony to his services, and of acquittal of the charge made against him, he was appointed commander of Portsmouth. He died at Holt, near Bishop's Waltham, in Hampshire, August 31, 1818.

CALDERON DE LA BARCA, PEDRO (1600-1681), the most eminent representative of the Spanish national drama, was born in Madrid, January 17, 1600. His prosperous life was undistinguished by striking incidents. He received his education at Salamanca, and after having been, as would seem, for some years a retainer or dependant of various noblemen, in 1625 entered the army, where it is hinted that he did not distinguish himself. He had begun to write for the stage in 1622, and in 1636 he was summoned to court, and soon became habitually employed as a writer of court spectacles by King Philip IV., a munificent patron of authors and artists. He was also made a knight of Santiago, and saw some further military service in Cata

lonia; but in 1651 he entered the church, and from that period wrote nothing but spectacular plays for representation at court, and the religious pieces known as *Autos Sacramentales*. He received various ecclesiastical preferments from Philip IV., and prolonged his days in wealth and honour until his death on May 25, 1681. Very few traits of his personal character have been preserved, and little else can be extracted from the sonorous eulogium of his friend and biographer Vera Tassis than that he was held in esteem for gravity, urbanity, and modesty. A surer testimony to his character is the spirit of his works, which are animated throughout by a lofty ideal of honour and religion according to the conceptions of his age and country, and are wholly free from the usual impurity of the stage. He must evidently have been a highly accomplished man, possessed of a large stock of erudition.

The entire number of pieces comprised in Hartzbusch's edition of Calderon, which does not include the *autos sacramentales*, is 122. There are 72 *autos*. It is of course impossible to notice here more than a fraction of this prodigious mass of dramatic poetry. We shall briefly characterize the classes under which it admits of being distributed, adducing a few of the more remarkable dramas as representatives of the whole, and following in the main the admirable arrangement of Schack.

1. *Religious Dramas*.—Of these Schack reckons sixteen, including *The Stature of Prometheus* and *Life is a Dream*. This division comprises some of Calderon's most famous pieces, in particular *The Wonder-working Magician*, in which the brilliancy of his poetical imagination is displayed to the fullest extent, and by Shelley's translation of which he is hitherto best known in England. The subject—the voluntary surrender of a human soul to the Evil One—offers striking analogies and equally strong contrasts to Goethe's *Faust*. The comparison of the two pieces is most instructive, and most forcibly attests the vast progress in depth of thought and complexity of emotion of the modern over the mediæval world. *The Devotion of the Cross* is another of the most remarkable pieces of this class, rich in poetical beauties, and exhibiting Catholic antinomianism in its most unmitigated form. There is a deeper vein of thought in *Life is a Dream*, in which the poet is comparatively free from ecclesiastical influences, and which is also one of his most striking and original productions. *The Constant Prince*, founded on Don Ferdinand of Portugal's captivity, is the very flower of Spanish religion, courtesy, and chivalry, and, like *Life is a Dream*, is an excellent acting play. *The Schism of England* and *The Dayspring in Copacavana*, apart from their great poetical merits, are interesting as indications of the national feeling with regard to nearly contemporary events.

2. Nineteen of Calderon's dramas are classed as historical tragedies. These generally exhibit his talent for effective theatrical situation in the most advantageous light; but in psychological depth and truth he is far behind the great dramatic masters of other countries. The most celebrated of these pieces are founded on incidents in Spanish and Portuguese history, from the posthumous coronation of Ñez de Castro to the heart-rending story of Gomez Arias's *Leman*, and the powerful domestic tragedy of the *Alcalde of Zalamea*, which displays more individuality in the delineation of personal character than is usual with him. Nowhere can a fuller insight be obtained into the peculiarities of the Spanish character and the national ideal while the nation was still a great Catholic and Crusading power. Calderon's treatment of historical fact, it need hardly be said, is frequently as free as Shakespeare's. The most remarkable of his historical plays, whose plots are not derived from the history of his own country, are *No Monster like Jealousy*, a most powerful tragedy on the

story of Herod and Mariamne; *The Locks of Absalom*, so greatly admired by Shelley; and *Zenobia the Great*.

3. The subjects of twenty-four of Calderon's pieces are derived from mythology, chivalric romance, or novels. Most of these are merely spectacular, affording little scope for strictly dramatic power, but dazzling from the opulence of the poet's invention, and the sweetness and variety of his versification. He has here given his imagination the freest rein, and is nowhere more truly himself. *No Magic like Love*, a play on the story of Circe; *Echo and Narcissus*; and *The Bridge of Mantible* may be cited as characteristic examples.

4. Sixteen romantic dramas, generally melodramas or tragi-comedies, form the transition from Calderon's tragic to his comic theatre. None of his plays are more distinguished for ingenuity of conception and grace of style. *The Loud Secret* is perhaps the most celebrated, but the rest are of hardly inferior merit.

5. We now come to Calderon's comedies of intrigue, the so-called "comedies of cloak and sword," his delineations of the manners of his day, and of the actual human life around him. His range is an exceedingly limited one in comparison with that of the English dramatists. It hardly transcends the sphere of ordinary good society,—the valets and other representatives of the lower orders being for the most part merely conventional types. The motive of his pieces, moreover, seldom comprehends more than the two prime factors of love and jealousy. Within these limits, however, his perception is commonly correct, and his characters are depicted with more individuality and subtlety than in his more serious pieces. Even his high-flown strain of chivalric sentiment and his punctilious formality correspond to fact. They are artificial indeed, but not affected, for they actually represent the ideal of the best contemporary society, and represent the Spanish cavalier, if not precisely as he was, yet as he wished to be esteemed. The capital merit of these pieces, however, is the prodigious ingenuity of the plots, and the fertility of invention by which our attention is kept continually on the stretch. Calderon's expedients are inexhaustible; every fresh incident surprises, and none appears capricious or unnatural. Twenty-five plays are included under this head. *The Fairy Lady* and *'Tis ill keeping a House with Two Doors* are perhaps the most generally known; all however are nearly upon a level.

6. *Autos Sacramentales*.—A volume might be written upon this most peculiar of all the forms of the modern European drama. We can only describe it here as a development of the mystery or miracle play of the Middle Ages, designed like it for public representation on some specified religious occasion, and falling like it into two classes, the strictly Biblical play, of which Calderon's *Brazen Serpent* is an instance, and the religious allegory. The latter is Calderon's characteristic department, and nothing can surpass the boldness and quaintness of his personifications. Man, the World, Guilt, the Morning Star, the Synagogue, and Apostasy figure, for example, among his innumerable *dramatis personæ*. The riches of his invention and his diction are nowhere more abundant; but the profoundness of his philosophy and theology have been greatly over-estimated by writers of his own religious communion.

7. *Minor Pieces*.—Calderon also composed numerous farces, interludes, and other brief occasional pieces, the greater part of which are lost.

Calderon received the Spanish drama from his predecessors in a flourishing condition, exhausted, in conjunction with his numerous gifted contemporaries, every phase of which it allowed, and left it at his death in a condition of total decay. His retirement from the theatre in middle

life was probably occasioned by the conviction that it admitted of no further development. In his relation to his predecessors he appears as an innovator, chiefly in the simplification of metrical forms. Though at least half of each of his plays is still in complete rhyme, he nevertheless resorts to assonances more liberally than his forerunners. If, on the one hand, this brings him nearer to the language of reality, it on the other sometimes betrays him into verbosity. In his earlier pieces the exuberance of his genius, and the example of the popular lyrical poets of the day, tempted him into conceits and extravagances of diction which are less apparent in his later works. He yet has more fire and colour than any other of the Spanish dramatists, and may be described as the one among them in whom the Oriental element is most largely developed. He shares with his rivals the reproach of repetition, of calculated stage effect, and of stereotyped forms of expression, which become at length mere convention and surplage. The peculiarity of the form of composition cultivated by Calderon renders it difficult to assign his relative rank among poets of the first class. The Spanish drama is a creation *sui generis*, and all attempts at a comparison between it and other theatrical forms must be futile for want of a common measure. The art of Calderon attains its purpose not less completely than that of Shakespeare or Sophocles; all that can be said in its disparagement is that this purpose is less elevated. It falls below the art of Greece, inasmuch as it makes no pretension to represent the ideal either of divinity or of manhood; and below the art of Shakespeare, inasmuch as, instead of offering a mirror to universal nature, it is restricted to the representation or poetic expression of a temporary and accidental phase of manners. It is the most perfect embodiment conceivable of all the romantic and chivalrous elements of Spanish national life; there is not, perhaps, such another example in literature of the wonderful power of poetry to eliminate all baser matter, and present the innermost idea of a society in untarnished brightness. Calderon is also the most perfect representative of the state of feeling induced by unconditional allegiance to the Catholic Church, at the critical moment when the scales of faith and knowledge are yet in equilibrium. Great Catholic poets may yet arise, with even more than Calderon's depth of conviction, but none can again enjoy Calderon's serenity. There is no disturbing element in his world, either of innovation or of resistance; he is everything which by theory a consummate Catholic poet ought to be. It is therefore but logical that he should be set up as the rival of Shakespeare by the partisans of the mediæval revival, of whom Frederick Schlegel is the most eminent literary representative. It would be a waste of time to contrast the conventional uniformity of his pieces, reducible to five or six types at most, with Shakespeare's infinite variety; the faint individualization of his characters with Shakespeare's miraculous subtlety; his class prejudices with Shakespeare's universal sympathy; his stereotyped cast of thought with Shakespeare's comprehensive wisdom. It is enough to remark, that greatly as he is admired and widely as he is read, he has not contributed a single appreciable element to the literature of any country but his own, while Shakespeare has revolutionized the taste of Europe. His relation to his contemporaries is also different from Shakespeare's. Shakespeare is a sun among stars; Calderon the brightest star of a group. We shall render him most justice, not by instituting a vain parallel with Shakespeare, or even Goethe, but by regarding those qualities which he necessarily has in common with all poetical dramatists. In these respects it is impossible to praise him too highly. Nothing can surpass the fertility, ingenuity, and consistency of his constructive faculty on the one hand, or the affluence of

his imagery and melody of his versification on the other. The poet and the playwright are happily combined in him; the development of his plots holds the spectator in suspense from first to last, and the diction, except in designedly comic passages, seldom lapses below the pitch of dignified and exquisite poetry. Even the extravagance of his hyperboles appears almost natural amid the general torrent of impassioned feeling. The interminable length of many of his *speeches* is certainly a fault, and is partly attributable to the fluency and facility of his metre. If we regard him as a tragic poet, we must allow him power, restricted by the absence of any philosophical view of human nature or destiny. As a comic poet he excels in the *vis comica* of situation; but his dialogue is more remarkable for vivacity than humour. His proper and peculiar sphere is that of the fancifully poetical. His inventiveness is here equal to any feat of construction, and his imagination to any opulence of adornment. After Shakespeare and Aristophanes, no dramatist has understood so well how to transport his reader or spectator to an ideal world.

Calderon's metrical forms, although, as already stated, less rich and intricate than those of the earlier Spanish dramatists, are nevertheless a great obstacle to his being adequately translated. No language but the German, in fact, is adapted to render him. Gries's version in that language is very celebrated. Schlegel and Schack have rendered some plays very well; and the *autos* have been translated by Lorinser. Shelley's version of some scenes of the *Wonder-working Magician* is incomparably the best English interpretation, and no reproduction in our language will ever be perfectly successful that does not proceed upon his principle of intermingling blank verse with irregular lyrical metres. Mr Fitzgerald and Mr D. F. M'Carthy, two excellent translators, have erred,—the former by resorting to blank verse entirely, the latter by discarding it altogether. Mr Fitzgerald's version is too English, and Mr M'Carthy's too Spanish; the peculiar delicacy of the assonant rhyme, which he has endeavoured to preserve throughout, is entirely imperceptible in our language. Mr Fitzgerald has rendered six plays, and Mr M'Carthy eleven. There is perhaps no more congenial field for a writer of a poetical temperament than the translation of Calderon.

The chronology of Calderon's pieces is unsettled, but much has been done to adjust it. Many of them were printed during his life, but the first collective edition was that published in 1685 by his friend Vera Tassis. It is not quite complete, and some plays, including most of the author's dramatic trifles, are irremediably lost. The best edition is that by Hartzbusch in Aribau's *Biblioteca de Autores Españoles* (4 vols., Madrid, 1848-50). It does not contain the *autos*, which were published at Madrid in 1717 and in 1759-60. There is also a good edition by Keil (Hamburg, 1827-30). Accounts of Calderon will be found in Bouterwek, Ticknor, and other historians of Spanish literature; but the best and fullest is that by Schack in his *Geschichte der dramatischen Literatur und Kunst in Spanien*, vol. iii. (Berlin, 1846.) (R. G.)

CALDERWOOD, DAVID (1575-1650), an historian of the Church of Scotland, was born in 1575. He was educated at Edinburgh, where he took the degree of M.A. in 1593. About 1604 he became minister of Crailing, near Jedburgh, and he speedily began to take part in the ecclesiastical proceedings of that period, and was conspicuous for his resolute opposition to the introduction of Episcopacy. In 1617, while James was in Scotland, a Remonstrance which had been drawn up by the Presbyterian clergy was placed in Calderwood's hands. He was summoned to St Andrews and examined before the king, but neither threats nor promises could make him yield, and deliver up the roll of signatures to the Remonstrance. He was deprived of his charge, committed to prison at St Andrews, and afterwards removed to Edinburgh. The privy council, which long exercised an undefined and despotic jurisdiction, ordained him to be banished from the kingdom for refusing to

acknowledge the sentence of the High Commission. On giving security to banish himself from the kingdom before the ensuing Michaelmas, and not to return without the royal licence, he was released from prison. He accompanied Lord Cranston to Carlisle, where that nobleman presented a petition in his favour to the king; but it was followed by no beneficial result. The subsequent application of Lord Cranston to the privy-council, and to the bishops, was attended with no better success. He lingered in Scotland, publishing a few tracts, till the 27th of August 1619, when he sailed for Holland. Where he chiefly resided in that country we are not informed, but Bishop Guthrie states, that "in the time of his exile he had seen the wild follies of the English Brownists in Arnheim and Amsterdam." During his residence in Holland he published various works, and, among the rest, his *Altare Damascenum*. At one period his enemies supposed him to be dead; and he has recorded a very extraordinary attempt to impose upon the world a recantation fabricated in his name. Calderwood appears to have returned to Scotland in 1624, and he was soon afterwards appointed minister of Pencaitland, in the county of Haddington. During the remainder of his life he continued to take an active part in the affairs of the church, and he introduced in 1649 the practice, now confirmed by long usage, of dissenting from the decision of the Assembly, and requiring the protest to be entered in the record. His last years were devoted to the preparation of a *History of the Church of Scotland*. In 1648 the General Assembly urged him to complete the work he had designed, and voted him a yearly pension of £800. He left behind him an historical work of great extent and of great value, not indeed as a masterly composition, but as a storehouse of authentic materials for history. An abridgment, which appears to have been prepared by himself, was published after his death. An excellent edition of the complete work was published by the Wodrow Society, 8 vols. 1842-49. The manuscript, which belonged to General Calderwood Durham, was presented to the British Museum. A copy, transcribed under the inspection of Wodrow, is among the archives of the church; another belongs to the library of the university of Glasgow; and, as Dr M'Crie has stated, "in the Advocates' Library, besides a complete copy of that work, there is a folio volume of it, reaching to the end of the year 1572. It was written in 1634, and has a number of interlineations and marginal alterations, differing from the other copies, which, if not made by the author's own hand, were most probably done under his eye." Calderwood died at Jedburgh on the 29th of October 1650, aged seventy-five. He appears to have been a man of unbending integrity, fearless in maintaining his opinions, and uniformly consistent in his professions; but as human virtues are never perfect, his decision of character had some tendency to deviate into that obstinacy from which good men are not always exempted.

CALEDONIA, used in general somewhat loosely to denote the northern portion of Britain during the period of the Roman occupation of the island, had originally a more restricted application. It is proposed in this article to give, from a geographical as well as an historical point of view, a brief account of what seems to have been known regarding it in ancient times.

The word *Caledonia* is first met with in the fourth book of Pliny's *Historia Naturalis* (circa 77 A.D.), where, in the very meagre notice of Britain, the Caledonian forest (*Caledonia sylva*) is given as the northern boundary of the Roman part of the island. Its next appearance is in the *Agricola* of Tacitus (96 A.D.). Here, both in the brief geographical description of Britain, chaps. x. and xi., and in the account of Agricola's campaigns, chaps. xxv.

xxxviii., Caledonia is unquestionably Britain north of the Firth of Forth. On turning to the geographer Ptolemy (circa 120 A.D.), we fail to meet with the term except as the name of one of the many tribes among which he has parcelled out the "Britannic Island, Albion." To explain this it is not necessary to assume that Ptolemy was ignorant of the wider acceptance in which Caledonia had recently come to be employed among the Romans. It is more reasonable to suppose that, as he avowedly drew the materials for his tables from earlier, chiefly from Tyrian sources, he judged it prudent to follow in the main long-recognized authorities. Yet even in Ptolemy we have an indication either of the importance of the Caledonians among their neighbours or of the occasional use of the word as a general name for all the northern tribes. Twice he gives the Deucaledonian Ocean as bounding Britain in the north, that is, after the necessary correction for his mistake in making the whole of the northern part of the island trend to the east instead of to the north, as washing the shores of modern Scotland on the west. Confused and inaccurate in some respects as the Alexandrian geographer's tables are, they, notwithstanding, contain a surprising amount of information regarding the leading features of the coast-line of Britain, the correctness of much of which can be verified by existing names. His account of the tribes and their towns, especially towards the north, is, as might have been expected, much less definite and trustworthy. In order to be able to give here some notice of the Ptolemaic geography of North Britain, Caledonia may for the moment be regarded as a synonymous term.

Ptolemy's error in turning the northern part of the island to the east has already been noticed. How he was led into it there are no means of determining. One effect of it is to exaggerate greatly the length of the Solway Firth and displace the Hebrides from their true position, as may be seen by referring to certain maps appended to several MSS. of the Geography and given with some editions of it. The error can easily be rectified; and when this is done the outline of the coast will be found to be wonderfully correct.¹ Commencing with the promontory of the Noouantai (Mull of Galloway) in the south-west and proceeding northwards along the shores of the Deucaledonian Ocean, we have in succession the Bay of Rerigonios (Loch Ryan), the Bay of Ouindogara (Ayr), the estuary of the Klota (Clyde), the Bay of Lelaamnonios (Loch Fyne), Cape Epidion (Mull of Kintyre), the outlets of the River Longus (Loch Linne?), outlets of the River Ituos, Bay of Ouolsas (Lochalsh), outlets of the River Nabaos, and Cape Tarouedoum or Orkas (Dunnet Head). Coming down the east coast, said to be washed by the German Ocean, we find Cape Ouirouedroum (Duncansbay Head), Cape Oueroubium (Noss Head?), the outlets of the River Ila, the High Bank, outlets of the River Loxa, estuary of the Ouarar (Moray Firth), estuary of the Touaisis (Spey?), outlets of the River Kelnios (Deveron?), the promontory of the Taizalai (Kinnaird's Head), outlets of the River Deoua (Dee), estuary of the Taoua, outlets of the River Tina (Tay), estuary of the Boderia (Firth of Forth), outlets of the River Alaunos, outlets of the River Ouedra (Tyne?). On the south, bounded by the Hibernian Ocean, we have the peninsula of the Noouantai (the Rhinns of Galloway), outlets of the River Abrouannos (Luce?), estuary of the Iena (Cree?), estuary of the Deoua (Dee), outlets of the River Noouios (Nith), outlets of the Itouna (Eden).

The country is represented as inhabited by the following

¹ The orthography of the names that follow is that of the text of Ptolemy (Wilberg's), and not of the Latin translation. With a few exceptions they are evidently intended to express native terms by means of Greek (perhaps originally Tyrian) characters, and it seems undesirable to obscure them further by presenting them in those of another language.

tribes, sixteen in number:—the Noouantai, dwelling under (i.e., east) of the peninsula of the same name (Wigtownshire), their towns Loukopibia and Retigonion; east of them the Selgouuai (along the Solway Firth, and inland), their towns Karbantorigon, Ouxellon (Dumfries?), Korda, Trimontion; still further east, the Otadinoi, probably along the south-east coast, their towns Kouria and Bremerion; and the Damnonioi, occupying apparently the basins of the Clyde, Forth, and Tay (in part), their towns Kolania, Ouandouara (Ayr?), Korra, Alauca (Stirling?), Lindon, Ouiktoria (near Perth); the Kaledonioi, in the district from Loch Fyne to the Moray Firth, with the Caledonian forest to the west of them; eastward the Ouakomagoi (Banff and parts of Moray and Aberdeenshire), their towns Banatia, Tameia, the Winged Camp, Touaisis; east of these the Taizaloi (part of Aberdeenshire), their town Deouana (Aberdeen), and the Ouenicones (Forfarshire), their town Orrea (Forfar?); while occupying the west of Argyll and Inverness, part of Ross-shire, and the whole of Sutherland and Caithness, were in succession the Epidioi (in Kintyre), Kerones, Kreones, Karnonakai, Karinoi, Kornauioi (Caithness), Decantai, Lougoi, and Smertai. Near the promontory of Orkas were the islands of Okitis and Doumna; north of which lay the Orkades (Orkneys), about thirty in number, and still farther north Thoule (Shetland?).

Ptolemy's description is the only detailed one we have till we come down to the 16th century. It is matter for regret that the *Antonine Itinerary*, so useful an aid to the identification of the Ptolemaic towns in the southern part of the island, does not extend to the north, and that the lists of the anonymous geographer of Ravenna are so corrupt as to be almost useless. About the middle of the last century a new element of confusion was introduced into what was tangled enough previously, by the publication of Bertraw's well-known forgery *De Situ Britannia*, falsely ascribed to Richard of Cirencester, which being accepted as genuine by Roy, Chalmers, Stuart, and others, has been the means of giving currency to many unfounded notions regarding the nature and extent of the Roman conquests in North Britain.

The written history of Caledonia as well as of the rest of what is now Scotland commences with the warlike operations in Britain of Agricola, the lieutenant of the Emperor Domitian. (See BRITANNIA, p. 353.) In the third year of his command this famous general, who was fortunate enough to have his son-in-law Tacitus as his biographer, determined to attempt the annexation of the northern portion of the island. Accordingly, in 80 A.D., he advanced as far as the estuary of the Taus, or as Wex reads, the Tanans. Whatever the true reading may be, the supposition that on this occasion Agricola reached the Tay is untenable; though, whether the river referred to be the English Tyne, the Tweed, or the Scotch Tyne, it is impossible to say. The succeeding summer found him as far north as the isthmus formed by the firths of Clota and Bodotria (Clyde and Forth). On it he erected a line of forts, with the intention apparently of making it the northern boundary of the empire in those parts. In the following year he crossed the Clota, and overran additional territory "in that part of Britain which looks towards Ireland." Information having now reached him that the remoter and still unconquered tribes were forming a combination against the Romans, he resolved to anticipate them, and (83 A.D.) carried the war beyond the Bodotria into the country of the Caledonians. That summer an engagement was fought, which, though it resulted in favour of the invaders, taught the Romans that they had no ordinary foe to cope with. On the approach of winter both sides retired to their quarters to make preparations for renewing the struggle. Next season (84) Agricola, on resuming the offensive, found himself con-

fronted by a grand union of all the tribes of Caledonia, under a leader whom Tacitus names Galgacus. The Roman general had previously despatched a fleet to ravage the coast, and on continuing his march northwards, encountered the enemy, upwards of 30,000 strong, near Mount Graupius; for there can be little doubt that this, the reading of Wex and Kritz, ought to be adopted instead of the Grampius of the common editions. The exact locality of the conflict that ensued has been the theme of much profitless controversy; but we shall probably not greatly err in placing it somewhere on the borders of Kincardineshire. General Roy, whose conjecture is usually followed, fixed on Ardoch in Perthshire. A careful study, however, of the whole narrative leads one to look for the field of battle farther north, and nearer the coast. Tacitus, writing on the model of Thucydides and Livy, has put into the mouth of each leader, on the eve of the engagement, a speech of his own composition, in which he describes the feelings that may be supposed to have actuated the hostile armies. That ascribed to Galgacus is a splendid specimen of polished sarcasm, mixed with impassioned appeals to the patriotism of his hearers. Might, however, prevailed over right, and the Caledonians were defeated with a loss of 10,000 men. Agricola, now thinking he had pushed his conquests far enough, made no attempt to pursue his beaten foe, but at once led his army back to the territory of the Boresti (or Horesti), whose name is probably preserved in the modern Forfar. Here he gave orders to the commander of his fleet to sail round the island, a feat which the latter accomplished. Soon after he himself was recalled to Rome by his jealous master.

Notwithstanding Agricola's success, the Romans seem to have been quickly obliged to abandon part of their conquests, for in less than forty years (129 A.D.) Hadrian's wall, which ran from the Tyne to the Solway, became the northern limits of their empire in Britain. About twenty years later a second Agricola appeared in the person of Lollius Urbicus, the lieutenant of Antoninus Pius. Almost nothing is known of his actions, but he seems to have once more carried the arms of Rome to the Clyde and Forth, if not beyond them, and to have erected on the line of Agricola's forts the more substantial work now known by the name of the emperor he served (see ANTONINUS, WALL OF). The natives must soon have recovered the lost ground; but scarcely anything is known henceforth of the state of affairs in the north till 208, when, if we may trust the historian Dion Cassius, as abridged by Xiphiline, the Emperor Severus determined to attempt the subjugation of the whole island. At that time the two most powerful tribes of North Britain were the Mæatae, close to Hadrian's Wall, and the Caledonians beyond them. Protected by their native fastnesses, the latter offered him such a resistance that, without being able to bring them to a decisive engagement, he lost through disease, fatigue, and the sword, no fewer, it is said, than 50,000 men. Having reached what is termed the northern extremity of the island, but which was in all likelihood merely the northern coast of Aberdeenshire, Severus retreated southwards in a very feeble state of health, partly induced by the fatigues he had undergone. A league formed the next year between the Caledonians and the Mæatae, both of whom had already cast off his authority, led him to make preparations for a new campaign, with the avowed determination of extirpating the whole race. In the midst of these, however, he died at York in 210.

For a whole century afterwards the ancient writers are almost silent regarding Caledonia. In the year 310 we hear for the first time of the Picts; and in 367 Theodosius, an able Roman general, was sent into Britain by Valentinian I. to defend the Britons of the south against the