

fessors Lehmann and Rochleder. A revision of the *Handbuch* by Kraut, in two parts, has since appeared. Of the fourth edition an English translation by H. Watts was published by the Cavendish Society in 1848-59. Gmelin was the author also of *Versuch eines neuen chem. Mineralsystems* (Heidelberg, 1825), and of numerous scientific papers. With Tiedemann he wrote *Versuche über die Wege auf welchem Substanzen aus dem Magen und Darmkanale in das Blut gelangen* (Heidelberg, 1820), and *Die Verdauung* (2 vols., Heidelberg, 1826-27).

GMELIN, SAMUEL GOTTLIEB (1743-1774), an eminent naturalist, nephew of J. G. Gmelin (see above), was born at Tübingen, June 23, 1743. He graduated there as M.D. in 1763, went to St Petersburg in 1767, and in 1768, with Pallas, Guldenshtädt, and Lapuchin, commenced a journey for the scientific exploration of the south-east possessions of Russia. Having visited in succession the western districts of the Don, the Persian provinces to the south and south-west of the Caspian Sea, the regions of the Volga, and the eastern borders of the Caspian, he in 1774 was on his way back to St Petersburg when he was seized as a hostage by Usmei Khan, of the Kaitak tribe, through whose ill-treatment he died on July 27th of the same year.

His principal works are *Historia Fucorum iconibus illustrata* (St Petersburg, 1768), and *Voyages dans différentes parties des l'Empire de Russie* (4 vols. 4to, St Petersburg, 1770-84).

GMÜND, a town of Württemberg, circle of Jaxt, formerly a free imperial town, is situated in a charming and fruitful valley on the Rems, here spanned by a beautiful bridge, 31 miles E.N.E. of Stuttgart. It is surrounded by old walls, flanked with towers, and has a considerable number of ancient buildings, among which are the church of the Holy Cross; St John's church, which dates from the time of the Hohenstaufens; St Leonard's church, situated on a height near the town, partly hewn out of the rock and much frequented by pilgrims; the chapels of St Joseph and God's Rest; and the Dominican convent, founded in 1204, now a house of correction. Among the modern buildings are the gymnasium, the drawing and tradeschools, the Roman Catholic seminary, the town hall, the royal deaf-mute and blind institute, the blind asylum, the lunatic asylum, and two hospitals. The industries include the manufacture of gold, silver, copper, bronze, and brass wares, silk and part-silk cloths, tobacco, wax, glue, leather, furniture, bone-dust, and lucifer matches. There is also considerable trade in corn, hops, and fruit. Population in 1875, 12,838.

Gmünd was surrounded by walls in the beginning of the 12th century by Duke Frederick the elder of Swabia. It received town rights from Frederick Barbarossa, and after the dying out of the Hohenstaufens became a free imperial town. In 1546 it was besieged and taken by the Protestants, and in 1793 it was burned by the Swedes. It retained its independence till 1803, when it came into the possession of Württemberg. Gmünd is the birth-place of the painter Hans Baldung and of the architect Heinrich Arler. In the Middle Ages the population was about 10,000.

GNAT, a name (Anglo-Saxon, *gnat*) properly applied to the members of the *Culicidae* (a family of the insect order *Diptera*, division *Orthorrhapha*, subdivision *Nematocera*, section *Eucephala*), but sometimes also used for the *Chironomidae*. The *Culicidae* consist of about 150 known species, of the genera *Culex*, *Anopheles*, *Aedes*, *Psorophora*, *Corethra*, &c.; they are distributed over the chief divisions of the world, and, in spite of their very feeble build, reach as far north as man has penetrated (having been found during Nares's recent Arctic expedition). As regards time, examples of a *Culex* and a *Corethra* have been discovered in the Tertiary beds of the Lower White River, Colorado. The *Culicidae* are distinguished from their immediate allies, amongst other characters, by having the parts of the mouth produced into a slender porrected rostrum, nearly half the length of the insect, and composed of many distinct pieces (seven, according to Westwood, who remarks that the mouth in these delicate creatures is formed of the same number of pieces, and on the same plan, as that of the

robust *Tabani*), and many-jointed palpi, very long and pilose in the male, in which sex the antennæ are plumose and 14-jointed. The fibrils of the antennæ are considered by Mayer as auditory organs. The usual special representative of the family is *Culex pipiens*, the common gnat, whose blood-sucking propensities have rendered it too well known. It pierces the skin with the needle-like lancets of its rostrum, which are barbed at the tips, and gradually inserts the whole of those organs, at the same time liquefying the blood by some fluid secretion, which apparently adds to the subsequent irritation. The female, recognizable by her more simple antennæ and palpi, alone attacks man, and, in default of her favourite food, will feed on the honey of flowers. This blood-sucking taste is shared by the allied *Simuliidae*. The dreaded mosquito is nothing but a species of *Culex*, so closely allied to *C. pipiens* that it is difficult to say where "gnat" ends and "mosquito" begins, though the original mosquito is a native of Cuba. The curious humming noise (from which the name *pipiens* is fancifully derived) accompanying the flight of the gnat is caused by the extremely rapid motion of its wings, which have been calculated to vibrate 3000 times in a minute,—the great relative bulk of the thoracic muscles accounting materially for this. In connexion with the gnat's wing it may be observed that, though apparently clear, "battledore scales" have been discovered upon it by microscopists. The habit of gnats to associate in clouds has been frequently noticed, from the poet Spenser downwards; and instances are even on record of their gatherings round church-spires having caused alarms of fire, from being mistaken for smoke. This apparently arises from the extreme spontaneity and ease of the individuals in their evolutions, which are so rapidly conducted as to enable them to fly unwet in a shower of rain. It has been observed that many of these large gatherings are exclusively composed of females. The transformations of the gnat have often been chronicled, and by none in a more interesting way than Réaumur. The female deposits her eggs in a little raft or boat-like mass, upon the surface of water, using her hind-legs while packing them together; the larvæ hatched from them are very active, diving in a jerky manner quickly, and often coming to the surface to breathe, suspending themselves head downwards, and taking in atmospheric air through a spiracle in one of the large tubes into which the end of the body subdivides. The pupæ are also capable of active motion by means of paddles at the tail, and also suspend themselves under the surface for respiratory purposes, though not breathing as in the larva, but through two little tubes on the back of the thorax. When the perfect insect makes its appearance, the pupa-skin is used by it as a floating foothold until it is ready to take to flight. So short a time is occupied by the entire series of metamorphosis that many generations are perfected in one summer.

GNESEN (Polish, *Gniezno*), the chief town of a circle in the Prussian province of Posen, government of Bromberg, is situated on the Wrzesnia, 30 miles E.N.E. of Posen. Besides the cathedral, which contains the remains of St Adalbert, there are nine Roman Catholic churches, and there is also a Protestant church, a synagogue, a clerical seminary, and a convent of the Franciscan nuns. The industries are cloth and linen weaving and brandy making. A great horse and cattle market is held annually. The population in 1875 was 11,203, of whom about half are Poles.

Gnesen is said to be the oldest town in Poland, and was the capital of the kingdom till 1320. It was made the seat of an archbishop early in the 11th century. It is still the seat of the cathedral chapter, but the archbishop now resides at Posen.

GNOSTICISM, a general name applied to various forms of speculation in the early history of the church. The term *gnōsis* is found in the Septuagint translation of the Old

Testament; and in the Apocryphal Book of Wisdom, denoting the knowledge of the true God, or knowledge communicated by Him. In the New Testament the word is frequently used by St Paul (1 Cor. i. 5, xii. 8; 2 Cor. iv. 6, x. 5), and in the second epistle of St Peter (i. 5, 6; iii. 18), to express the saving knowledge of God in Christ; and in the first epistle to Timothy occurs the significant phrase, "Oppositions of Science (*γνώσεις*) falsely so called." It may be inferred, therefore, that the use of the simple term, in a bad as well as a good sense, was not unknown to the apostolic age, although the expression *γνῶστικός* (Gnostic) is said not to be found till the beginning of the 2d century, when it was first employed by the sect of the Ophites, or, according to some, by Carpocrates. Both expressions were used by the early Christian fathers with the double meaning already indicated. Clement of Alexandria, in his *Stromata* or *Miscellanies*, entitles the enlightened or perfect Christian a Gnostic (*Strom.* i. 20, ii. 6). He points out at length the distinction between the true Gnostic and the disciples of false systems who laid claim to the name of Gnostics. It is only to systems of the latter kind that the name of Gnosticism is now applied.

The sources of Gnosticism are to be found in diverse forms of religious and speculative culture antecedent to Christianity, especially in the theology of the Alexandrian Jews, as represented in the writings of Philo, and again in the influences flowing from the old Persian or Zoroastrian religion and the Buddhistic faiths of the East. To the theosophic system of Philo, with its mixture of Platonic and Old Testament ideas, some of the most characteristic conceptions of Gnosticism are certainly to be traced, such as the infinite separation between God and the world, and the necessity of a mediating power or powers in the creation of the world. This class of ideas prevailed largely at the time of the introduction of Christianity, especially in Alexandria, which was the great meeting-point of Jewish and Hellenic culture. The more the state of the pre-Christian Jewish mind and Jewish literature is investigated, the more do we recognize everywhere a strange commingling of old with new thoughts, of tradition with philosophy, of religion with speculation. The age was in all its aspects eclectic, and the Jewish no less than the Gentile schools of the time were centres for the fusion of old streams of culture from many quarters, and the rise of broader intellectual tendencies. Ever since the captivity, Judaism had borne more or less the impress of the old state religion which it encountered in its exile. How far post-Exilian Judaism was moulded by Zoroastrian conceptions is a very difficult question; but no historical student can doubt that its cosmogony, its angelology, and even its anthropology, were largely modified by contact with Persia. But not only was Zoroastrianism active in and through Judaism. In itself, it spread westward, and became directly and indirectly both a precursor and a parent of Gnostic speculation. Certain forms of Gnosticism seem little else than adaptations of the Persian dualism to the solution of the great problem of good and evil. In other forms of it, again, the Pantheism of India seems to have been a pervading influence. This, too, has its representative in the Jewish schools of the time, in the secret doctrines of the Kabbala, which many carry considerably beyond the time of Christ, although the two books through which we alone know these doctrines—the *Book of Creation* and the book called *Zohar* or *Light*—are plainly of much later production. These doctrines sprang up in Palestine, and not among the Hellenistic Jews. The philosophy on which they rest is plainly pantheistic. Whereas the principle lying at the foundation of the theosophy of Philo makes almost an absolute distinction between the Supreme indefinable Source of all things and

the world, the philosophic postulate of the Kabbala is the identity of God and the world—the one being the Eternal Substance of which the other is the manifestation and form. "In place of the personal God, distinct from the world, acknowledged in the Old Testament, the Kabbala substitutes the idea of an universal and infinite substance, always active, always thinking, and in the process of thought, developing the universe. In the place of a material world distinct from God and created from nothing, the Kabbalist substitutes the idea of two worlds—the one intelligible, the other sensible,—both being, not substances distinct from God, but forms under which the Divine Substance manifests itself" (Mansel's *Gnostic Heresies*, p. 35).

Gnosticism is found reproducing one and all of these conceptions, with the additional idea of *redemption* directly borrowed from Christianity. In all its forms, it may be said to represent the efforts made by the speculative spirit of the time to appropriate Christianity, and to make use of some of its most fertile principles for the solution of the mysteries lying at the root of human speculation. The more advanced writers of the present day refuse to recognize Gnosticism as a *heresy*, or to speak of the Gnostics as deserters from the Christian Church. And they are right so far. The Gnostic schools were always so far outside the church. They were not *heretical*, therefore, in the ordinary sense. But it is no less true that Gnosticism, in all its developments, is only intelligible in connexion with Christianity. It was the impulse of Christian ideas which alone originated it, which constituted the vital force of thought that made it one of the most significant phenomena of early Christian history; and it is only its connexion with Christianity which can be said to make it any longer interesting.

The question as to the date of its origin has been much investigated of late by such writers as the late Dean Mansel among ourselves, and Lipsius, Harnack, and Hilgenfeld in Germany. Do we find traces of it in the New Testament writings? or are the supposed allusions to it there to be otherwise explained? It is well known that this question has an important bearing upon other questions as to the origin of some of the New Testament writings, and the special object for which these writings were composed. Without entering into details, or attempting to examine the several passages which may be supposed to contain allusions to Gnosticism in the New Testament, it may be said that such allusions, more or less definite, seem to occur in the later epistles of St Paul, especially the epistles to the Ephesians and Colossians, and in the Pastoral epistles. A supposed allusion has also been traced in the first epistle to the Corinthians, where the word *γνῶσις*, for the first time in the New Testament writings, is found in a depreciatory sense, in the phrase *ἡ γνῶσις φουοῖ, ἡ δὲ ἀγάπη οἰκοδομεῖ* (1 Cor. viii. 1). In so very general a use of the expression, however, even in its connexion with the question of eating meats which had been offered to idols, it must be held very doubtful whether anything more than a general meaning is intended. And the same remark applies to many even of the more defined modes of expression, such as *Pleroma* and *Æon*, which occur in the later epistles. The true explanation of all these phrases, as well as much else in St Paul's writings, is probably the fact that the spirit of Gnosticism, and the language which it afterwards developed and applied, were "in the air" of the apostolic age. Its modes of thought, as already seen, were prevalent in Philo and in other quarters, and the tendencies which were afterwards worked up into systems were no doubt in existence in the time of St Paul, and still more in the later apostolic time. It seems plainly against such tendencies, rather than against any special sects or schools, that the cautions of St Paul are directed. In the Apocalypse, and in the epistles and gospel attributed to St John, these tendencies are seen in a

more developed although hardly in a more distinct state. The second chapter (vv. 6-15) of the Apocalypse has been held to mention a sect of the Gnostics by name—the Nicolaitans—a sect supposed to derive its name from Nicolas, one of the seven deacons, who had departed from the faith and fallen into licentious doctrines and practices. Even in such a sect as this, however, we recognize rather the expression of those lax and restless tendencies which sought everywhere to corrupt the doctrines of the gospel, than any clear philosophical bias. Upon the whole, it may be concluded that what we see in the writings of the New Testament is exactly what we might expect. The Gnostical spirit is present, but Gnosticism is as yet undeveloped. The apostolic age is an age of transition, in which the speculative and ethical spirit of the time is everywhere seen encountering the new life of Christianity, and new seeds of creative thought are everywhere springing from the encounter. There are teachers of all kinds, especially Jewish teachers, busy throughout the Roman world. But Gnosticism properly so-called, as a series of speculative systems, is not yet born. Its approach is heralded by many tendencies forecasting it; but it is only in the Syrian and Alexandrian schools of the beginning of the 2d century that we see it coming forth into distinct shape. Men like Simon Magus and his pupil Menander, the former the opponent of St Peter, and again men like Cerinthus, the opponent of St John, may be called Gnostics. In such traditions of their teaching as survive, we see the workings of the Gnostical spirit—the spirit which sought to transmute the facts of Christianity into some ideological theory. But none of these leaders elaborated systems, or at least we are no longer able to trace with precision of outline the doctrines which they taught. Properly speaking, therefore, they are the precursors of Gnosticism, rather than the founders of Gnostic schools. It is implied by Irenæus (i. 25) that the followers of Carpocrates first called themselves Gnostics; and again by Hippolytus that this designation was first assumed by the Ophites (l. v.). But little can be gathered from writers like Irenæus, or even Hippolytus, as to the true order of development of the Gnostic systems. With the former, for example, Saturninus and Basilides stand not only before Carpocrates, but before Cerinthus, the Ebionites, and the Nicolaitans (i. 24, 26). The last thing to seek in the early fathers is either accuracy of chronology, or a clear sequence of thought. They handle topics, for the most part, quite irrespective of either; and the student is forced back mainly, if not exclusively, on internal evidence as his only trustworthy guide in analysing and classifying the systems of thought which prevailed in the first two centuries.

According to such evidence, and the bias of individual writers, the Gnostic systems have been very differently classified. Mosheim has divided them with reference to their greater or less recognition of the Dualistic principle; Neander with reference to their relation to Judaism; F. Baur with reference to their relation both to Judaism and heathenism. Lipsius, one of the most recent and careful writers on the subject, arranges the Gnostical systems in a threefold order—1st, in so far as they arise within the Jewish schools, and aim to distinguish between Christianity and Judaism; 2d, in so far as they appear within the broader sphere of Hellenism; and 3d, in so far as they approach the circle of Christian faith, and become more or less united with the doctrines of the church.

The most intelligible principle of classification seems to be that already indicated, which recognizes first an inchoate period corresponding to the New Testament age, and represented by many diverse teachers, chiefly of Jewish origin, and then fixes attention upon the great schools of Syria and of Egypt, with the addition of that of Asia Minor, repre-

sented by Marcion. These schools are distinguished by their internal features, and their respective relations to Judaism on the one hand and dualism on the other; but they stand out more clearly from their geographical centres, perhaps, than from any other distinguishing features.

I. The inchoate phase of Gnosticism is represented by men like Simon and Cerinthus, both prominently associated with apostles and sects, such as the Ophites or Naasseni (from $\sigma\phi\upsilon\varsigma$, serpent), the Peratæ or Peratics, the Sethiani, and the followers of one Justinus, author of a book called the *Book of Baruch*, which was written probably not earlier than the beginning of the 2d century. All these sects are elaborately described by Hippolytus in the fifth book of his *Refutation of Heresies*. Simon Magus follows them in his order of treatment (l. v.). There can be little doubt, however, that Simon must be placed in the very front of the history of Gnosticism, in so far as he belongs to this history at all. This is the position that he occupies in the treatise of Irenæus (*Adv. Hæreses*, l. i. c. 23); and his association with St Peter, as well as the account of him in the apostolic history in which he appears (Acts viii. 5, 9, 10) within seven years of the ascension of our Lord, plainly indicates that this is his true position. The character of his teaching, moreover, points to the same conclusion. It is a form of anti-Christianism, rather than any mere deprecation of the Christian system. It is true that he is represented in the passage of the Acts of the Apostles already referred to (viii. 13) as having professed himself a believer, and having been baptized; but his whole career afterwards, and the doctrines attributed to him, prove that, whatever may have been his feelings for the moment, he neither understood Christianity, nor came under its practical influence in any degree. Probably he regarded the apostles as only magicians of remarkable skill, and enrolled himself for a time in their company in order that he might learn their secrets and be able to exercise their powers. He was plainly an impostor of the first magnitude, who must be credited with a marvellous and unblushing audacity rather than with any clear philosophic or spiritual aims. He gave himself out as "the great power of God" (Acts viii. 10). "Ego sum sermo Dei," he said of himself, according to St Jerome (on Matt. xxiv. 5), with much blasphemous nonsense besides. He carried about with him a "certain woman named Helena," a prostitute whom he had purchased in the city of Tyre, and who he said "was the first conception (*Ἐρῶα*) of his mind, the mother of all things, by whom in the beginning he conceived the thought of making the angels and archangels" (Iren., *Adv. Hæres.*, i. 23). He recognized Christ as Redeemer, but only as occupying an inferior position to himself. He was the true Logos or Power of God, which had previously in an imperfect degree appeared in Jesus. He himself is "the God who is over all things, and the world was made by his angels" (*Ibid.*, i. 23). It is clear that a teacher of this kind had little relation to Christianity, except in so far as it came across his own designing and ambitious path. He had knowledge and intellectual address to avail himself of the prevailing conceptions of the Alexandrian philosophy, so as to impart some coherency to his own insane dreams; but he was characteristically a magician (as his character has survived in history) rather than a philosopher or spiritual thinker. He claims the position assigned to him in the history of Gnosticism mainly in virtue of his pupil and successor Menander who laid the foundation at Antioch of the Syrian Gnostic school more conspicuously represented by Saturninus and others.

For an account of Cerinthus and his system we refer our readers to the article CERINTHUS. The account of his relations with St John, as given by later Christian tradition, may be a mythical expression of the popular Christian

feeling about an obnoxious teacher rather than a statement of actual facts; but there seems no doubt that Cerinthus represented, in the close of the 1st century, a type of doctrine especially opposed to that of the fourth gospel. He is supposed to have been of Jewish descent, to have been educated in Alexandria, and to have diffused his doctrine in Asia Minor. Opposed as he was to the Christianity of the church in attributing the creation of the world, not to the Supreme God, but to "a power separate and distinct from" Him, and in conceiving Jesus as a mere man to whom the Christ was united at baptism, and from whom the Christ departed before His death (Iren., i. 2; Hippolytus, vii. 33), he was yet far from being the mere anti-Christian impostor that Simon was. He makes no claim to miraculous or divine powers in himself, but holds a distinct, however erroneous, Christology. The idea of redemption is not only recognized by him, but recognized as verified in Christ and in Him alone. His chief conception of the Creator of the world being other than the Supreme God was probably borrowed by him from the Egyptian schools in which he seems to have taught.

The sects of the Naasseni, the Peratæ, the Sethiani, and the followers of Justin, placed, as we have said, by Hippolytus before Simon, may probably all be ranked along with him and Cerinthus in the early and still undeveloped stage of Gnosticism. It is very difficult to attain to any certainty as to their chronological position. Bunsen traces the origin of the Ophites as far back as the Pauline age; but on very definite grounds it may be concluded that the sect, if existent then, could hardly have acquired any prominence or intellectual interest,—not even in the time of St John; and certain details of their teaching cannot well be earlier than the beginning of the 2d century. Hippolytus gives a distinct and lengthened account of these several sects. The Naasseni, he says, borrowed their opinions from the Greek philosophers and the teachers of the mysteries; the Peratæ took them "not from the Scriptures, but from the Astrologers;" the Sethiani "patched up their system out of shreds of opinion taken from Musæus, and Linus, and Orpheus;" and Justin was indebted for his to the "marvels of Herodotus!" He says, moreover, of the Naasseni that they "call themselves Gnostics." We must leave here, as elsewhere, the more particular description of these sects to special articles. All of them, however, may, with Mansel (*Gnostic Heresies*, p. 96), be regarded as branches of a common sect to which the title of Ophites particularly answers. The serpent was more or less a common symbol with them all; and the idea of the serpent as in some manner a redeeming power for mankind—"a symbol of intellect by whose means our first parents were raised to the knowledge of the existence of high beings than their creator"—seems to have run through them all. The serpent no doubt tempted man, but he fell from allegiance to the Demiurge, or Creator of the present world, only to rise to the knowledge of a higher world. Thus to identify the serpent with the Redeeming Word or Divine Son came very near to converting the power of Evil into the ideal of Good. This was the logical conclusion which probably lay more or less in all their systems; but it only showed itself fully in a cognate sect called the Cainites, the description of which follows that of the Ophites and the Sethians in the first book of the treatise of Irenæus (c. xxxi.). This sect carried to its extreme form the inversion of Biblical story, and raised the serpent into a creative and redeeming power. All the evil characters in the Old Testament, with Cain at their head, are set forth as the true spiritual heroes; and, in consistency with the same view, Judas Iscariot, in the New Testament, is represented as alone "knowing the truth," and so accomplishing the betrayal of the Saviour, as some later theorists have

also supposed, in order that His good work might be completed. They had a gospel of their own in the interest of such views, which they styled "the gospel of Judas."

Another name in the history of Gnosticism, that of Carpocrates, may be classed in this earlier period, although he is said to have been still active as a teacher in the time of Hadrian (117-138). The followers of Carpocrates, as already mentioned, are represented by Irenæus (i. 25) as first styling themselves Gnostics. His opinions had a certain affinity both with those of Cerinthus and the Ophites. They are described at length by Irenæus (i. 25) and Hippolytus (vii. 20). Both writers also ascribe to this teacher and his disciples a great devotion to magical arts, and accuse them of voluptuousness and even licentiousness of life. They seem to have cherished an esoteric doctrine which inculcated the indifference of all actions, and that nothing was really evil by nature. Some of the teachers of the sect marked their pupils by branding them on the inside of the lobe of the right ear. Epiphaneus, a son of Carpocrates, is associated with his father in the reign of Hadrian as actively promoting the spread of their heresy, and, dying young, he is said to have been worshipped as a god by the inhabitants of a town in Cephalonia, of which his mother was a native. He must have been a remarkable youth, credited as he is with a work on *Justice*, fragments of which have been preserved by Clement of Alexandria, advocating a very outrageous form of communism. Women of note allied themselves to this free confederacy, one of whom, Marcellina, came to Rome in the time of Anicetus (d. 168), and "led multitudes astray" (Iren. i. 25; see also CARPOCRATES).

II. But, as already indicated, it is not till the first quarter of the 2d century that we see Gnosticism in full and systematic development; and then it ranges from two main centres—Antioch in Syria, and Alexandria.

(1.) Menander, the pupil of Simon, settled at Antioch, and there laid the foundation of the Syrian Gnostic school, whose chief representatives in the 2d century are Saturninus, Tatian, and Bardesanes, the last two of whom were more or less connected with the church—Tatian, as a pupil of Justin Martyr, and the writer of a harmony of the four gospels under the name of *Diatessaron*, and Bardesanes as one of the first of the interesting series of hymn-writers for which we are indebted to the Syrian church. The Syrian Gnosis is distinguished by its admixture of Zoroastrian elements, and the consequent sharpness and precision with which it seizes the idea of conflict between the powers of Good and Evil—the Supreme God, on the one hand, and the Demiurge and his angels or sons, on the other hand. For a more particular account of the characteristics of the system, see articles on the names above mentioned.

(2.) Along with the Syrian school, and occupying a more prominent place in the development of the religious thought of the 2d century, stands the great school of Alexandrian Gnosticism, represented especially by Basilides and Valentinus and their followers. Basilides appears to have been a native of Syria, and to have taught in Alexandria about the year 125. "He is the first Gnostic teacher," says Bunsen (*Hippolytus and his Age*, p. 107), "who has left an individual personal stamp upon his age. . . His erudition is unquestionable. He had studied Plato deeply. . . All that was great in the Basilidean system was the originality of thought and moral earnestness of its founder." Bunsen also maintains that "Basilides was a pious Christian; and worshipped with his congregation," while admitting that his sect fell away from the church and from Christianity by refusing to recognize the authority of Scripture and the necessity of practical Christian communion.

Valentinus was probably educated in the school of Alexandrian Gnosticism, as he developed Gnostic ideas in their connexion with Hellenic, rather than Persian, modes of

thought into the most elaborate and carefully reasoned system which they reached. He came to Rome about the year 140, and there formed a sect which exercised considerable influence over the commingling speculations of the time which met in that great centre. Bunsen vindicates his Christian character, and says that St Jerome speaks of him with great respect. If at any time he really belonged to the church, it seems to be admitted (Epiph., *Hær.*, xxxi. 7) that in Cyprus, whither he returned and where he died, he ultimately proclaimed himself outside its pale. The most illustrious disciples of the Valentinian Gnosticism, which prevailed on till the 6th century, were Ptolemæus, Heracleon, and Marcus. It is the tenets of these teachers, especially of the first, that are chiefly discussed in the opening chapter of the well-known treatise of Irenæus.

(3.) In addition to these two great schools of Gnosticism there is still a third, especially represented by the famous Marcion of Pontus, whose centre may be regarded as Asia Minor. Marcion was the son of a Christian bishop, by whom he is said to have been excommunicated. Following one Cerdon, a Gnostic of Antioch, Marcion distinguished himself by his extreme opposition to Judaism, and generally by a Gnostic attitude at variance with the Old Testament, the God of which is to him the Demiurge in conflict with the Supreme Being and the Christ whom He sent to redeem the world from the power of this Demiurge. His Christology was of course docetic,—the divine power being only united to the man Jesus for a time. He accepted only ten of St Paul's epistles, and a mutilated copy of the gospel of St Luke. The teaching of the Clementine fictions and a Jewish sect known by the name of Elkesaites, whose tenets seem to have resembled this teaching, is considered by Mansel and others to constitute a Judaizing reaction from the Pauline Gnosticism of Marcion.

Our readers are referred to special articles for a detailed exposition of these several Gnostic systems. It remains for us here to give a general sketch of the questions which Gnosticism discussed, and the broader features which characterized its main developments.

III. The fundamental questions with which Gnosticism concerned itself are the same which in all ages have agitated inquiry and baffled speculation, viz., the origin of life and the origin of evil,—how life sprung from the Infinite Source,—how a world so imperfect as this could proceed from a supremely perfect God. The Oriental notion of matter as utterly corrupt is found to pervade all Gnostical systems, and to give so far a common character to their speculations. It may be said to be the ground-principle of Gnosticism.

Setting out from this principle, all the Gnostics agree in regarding this world as not proceeding immediately from the Supreme Being. A vast gulf, on the contrary, is supposed to separate them. In the general mode in which they conceive this gulf to be occupied they also agree, although with considerable varieties of detail.

The Supreme Being is regarded as wholly inconceivable and indescribable—as the unfathomable Abyss (Valentinus)—the Unnameable (Basilides). From this transcendent source existence springs by emanation in a series of spiritual powers (*δυνάμεις*). It is only through these several powers or energies that the infinite passes into life and activity, and becomes capable of representation. To this higher spiritual world is given the name of *πλήρωμα*, and the divine powers composing it, in their ever-expanding procession from the Highest, are called *Æons*.

So far a common mode of representation characterizes all the Gnostical systems. All unite in this doctrine of a higher emanation-world. It is in the passage from this higher spiritual world to the lower material one that a

speculative distinction of an important character begins to characterize them. On the one hand, this passage is apprehended as a mere continued degeneracy from the Source of Life, at length terminating in the kingdom of darkness and death—the bordering chaos surrounding the kingdom of light. On the other hand, this passage is apprehended in a more precisely dualistic form, as a positive invasion of the kingdom of light by a self-existent kingdom of darkness. According as Gnosticism adopted one or other of these modes of explaining the existence of the present world, it fell into the two great divisions which, from their places of origin, have received the respective names of the Alexandrian and Syrian Gnosis. The one, as we have seen, presents more a Western, the other more an Eastern type of speculation. The dualistic element in the one case scarcely appears beneath the Pantheistic, and bears resemblance to the Platonic notion of the *ελατ*—a mere blank necessity, a limiting void. In the other case, the dualistic element is clear and prominent, corresponding to the Zarathustrian doctrine of an active principle of evil as well as of good—of a kingdom of Alriman (Auro-Mainyus) as well as a kingdom of Ormuzd (Ahura-Mazdào).

In the Alexandrian Gnosis a link of subordination is preserved between the two kingdoms, separated as they are. For the *ελατ* only becomes a living and active power of evil through the quickening impartation of some element from the higher kingdom in its progressive descent from the Supreme Source. The stream of being in its ever-outward flow at length comes in contact with dead matter, which thus receives animation, and becomes a living source of evil. Its life and power, however, are withal only derived from the higher kingdom. But in the Syrian Gnosis the kingdom of darkness has no such dependence upon the kingdom of light. There appears from the first a hostile principle of evil in collision with the good.

Out of this main distinction other more special distinctions arise, still more clearly defining the one form of *γνώσις* from the other. According as the two kingdoms are recognized as subordinate the one to the other, or as opposed to each other, it is obvious that different views will prevail as to the character of the *Δημιουργός*, or maker of this world, whose name and functions are so prominent in all systems of Gnosticism. In the one case, his relation to the Supreme Source of life will be apprehended as more dependent—in the other, as more hostile. In the former view, the *γνώσις*, while rising in its pride of speculation far above all mere earthly relations and historical religions, could yet find in these a point of contact, whereby the higher spiritual truth, penetrating this lower world, would gradually raise it to its own elevation. In the latter, no such point of contact is left between nature, or history, and the *γνώσις*. Accordingly, while the Alexandrian form of Gnosticism was found to embrace Judaism, as a divine institution, although very inferior and defective in its manifestation of the Divine character, the Syrian rejected it as being wholly the work of the spirit of the lower world—the *Δημιουργός* warring with the supreme God. This anti-Judaical spirit is found developed to its extreme in Marcion.

The Gnostic conception of Christ, in so far uniform, is also of course greatly modified by the different relations which the systems thus bore to Judaism. In all he is recognized as a higher *Æon*, proceeding from the kingdom of light for the redemption of this lower kingdom of darkness. But, in the one case, however superior, he is yet allied to the lower angels and the *Δημιουργός*, governing this lower world. His appearance, accordingly, admits of being historically connected with the previous manifestations of the Divine presence upon earth. But, in the other case, he is apprehended as a being wholly distinct from the *Δημιουργός*, and his appearance takes place in this lower world without

any previous preparation, in order that he may draw to himself all kindred spiritual natures held in bondage by the power of this lower world. If any point of connexion is admitted in this latter case betwixt Christianity and the lower world, it is certainly not found in Judaism or any historical religion, but in the theosophic schools, where an esoteric knowledge of the Supreme was cultivated.

IV. Vague, confused, and irrational as Gnosticism in most of its systems is, its influence upon the development of Christian thought was by no means detrimental. It compelled Christian teachers to face the great problems of which it attempted the solution in so many fantastic forms. It expanded the horizon of controversy within as without the church, and made men like Irenæus, and Clement, and Origen, and even Tertullian, feel that it was by the weapons of reason and not of authority that they must win the triumph of Catholic Christianity. Gnosticism, therefore, may be said to have laid the foundation of Christian science, and it is certainly interesting and deserving of notice that it is in the two great cities of Antioch and Alexandria,—where Gnosticism had chiefly planted itself,—that we see the rise of the first two schools of Christian thought. These centres of half-Pagan and half-Christian speculation became the first centres of rational Christian theology.

The several schools of Gnosticism seem to have gradually lost importance after the middle of the 3d century, although some of them continued to linger till the 6th century. Manichæism was little else than a revival of it in the Syrian form, and this system in the 4th and 5th centuries became so powerful as almost to be a rival to Christianity. The great Christian father St Augustine, as is well known, was long fascinated by its influence. Again, strangely, in the 12th century the same spirit burst forth afresh, and in special connexion with the name of the great apostle of the Gentiles. The sect of Paulicians, originating in the old Syrian haunt of heresy, Samosata, spread through Asia Minor, and then through Bulgaria and the borders of the Greek empire into Italy, Germany, and France. Gibbon, in the 54th chapter of his famous *Decline and Fall of the Roman Empire*, has given a vivid and powerful description of the fortunes and persecutions of the sect, and the readiness with which its doctrines seized upon whole populations. In southern France especially it spread like wildfire, and for a time almost entirely displaced Catholic Christianity. This Western development of the old Oriental dualism was characterized by many of the features of the earlier Gnosticism, such as the doctrine of the radical evil of matter, aversion to the Old Testament as the work of an evil Demiurge, and a docetic Christology. Extinguished in the horrors of the Albigensian war, it can hardly be said to have reappeared in the history of Christendom.

Literature.—Only one original Gnostic work has survived to modern times, the *πύρις σοφία* of Valentinus (edited by Petermann, Berlin, 1851); for all further knowledge of the system we are entirely dependent on the treatises of its avowed opponents,—especially on that of Irenæus (*ἑλεγχος τῆς ψευδοκρίτου γνώσεως*) and on that of Hippolytus (*ἑλεγχος κατὰ πασῶν αἰρέσεων*), although reference may also be made to passages bearing on the subject in the writings of Justin Martyr, Tertullian, Clemens Alexandrinus, Origen, Eusebius, Philastrius, Epiphanius, Theodoret, Augustine, and Plotinus. The subject is taken up with more or less fulness in all the church histories, and histories of philosophy. Among the more important recent works bearing upon the elucidation of Gnosticism may be mentioned those of Neander (*Genetische Entwicklung der vornehmsten Gnostischen Systeme*, 1818), Matter (*Histoire critique du Gnosticisme*, 1828, 2d ed. 1843), Baur (*De Gnosticorum Christianismo Ideali*, 1827; *Die Christliche Gnosis*, 1835; *Die drei ersten Jahrhunderte*, 3d ed., 1863), Bunsen (*Hippolytus u. seine Zeit*, 1852-53), Lipsius (art. "Gnosticismus" in Ersch and Gruber's *Encyclopædie*, republished in a revised form with the title *Der Gnosticismus; sein Wesen, Ursprung, und Entwicklung*, 1860), Harnack (*Zur Quellenkritik der Geschichte des Gnosticismus*, 1873), Mansel (*Gnostic Heresies*, 1875), and Lipsius (*Die Quellen der ältesten Ketzergeschichte*

neu untersucht, 1875). References to the monographs by Ritschl, Volkmar, Heinrici, Hilgenfeld, and others on special branches of the subject will be found under the several headings BARDESANES, BASILIDES, MARCION, VALENTINUS, &c. (J. T.)

GNU (*Catoblepas*), a genus of ruminant mammals constituting the equine group of the antelope family, and containing two species—the gnu or kokoon (*Catoblepas gnu*) and the brindled gnu (*Catoblepas gorgon*). Owing to their singular appearance, which has been aptly compared to that of a creature compounded of a bison's head, a horse's body, and an antelope's legs, their proper zoological position has been a matter of dispute—some placing them among the oxen, while others regard them as a connecting link between bovine animals and the true antelopes. The gnu measures about 4½ feet in height at the shoulders, and 9 feet in extreme length. Its nose is broad and flattened, and bears on its upper surface a crest of reversed hair, while there is an abundant growth of bushy black hair beneath the chin and between the forelegs. The horns, which are present in both sexes, are very broad at their base, forming a solid helmet on the forehead, from which they bend downwards and outwards, thereafter curving rapidly upwards to the tip. A mane of light-coloured hair, tipped with brown, and presenting a neatly clipped appearance, extends along the neck,



Gnu.

while the horse-like tail, which is more or less of a creamy colour, reaches to the ground. The nostrils are large, and are furnished with a muscular valve by which they can be closed. The gnu is a native of the arid plains of South Africa, where it congregates in considerable herds, its restlessness of disposition leading it to migrate frequently from place to place. The fantastic appearance of these creatures is fully equalled by the grotesqueness of their actions. Advancing, as they generally do, in single file, they may be seen wheeling and prancing in all directions, tossing their heads, switching their long tails, and then starting off, especially if alarmed by the appearance of a lion, at tremendous speed, raising columns of dust along their track, and leaving their pursuers hopelessly in the rear. Should they be surprised in their gambols by the sight of a caravan, their exceeding inquisitiveness impels them to approach the intruding object, which they do in a compact square, looking all the while the very picture of defiance. "During bright moonlight," says Captain Harris, "curiosity often prompted a clump of gnus to approach within a few yards of our bivouac, where they would stand for hours in the same position, staring wildly, lashing their dark flanks, and utter-

ing a subdued note resembling the harsh croaking of a frog." The noise made by the old bulls, as they roam singly during the rutting season, is much more formidable, being usually compared to the roar of the lion; and many sportsmen who have hunted the gnu bear testimony to the remarkable likeness between the solitary males with their long manes, when seen at a considerable distance, and the "king of beasts." They are by no means the formidable creatures their ferocious aspect might lead one to suppose. However defiant the herd appears as it approaches a caravan, the report of a gun puts the whole troop of gnus to flight, and they are never known to attack man unless driven thereto in self-defence. The female has seldom more than a single young one at a birth, the calf at first being of a whitish colour. When captured young, the gnu may, according to Captain Harris, be reared by the hand on cows' milk; and although of uncertain temper, it can be got to herd with the cattle on the farm. The flesh of the calf is considered a delicacy, but that of the adult is insipid, being almost destitute of fat. Its long silky tail is in great request for chowries, and its hide is cut into strips and used for ropes and twine.

The brindled gnu is a more northerly form, never being found south of the Orange river. It is readily distinguished from the other species by the black colour of its tail and mane, the obscure vertical streaks on its body, its more elevated withers, and its extremely long aquiline nose. While equally grotesque in appearance and manner, it is much less spirited and active than the gnu. Its flesh is highly prized by the natives, who also convert its hide into mantles, rendered attractive to South-African taste by being dressed without removing the long hair of the mane and beard.

GOA, a Portuguese settlement on the Malabar or western coast of India, lying between 15° 44' 30" and 14° 53' 30" N. lat., and between 73° 45' and 74° 26' E. long. It is bounded on the N. by the river Tirakul or Auralandem, separating it from Sávant Wári-State, on the E. by the Western Gháts, on the S. by Kanara district, and on the W. by the Arabian Sea. Total area, 1062 square miles; population, 392,234.

This settlement forms a patch of foreign territory on the east of the Bombay coast, and is surrounded on all sides, except to the seaward, by British districts. Goa is a hilly country, especially the recently acquired portion known as the Novas Conquistas. Its distinguishing feature is the Sahyadri Mountains, which after skirting a considerable portion of the north-eastern and south-eastern boundary, branch off westwards across the territory with numerous spurs and ridges. The plains are well watered by large navigable rivers. The most important is the Mandavi river, on whose banks both the ancient and modern cities of Goa stand, with a fine harbour formed by the promontories of Bardez and Salsette. The port of New Goa or Panjim is divided into two anchorages by the projection of the *cabo* (cape) from the island of Goa, both capable of safely accommodating the largest shipping.

Goa ranks high as regards its early importance among the cities of western India. It emerges very distinctly in the 14th century, and was visited by the famous traveller Ibn Batuta. In the 15th century it formed the chief emporium of trade on the western side of India. Caravans of merchants brought down its products to the coast, and it was the only city in western India which enjoyed at this period a revenue of £10,000. Its wealth and advantageous situation attracted the Mahometan princes of the Deccan, and in 1469 it was taken by the Báhmani king. A fleet of 120 ships operated from the sea; the Báhmani troops forced their way down the passes of the Gháts; and Goa capitulated. It next passed under the Bijápur dynasty, and on the arrival of Albuquerque, at the beginning of the

16th century, its military and commercial capabilities at once struck his mind. In 1510 the fleet of Albuquerque, consisting of 20 sail of the line, with a few small vessels and 1200 fighting men, hove in sight off the harbour. A holy mendicant or *jogi* had lately foretold its conquest by a foreign people from a distant land, and the disheartened citizens rendered up the town to the strangers. Eight leading men presented the keys of the gates to Albuquerque on their knees, together with a large banner which was usually unfurled on state occasions. Mounted on a richly caparisoned steed, Albuquerque entered the city in a triumphal procession, with the Portuguese banners carried by the flower of the Lisbon nobility and clergy amidst the acclamations of an immense multitude, who showered upon the conqueror filigree flowers of silver and gold. Albuquerque behaved well to the inhabitants, but was shortly afterwards expelled by the Bijápur king. However, he returned a few months later with a fleet of 28 ships carrying 1700 men, and after a bloody attack, in which 2000 Mussulmans fell, forced his way into the town. For three days the miserable citizens were subjected to every atrocity. The fifth part of the plunder, reserved for the Portuguese crown, amounted to £20,000.

The conquest of Goa illustrates the essentially military basis on which the Portuguese power in India rested. The subsequent history of the town has been one of luxury, ostentation, and decay. After bearing a siege by the king of Bijápur, and suffering from a terrible epidemic, Goa reached the summit of its prosperity at the end of the 16th century, during the very years when the English Company was struggling into existence under Elizabeth. "Goa Dourada," or Golden Goa, seemed a place of fabulous wealth to the plain merchants who were destined to be the founders of British India. "Whoever has seen Goa need not see Lisbon," said a proverb of that day. Indeed, if the accounts of travellers are to be trusted, Goa presented a scene of military, ecclesiastical, and commercial magnificence, such as has had no parallel in the European capitals of India. The brilliant pomp and picturesque display of Goa were due to the fact that it was not only a flourishing harbour, but the centre of a great military and ecclesiastical power. The Portuguese based their dominion in India on conquest by the sword. They laboured to consolidate it by a proselytizing organization which throws all other missionary efforts in India into the shade.

Goa reached its climax of pomp and power about the year 1600. Immediately afterwards commenced the long struggle with the Dutch, which before the end of the century had stripped Portugal of its fairest possessions in the East. In 1603 the Dutch blockaded Goa, but had to raise the siege. In 1635 the old epidemic fever which had afflicted Goa in the preceding century again broke out, and raged for five years. In 1639 the Dutch once more blockaded Goa, but found their meagre force of twelve ships insufficient for its capture. In 1666 luxury and the plague, and the Dutch privateers had effectually crippled the commerce of Goa. Thevenot in that year drew a powerful picture of the decayed city. In 1675 Dr John Fryer described the city as in a ruinous state, whilst the inhabitants still made pitiful attempts at display in spite of their increasing misery. In 1683 Goa narrowly escaped falling into the hands of the Marhattá hordes under Sambáji. Before 1687 the abandonment of Old Goa had taken place. "Many streets," says an official document of that year, "have now become lonely and uninhabited." The river had silted opposite its quays, ships could no longer approach the city, the fever had again broken out, and the population had moved out to suburbs nearer the mouth of the river. In 1695 only 20,000 inhabitants remained. In 1739 the whole territory was attacked by the Marhattás, and only saved by the unexpected appearance of a new viceroy with a fleet. Various attempts were made in vain to rebuild Old Goa, and by the middle of the 18th century "this fairest but poorest settlement had become a burden to the Portuguese Home Government, costing no less than 300,000 piastres a year."

In 1759 further attempts to rebuild Old Goa were given up, and the governor changed his residence to Panjim or New Goa, the present city, at the mouth of the river. In 1775 the population was reduced to about 1600 souls, of whom 1198 were Christians, almost entirely half-castes and native converts. In 1759 also the Jesuits were expelled. They had got into their hands what little commerce remained, and the last touch was put to the ruin of Old Goa. "The river washes the remains of a great city,—an arsenal in ruins, palaces in ruins, quay walls in ruins, churches in ruins,—all in ruins. We looked and saw the site of the Inquisition, the bishop's prison, a grand cathedral, great churches, chapels, convents, religious houses, on knolls surrounded by jungle and trees

scattered all over the country. We saw the crumbling masonry which once marked the lines of streets and enclosures of palaces, dockyards filled with weeds and obsolete cranes."

Panjim or New Goa lies in lat. 15° 30' N., long. 75° 53' E., at the mouth of the river Mandavi, and is a modern town with few pretensions to architectural beauty. Ships of the largest tonnage can lie out in the harbour, but only vessels of moderate size can be brought alongside of the city. The population is estimated at 15,000. Panjim was the residence of the viceroy from 1759, and in 1843 was ranked the capital of the Portuguese possessions in India.

The territory of Goa, including the two cities of Old Goa and Panjim with the adjoining country under Portuguese rule, amounts, as already stated, to 1062 square miles. Of the total population, namely, 392,234, nearly two-thirds or 232,089 are Roman Catholics, 123,824 are Hindus, and 2775 Mahometans. The Roman Catholics are subject in spiritual matters to an archbishop, who has the title of primate of the East. The Hindus and Mahometans enjoy perfect liberty in their religious affairs, and have their own places of worship. Agriculture forms the chief industry of the country. The total area under cultivation is 234,754 acres. Rice is the staple produce; next is the cocoa-nut, which is deemed important from the variety of uses to which the products are applied. The chief exports are cocoa-nuts, betel-nuts, mangoes, water-melons, cinnamon, pepper, salt fish, gum, firewood, and salt; and the chief imports rice, cloth, sugar, wines, tobacco, glassware, and hardware. The district seldom suffers from great floods. Some parts are subjected to inundations during heavy rains, but little damage is done to the crops. The high-lying town of Panjim takes its name from the native word *Ponji*, meaning "arable land that cannot be inundated." The total revenue in 1873-74 was £108,148; the expenditure, £107,145. The police force numbers 919 men. In 1869-70 there were 137 lower schools, and 25 higher schools, including a National Lyceum with 2433 pupils. There are also medical and chemistry schools, and since 1870 a college for the study of practical sciences has been established. The prevailing endemic diseases are intermittent and remittent fevers, diarrhoea, and dysentery. The average annual rainfall for the three years ending 1875 was 100·22 inches.

See "Livro dos privilegios da Cidaada de Goa," in *Archivio Portuguez Oriental*, 1857; *Archivo da Relacao de Goa contendo varios documentos da Goa*, 1867; e 19, by J. I. de Avranche Garcia, 1872, &c.; *Feições meteorologicas da Goa*, 1867; *Boletim de Governo dos Estados da India, Goa and New Goa*, 1888-70, &c.; *O Gabinete Literario das Fontainhas* (monthly, 1846, &c.); Tolbort, "The Authorities for the History of the Portuguese in India," in *Journ. of Asiatic Soc. of Bengal*, 1873; R. F. Burton, *Goa and the Eze Mountains*, 1851; Mrs Burton, *A. E. L. Arabia, Egypt, India*, 1873.

GOA POWDER, a drug occurring in the form of a yellowish-brown powder, varying considerably in tint, which has recently been brought into notice by Dr Fayer of Calcutta as a remedy for ringworm. It derives its name from the Portuguese colony of Goa, where it appears to have been introduced about the year 1852. In 1875 it was shown by Dr Lima that the substance had been exported from Bahia to Portugal, whence it found its way to the Portuguese colonies in Africa and Asia. The tree which yields it belongs to the genus *Andria* of the natural order *Leguminosae*, and has been named *A. Araroba*. It is met with in great abundance in certain forests in the province of Bahia, preferring as a rule low and humid spots. The tree is from 80 to 100 feet high, and is furnished with imparipinnate leaves, the leaflets of which are oblong, about 1½ inch long and ¾ inch broad, and somewhat truncate at the apex. The flowers are papilionaceous, of a purple colour, and arranged in panicles. The Goa powder or araroba is contained in the trunk, filling crevices in the heartwood. To obtain it, the oldest trees are selected as containing a larger quantity, and after being cut down are sawn transversely into logs, which are then split longitudinally, and the araroba chipped or scraped off with the axe. During this process the workmen feel a bitter taste in the mouth; and great care has to be taken to prevent injury from the irritating action of the powder on the eyes. In this state, *i.e.*, mixed with fragments of wood, the Goa powder is exported in casks.

In India Goa powder has been used in the form of a paste, made by mixing the powder with vinegar or lime juice, as a local application for the cure of Indian ringworm. It appears to be one of the best remedies for that obstinate disease; and so highly is it valued that its price in Bombay averages £3, 12s. per lb. Its use in chloasma, intertrigo, and psoriasis, as well as in various other skin diseases, has also been attended with considerable success. The only disad-

vantages attending its use are—that it leaves a stain which is difficult to remove, and that the powder is apt to set up severe irritation of the eyes, if it come in contact with the conjunctiva. On this account Mr Balmanno Squire prefers to use it in the form of ointment. When given internally it has been found to act as an emetic and purgative. In England it is now regarded as one of the most efficacious remedies in intractable cases of ringworm.

GOÁLPÁRA, the most westerly district of Assam, between 25° 21' and 26° 54' N. lat. and between 89° 44' and 91° 0' E. long., bounded on the N. by Bhután, E. by Kámrup, S. by the Gáro Hills, and W. by Kuch Behar and Rangpur. The district is situated on the Brahmaputra, at the corner where the river takes its southerly course into Bengal. The scenery is striking. Along the banks of the river grow clumps of cane and reed; farther back stretch fields of rice cultivation, broken only by the fruit trees surrounding the villages, and in the background rise the forest-clad hills overtopped by the white peaks of the Himalayas. The soil of the hills is of a red ochreous earth, with blocks of granite and sandstone interspersed; that of the plains is of alluvial formation. Earthquakes are common and occasionally severe shocks have been experienced. The Brahmaputra annually inundates vast tracts of country. Numerous extensive forests yield valuable timber. Wild animals of all kinds are found.

Goálpára has always formed the frontier between Bengal and Assam; originally it must have constituted part of the legendary Hindu kingdom of Kámrup; from that it must have fallen into the hands of the early rajas of Kuch Behar, who, however, were unable long to retain their kingdom. From the east the wild Ahams came down the valley of the Brahmaputra, while from the west the Mughuls extended the limits of the Delhi empire. In 1608 the Mughuls came into collision with the Ahams, but were forced to retreat with a decisive defeat. The district came into British possession with the rest of Bengal in 1765. It has undergone several changes in administration, and in 1872, when Assam was constituted a separate administration, Goálpára was included within it.

In 1872 the population was 407,714,—311,419 being Hindus, and 89,916 Mahometans. Goálpára town, with between 3000 and 4000 inhabitants, is the most populous place, as well as the chief centre of trade. Dhubri is the point where the traffic of northern Bengal is shipped on board the Assam steamers. Gamripur and Lakshnipur carry on a thriving trade in timber.

Rice forms the staple crop of the district. Mustard and jute are also largely grown. The area under cultivation is estimated at 600,000 acres, or about one-third of the total area. The district is not liable to any form of natural calamity; occasionally blights have been caused by worms and insects, but the harvests have never been affected. The manufactures consist of the making of brass and iron utensils and of gold and silver ornaments, weaving of silk cloth, basket-work, and pottery. The cultivation of tea has recently been introduced, and is advancing considerably. The chief centres of traffic are Goálpára town, Dhubri, Jogigopha, Bijni, Gauripur, and Singiwári. Local trade is in the hands of Marwári merchants, and is carried on at the *bazars*, weekly *hats* or markets, and periodical fairs. The chief exports are mustard-seed, jute, cotton, timber, lac, silk cloth, india-rubber, and tea; the imports, Bengal rice, European piece goods, salt, hardware, oil, and tobacco. The Brahmaputra and its tributaries are the chief means of communication, and are navigated by river steamers and the largest native boats. Goálpára is considered an unhealthy district both for Europeans and for natives. The principal diseases are intermittent and remittent fevers, diarrhoea, dysentery, rheumatism, and chest complaints. Cholera frequently occurs in an epidemic form, and small-pox is more or less prevalent every year. The mean annual temperature is 75° Fahr.; and the average annual rainfall is 98·75 inches.

GOÁLPÁRA, the chief town of above district, situated on the left bank of the Brahmaputra, in 26° 11' 0" N. lat., 90° 41' 0" E. long. It was the frontier outpost of the Mahometan power in the direction of Assam, and has long been a flourishing seat of river trade. The civil station is built on the summit of a small hill commanding a magnificent view of the valley of the Brahmaputra, bounded on the north by the snowy ranges of the Himalayas and on the south by the Gáro hills. The native town is built on the western slope of the hill, and the lower portion is subject to inundation from the marshy land which extends in every direction. Population (1872) 4678.