

In Scotland simony is an offence both by civil and ecclesiastical law. The rules are generally those of the canon law. There are few decisions of Scottish courts on the subject. By the Act of 1584, c. 5, ministers, readers, and others guilty of simony provided to benefices were to be deprived. An Act of Assembly of 1753 declares pactions simoniacal whereby a minister or probationer before presentation and as a means of obtaining it bargains not to raise a process of augmentation of stipend or demand reparation or enlargement of his manse or glebe after induction. (J. Wt.)

SIMPLICIUS, the successor of Pope Hilarius or Hilarus, was a native of Tibur, and was consecrated bishop of Rome on February 25, 468. He died March 2, 483, and was succeeded by Felix III. His extant letters, which date from the banishment of Romulus Augustulus and the early years of Odoacer's reign, relate almost entirely to the ecclesiastical and court intrigues of Alexandria and Constantinople in connexion with the Monophysite controversy.

SIMPLICIUS, a native of Cilicia, a disciple of Ammonius and of Damascius, was one of the last of the Neoplatonists. From 400 to 529 A.D. the Neoplatonic school at Athens was the centre of pagan opposition to victorious Christianity, and, as such, fell a victim to imperial persecution. The subvention which it had received from the state was withdrawn; its private property was confiscated; and at last in 529 the teaching at Athens of philosophy and jurisprudence was forbidden (Malalas, p. 451, ed. Bonn). Disestablished, disendowed, and silenced, the scholar Damascius, Simplicius, Priscianus, and four others resolved in 531 or 532 to seek the protection of Khosrau Anósharvân (or Chosroes), who had ascended the throne of Persia in the former of these years. To his court they went; but, though from this patron of Greek learning they received a hearty welcome, they found themselves unable to support a continued residence amongst barbarians. Before two years had elapsed they returned to Greece, Khosrau, in his treaty of peace concluded with Justinian in 533, expressly stipulating that the seven philosophers should be allowed "to return to their own homes, and to live henceforward in the enjoyment of liberty of conscience" (Agathias, ii. 30, 31). After his return from Persia Simplicius wrote commentaries upon Aristotle's *De Cælo*, *Physica*, *De Anima*, and *Categorica*, which, with a commentary upon the *Enchiridion* of Epictetus, have survived. In his writings Simplicius, who had small pretensions to originality of doctrine, devotes himself to the exposition and reconciliation of his authorities. His respect at once for Plato and for Aristotle is so great that he refuses to acknowledge any real difference between them, even in regard to their theories of universals and of matter. His remarks are, however, thoughtful and intelligent, and his learning is prodigious. To the student of Greek philosophy his commentaries are invaluable, as they contain many fragments of the older philosophers as well as of his immediate predecessors.

The editions of the Greek text of the commentaries are as follows:—on the *De Cælo*, Utrecht, by S. Karsten, 1865 (the Greek text published at Venice in 1526 is no more than a retranslation from Guil. de Moerbeka's Latin version); on the *Physica*, Venice, 1526, Berlin (by H. Diels), vol. i. 1882; on the *De Anima* (a dis-appointing work), Venice, 1527, Berlin (by M. Hayduck), 1882; on the *Categorica*, Venice, 1499, Basel, 1551; on the *Enchiridion*, Venice, 1528, Paris (Didot), 1842, &c. On the life and writings of Simplicius, see J. A. Fabricius, *Bibliotheca Græca*, ix. 529 sq.; Ch. A. Brandis's excellent article in Smith's *Dict. of Greek and Roman Biography*; E. Zeller, *D. Phil. d. Gr.*, III. ii. 851 sq.; also Ch. A. Brandis, "Ueber d. Griech. Ausleger d. Aristot. Organons," in *Abh. Berl. Akad.*, 1833, and C. G. Zumpt, "Ueber d. Bestand d. phil. Schulen in Athen," *ibid.*, 1842.

SIMPSON, SIR JAMES YOUNG, BART. (1811–1870), physician, was born in the town of Bathgate, Lidlithgow, Scotland, on the 7th of June 1811. His father was a baker in that town, who largely owed a moderate success

in business to a shrewd and managing wife. James was the youngest of a family of eight, and for the furtherance of his worldly prospects the others struggled and sacrificed. At the age of fourteen he entered the university of Edinburgh as a student in the arts classes. Two years later he began his medical studies. At the age of nineteen he obtained the licence of the College of Surgeons, and two years afterwards took the degree of doctor of medicine. Dr Thomson, who then occupied the chair of pathology in the university, impressed with the graduation thesis, "On Death from Inflammation," presented by Simpson, offered him his assistantship. The offer was accepted, and during the session 1837–38 he acted as interim lecturer on pathology during the illness of the professor. The following winter he delivered his first course of lectures on obstetric medicine in the extra-academical school. On February 4, 1840, he was elected to the professorship of medicine and midwifery in the university. Towards the end of 1846 he was present at an operation performed by Liston on a patient rendered unconscious by the inhalation of sulphuric ether. The success of the proceeding was so marked that Simpson immediately began to use it in midwifery practice. He continued, however, to search for other substances having similar effects, and in March 1847 he read a paper on chloroform to the Medico-Chirurgical Society of Edinburgh, in which he fully detailed the history of the use of anæsthetics from the earliest times, but especially dwelt upon the advantages of chloroform over ether. He advocated its use, not only for the prevention of pain in surgical operations, but also for the relief of pain in obstetrical practice. His strong and uncompromising advocacy of its use in the latter class of cases gave rise to one of the angriest and most widespread controversies of the time, and, although his views may not have been generally indorsed by later professional practice, anæsthetics in surgical operations have from that time held an indisputed place, and Simpson's anæsthetic still continues the favourite in the practice of the Edinburgh school. In 1847 he was appointed a physician to the queen in Scotland. In 1859 he advocated the use of acupressure in place of ligatures for arresting bleeding; his views on this subject have, however, given place to improvements in the ligature and to a better knowledge of the conditions influencing its efficiency. His contributions to the literature of his profession and to archæology, in which latter he took an active interest, were very numerous, and embrace *Obstetric Memoirs and Contributions* (2 vols.), *Homœopathy, Acupressure, Selected Obstetrical Works, Anæsthesia and Hospitalism, Clinical Lectures on the Diseases of Women*, and three volumes of essays on archæological subjects. Simpson, who had been created a baronet in 1866, died on May 6th 1870, and was accorded a public funeral; his statue in bronze now stands in West Princes Street Gardens, Edinburgh.

Simpson was a man of strong individuality and somewhat hasty temper, an uncompromising and aggressive opponent when he believed himself in the right, yet so tender and sympathetic that he endeared himself to an immense circle of friends and patients. Endowed with great mental power, activity, and receptivity, he performed a very large amount of literary work, much of which was of great value at the time and still continues to be of interest. He will, however, be chiefly remembered in the annals of medicine as a great personality, who brilliantly fought and won the battle for anæsthetics, and introduced chloroform.

SIMPSON, THOMAS (1710–1761), mathematician, was born at Market Bosworth in Leicestershire on the 20th of August 1710. His father was a stuff weaver, and, intending to bring his son up to his own business, took little care of the boy's education. Young Simpson, however, was eager for knowledge, and so ardent was he in pursuit of it that he neglected his weaving, and in consequence of a quarrel was forced to leave his father's house. He settled

for a short time at Nuneaton, where he met a pedlar who practised fortune-telling. By the encouragement and assistance of this man Simpson was induced to make a profession of casting nativities himself, and he soon became the oracle of the neighbourhood. But he was not long in discovering the imposture of astrology, and his conscience, as well as an accident which happened to him in the practice of his art, compelled him to abandon this profession. After a residence of two or three years at Derby, where he worked as a weaver during the day and taught pupils in the evenings, he went up to London and pursued the same course, but with more success. The number of his pupils increased; his abilities became more widely known; and he was enabled to publish by subscription his *Treatise of Fluxions* in 1737. His treatise, as was afterwards acknowledged, abounded with errors of the press, and contained several obscurities and defects incidental to the author's want of experience and the disadvantages under which he laboured. His next publications were *A Treatise on the Nature and Laws of Chance*, 1740; *Essays on Several Curious and Useful Subjects in Speculative and Mixed Mathematicks*, 1740; *The Doctrine of Annuities and Reversions deduced from General and Evident Principles*, 1742; and *Mathematical Dissertations on a Variety of Physical and Analytical Subjects*, 1743. Soon after the publication of his *Essays* he was chosen a member of the Royal Academy at Stockholm; in 1743 he was appointed professor of mathematics in the Royal Military Academy at Woolwich; and in 1745 he was admitted a fellow of the Royal Society of London. In 1745 he published *A Treatise of Algebra*, with an appendix containing the construction of geometrical problems, and in 1747 the *Elements of Plane Geometry*. The latter book, unlike many others with the same title, is not an edition of Euclid's *Elements*, but an independent treatise. Though it can hardly be said that as an introduction to geometry it is preferable to Euclid, yet the solutions of problems contained in it (and in the appendix to the *Algebra* as well) are in general exceedingly ingenious. In his *Trigonometry, Plane and Spherical, with the Construction and Application of Logarithms*, which appeared in 1748, there is a tolerably uniform use of contractions for the words sine, tangent, &c., prefixed to the symbol of the angle. *The Doctrine and Application of Fluxions*, which he issued in 1750, was more full and comprehensive than his earlier work on the same subject, and altogether was so different that he wished it to be considered as a new book and not as a second edition of the former. In 1752 appeared *Select Exercises for Young Proficients in the Mathematicks*, and in 1757 his *Miscellaneous Tracts on Some Curious and Very Interesting Subjects in Mechanics, Physical Astronomy, and Speculative Mathematics*, the last and perhaps the greatest of all his works. From the year 1735 he had sometimes under his own name, sometimes under fictitious names, been a frequent contributor to the *Ladies' Diary*, an annual publication partly devoted to the solution of mathematical problems, and from 1754 till 1760 inclusive he was the editor of it. From first to last Simpson seems to have had his own share of the cares and anxieties of this world, and it is astonishing how under such circumstances he contrived to accomplish what he did. His unremitting application and the want of proper regimen gradually undermined his health, and he died on the 14th of May 1761 at his native village. His name will probably be considered the most illustrious in the long roll of the non-academical mathematicians of Britain.

SIMROCK, KARL (1802–1876), German poet and student of mediæval literature, was born on the 28th August 1802 at Bonn, where his father was a music-seller.

He studied law at the universities of Bonn and Berlin, and in 1823 entered the Prussian civil service, from which he was expelled in 1830 for having written a poem in praise of the July revolution. Afterwards he was permitted to lecture at the university of Bonn, and in 1850 he was made a professor of Old German literature. He died on the 18th July 1876.

Simrock established his reputation by his excellent modern rendering of the *Nibelungenlied* (1827), and of the works of Walther von der Vogelweide (1833). Among other works translated by him into the German of to-day were the *Arme Heinrich* of Hartmann von Aue (1830), the *Parzival* and *Titiviel* of Wolfram von Eschenbach (1842), the *Tristan* of Gottfried of Strasburg (1852), the *Edda*, *Beowulf*, and *Heliand*. In the *Heidenbuch* (1843–49) he offered a complete representation of the heroic legends of Germany, partly by means of translations, partly by means of independent poems. Before the publication of this work he had given evidence of an original poetical faculty in *Wieland der Schmied* (1835); and in 1844 he issued a volume of *Gedichte* in which there are many good lyrics, romances, and ballads. In 1850 appeared *Lauda Sion*, and in 1857 the *Deutsche Sionsharfe*, collections of Old German sacred poetry. Of his republications the most popular and the most valuable were the *Deutschen Volksbücher*, of which fifty-five were printed between 1839 and 1867. His best contribution to antiquarian science was his *Handbuch der deutschen Mythologie* (1853–55). At an early stage of his career Simrock took a high place among students of Shakespeare by his *Quellen des Shakespeare in Novellen, Märchen, und Sagen* (1831); and afterwards he translated Shakespeare's poems and a considerable number of his dramas. Another important book was *Novellenschatz der Italiener* (1832). Among the rest of his works may be mentioned *Die Rheinsagen*, *Das materische und romantische Rheinland*, and his *Deutschen Kriegslieder*.

See Hocker, *Karl Simrock* (1877).

SIMSON, ROBERT (1687–1768), mathematician, was the eldest son of a Glasgow merchant, John Simson of Kirktonhill in Ayrshire, and was born on the 14th of October 1687. He was intended for the church, and passed with distinction through the usual course of study for that profession at the university of Glasgow. The bent of his mind, however, was towards mathematics, not theology; and, when a prospect was opened up to him of succeeding to the mathematical chair, he proceeded to London in order to become acquainted with some of the eminent mathematicians there and to increase his stock of mathematical knowledge. After a year's residence in London he returned to Glasgow, and in 1711 was appointed by the university to the professorship of mathematics. The duties of this office he discharged for half a century. During that time he published several works on pure geometry, and carried on an extensive mathematical correspondence. In 1746 the university of St Andrews, wishing to confer on him an honorary degree, chose, according to his biographer Dr William Trail, that of doctor of medicine, because in his youth he had made a careful study of botany. He never married, and his long life was spent within the walls of his college. His habits were exceedingly regular, his hours of work and of amusement being rigorously fixed. A studious man of science, he had no relish for the promiscuous intercourse of society, and his manner of living was simple and inexpensive. In person he was tall, with a handsome countenance and an affable manner, and he used always to dress in light-coloured clothes. Though, like some other distinguished mathematicians, he was rather absent-minded, in matters of business he was very circumspect. He was a man of the strictest integrity, ready to do justice to the merits of others, and not too sensible of his own. He enjoyed a long course of uninterrupted health, and was seriously indisposed only for a few weeks before his death, which took place on the 1st of October 1768.

The first of Simson's published writings is a paper in the *Philosophical Transactions* of the Royal Society of London (vol. xl. p. 330, 1723) on the subject of Euclid's *Porisms*, the nature of which he was the first to elucidate (see PORISMS). Then followed *Sectionum Conicarum Libri V.* (Edinburgh, 1735), a second edition

of which, with additions, appeared in 1750. The first three books of this treatise were translated into English, and several times printed, with the title *The Elements of the Conic Sections*. In 1749 was published *Apollonii Pergæi Locorum Planorum Libri II.*, a restoration of one of Apollonius's lost treatises, founded on the lemmas given in the seventh book of Pappus's *Mathematical Collection*. In 1756 appeared, both in Latin and in English, the first edition of his *Euclid's Elements*. This work, which contained only the first six and the eleventh and twelfth books, and to which in its English version he added the *Data* in 1762, has become the standard text of Euclid in England. The additions and alterations which Simson made by way of restoring the text to its "original accuracy" are certainly not all of them improvements, and the notes he appended show with what an uncritical reverence he regarded the great geometers of antiquity. Two other works, restorations of Apollonius's treatise *De Sectione Determinata* and Euclid's treatise *De Porismatibus*, which Simson was too distrustful of himself to publish during his lifetime, were printed for private circulation in 1776 at the expense of Earl Stanhope, in a volume with the title *Roberti Simson, M.D. . . . Opera Quædam Reliqua*. The volume contains also two additional books *De Sectione Determinata*, two small dissertations on *Logarithms* and on the *Limits of Quantities and Ratios*, and a few problems illustrative of the ancient geometrical analysis. How far these restorations represent the lost originals will probably always be a matter of conjecture. The *De Porismatibus* certainly cannot be coextensive with Euclid's three books; but, if it is only a restored fragment, the credit due to Simson's perseverance and penetration in recovering from oblivion the nature and some of the contents of one of the most interesting treatises of antiquity will always be such as to keep his name in the remembrance of geometers.

SIMSON, WILLIAM (1800–1847), portrait, landscape, and subject painter, was born at Dundee in 1800. He studied under Andrew Wilson at the Trustees' Academy, Edinburgh, and his early pictures—landscape and marine subjects—were executed with great spirit and found a ready sale. He next turned his attention to figure painting, producing in 1829 the *Twelfth of August*, which was followed in 1830 by *Sportsmen Regaling* and a *Highland Deerstalker*. In the latter year he was elected a member of the Scottish Academy; and, having acquired some means by portrait-painting, he spent three years in Italy, and on his return in 1833 settled in London, where he exhibited his *Camaldolese Monk Showing Relics*, his *Cimabue and Giotto*, his *Dutch Family*, and his *Columbus and his Child at the Convent of Santa Maria la Rabida*. He died in London on the 29th of August 1847.

Simson is greatest as a landscapist; his *Solway Moss—Sunset*, exhibited in the Royal Scottish Academy of 1831 and now in the National Gallery, Edinburgh, ranks as one of the finest examples of the early Scottish school of landscape.

His elder brother George (1791–1862), portrait-painter, was also a member of the Royal Scottish Academy, and his younger brother David (d. 1874) practised as a landscape-painter.

SINAI. In judging of the points of controversy connected with Sinai we are brought face to face with the question of the historicity of the Hebrew records involved. Though new attempts to fix the stations of the wilderness wandering appear every year, critics have long agreed that the number of forty for the years of wandering and for the stations are round numbers, and that the details are not based on historical tradition of the Mosaic age. This does not exclude the possibility that the names of some or all of the stations belong to real places and are based on more or less careful research on the part of the writers who record them. As regards the Mountain of the Law in particular, if the record of Exod. xix. sq. is strictly historical, we must seek a locality where 600,000 fighting men, or some two million souls in all, could encamp and remain for some time, finding pasture and drink for their cattle, and where there was a mountain (with a wilderness at its foot) rising so sharply that its base could be fenced in, while yet it was easily ascended, and its summit could be seen by a great multitude below. In the valley there must have been a flowing stream. The peninsula of Sinai does not furnish any locality where so great a host could meet under the conditions specified, and accordingly many

investigators give up the statistics of the number of Hebrews and seek a place that fulfils the other conditions. But when we consider that the various records embodied in the **PENTATEUCH** (*q.v.*) were composed long after the time of Moses, and that the authors in all probability never saw Sinai, and had no exact topographical tradition to fall back on, but could picture to themselves the scene of the events they recorded only by the aid of imagination, the topographical method of identifying the Mountain of the Law becomes very questionable. The Pentateuchal writers are not at one even about the name of the mountain. It used to be thought that Horeb was the name of the mountain mass as a whole, or of its southern part, while Sinai was the Mountain of the Law proper, but it has been shown by Dillmann that the Elohist and Deuteronomy always use the name Horeb for the same mountain which the Jahvist and the Priestly Code call Sinai. The Elohist belonged to Northern Israel, but Judges v. 5 shows that even in Northern Israel the other name Sinai was not unknown. And it might be shown, though that cannot be done here, that the several accounts vary not only as regards the name but in topographical details. Thus all that can be taken as historically fixed is that after leaving Goshen the Hebrews abode for some time near a mountain called Sinai or Horeb (*cf.* ISRAEL, vol. xiii. p. 396), and that this mountain or range was held to be holy as a seat of the Deity (Exod. ii. 1, 1 Kings xix.).

Where, then, was this mountain? The Midianites, of whom according to one source Jethro was priest, probably always lived east of the Gulf of Akaba; yet we can hardly follow Beke in seeking Sinai beyond that gulf, but must rather think of some point in the so-called peninsula of Sinai, which lies between the Gulfs of Akaba and Suez, bounded on the N. by the Wilderness el-Tih, which slopes gently towards the Mediterranean. To the south of this wilderness rises the Jebel el-Tih, a mass composed mainly of Nubian sandstone and cretaceous limestone, which attains in fantastic forms an altitude of some 3000 feet; its ridges converge towards the south and are cut off by great valleys from the mass now known as Mount Sinai. The latter is composed of primitive rocks,—granite, porphyry, diorite, gneiss, &c. The sandstones of Jebel el-Tih are rich in minerals; inscriptions of Amenophis III. and Thothmes III. found on the spot show that the ancient Egyptians got emerald, malachite, and kupergrün at Sarbüt al-Khâdem; and still older are the turquoise and copper mines of Maghâra, where inscriptions occur bearing the names of kings from Senefru and Cheops down to Rameses II. These mines were worked by criminals and prisoners of war, and the waste products of copper foundries indicate that the peninsula was once better wooded than now, of which indeed we have express testimony of post-Christian date. At present the dominant feature is bare walls of rock, especially in the primitive formations; the steep and jagged summits have a striking effect, which is increased by the various colours of the rock and the clearness of the atmosphere. The deep-cut valleys are filled by rushing torrents after rain, but soon dry up again. In the south the centre of the main mountain mass is Mount Catherine (8540 feet), Omm Shômar to the south-east being little lower; this peak and north of it Mount Serbâl (6750 feet), which rises more immediately from the plain, dominate the Kâ'ah, a waste expanse of sand strown with pebbles, which occupies the south-west margin of the peninsula. In the Kâ'ah is the village of Tûr, and at the southern promontory (Ras Mohammed) is the little hamlet of Sherm. The Sinai group as a whole is called by the Arabs Jebel al-Tûr; the name Sinâ in Arabic comes only from books. The area

of the peninsula is about 11,200 square miles, the population is four to five thousand souls, chiefly Bedouins of various tribes, whose common name, derived from Tûr, is Towâra. They have sheep and goats, with which they retire in summer to the higher lands, where there is good pasture ground, and where springs are comparatively common. On the chalk and sandstone water is scarcer than among the primitive rocks, and often brackish. Though the rocks are bare, there is always vegetation in the dales, especially acacias and tamarisks; from the latter (*T. mannifera*) manna is still derived in quantities that vary with the rainfall. On the hills grow aromatic plants, especially *Thymacea*. The fauna includes the ibex, hyrax, and hyæna; the panther too is sometimes found. Flights of quail have been observed. In some valleys there are well-kept gardens and good date-palms; the most noted oasis is that of Feiran, in the north-west of the peninsula, which is watered by a perennial stream. Whether Feiran is the Rephidim of Exod. xvii. is a question which, like the identification of the other stations of the Israelites, depends on the localization of the Mountain of the Law.

There is no genuine pre-Christian tradition on this subject. The chief authority for the ancient sanctity of Mount Sinai is Antoninus Martyr (end of the 6th century), who tells that the heathen Arabs in his time still celebrated a moon feast there. As *sin* means "moon," this feast has been connected with the name of Sinai, but the proposed etymology is not certain. Of heathen origin, too, are the many Nabatean inscriptions (see **NABATEANS**) of Sinai, found especially in the Wâdy Mokatteb (in the north-west), and sometimes accompanied by rude drawings. The language and character are Aramaic, but the proper names are mainly those of Arabs, who passing by graven their names on the rocks. That they were pilgrims to Sinai cannot be made out with certainty. The inscriptions date from the early years of the Christian era, when the Nabatean kingdom was at its height.

In early Christian times many anchorites inhabited Sinai, living for the most part in the caves, which are numerous even in the primitive rocks. Then monasteries were built, the most famous being the great one of St Catherine in Wâdy el-Dér (the valley of the monastery). On Serbâl, too, there were many granite dwellings, and in the neighbouring Pharan (Phœnicion), which was a bishop's see, there were, as the ruins show, churches and convents.

The question then is whether when the hermits first settled in the peninsula there existed a tradition as to the place of the Mountain of the Law, and whether they chose for their residence a spot which was already traditionally consecrated by memories significant to the Christian as well as to the Jew. No assertion of the existence of such a tradition is to be found in Josephus, who only says that Sinai was the highest mountain of the district—a description which might apply to Serbâl as seen from the plain below. Eusebius uses expressions which may also seem to point to Serbâl as the place of the law-giving, and it must be admitted that the tradition which seeks the holy site in the group of Jebel Mûsâ (*i.e.*, the mass of which Mount Catherine is the highest peak) is not older than the time of Justinian, so that the identification with Mount Serbâl seems to have greater antiquity in its favour. In later times Jebel Mûsâ and Serbâl had each its own tradition, and the holy places were pointed out at each; thus from the monastery of St Catherine a path of granite steps was constructed up to "the Mountain of the Law," but similar steps are found at Serbâl. That these traditions are not decisive, however, is admitted, more or less, even

by those moderns who, like Lepsius, Ebers, Bartlett, give their voice for Serbâl. Most authorities still prefer Jebel Mûsâ or some point in that group, but they again differ in details. First of all there is much difficulty in determining the route by which the Hebrews approached the mountain. Then comes the question of finding a suitable plain for their encampment under the mountain, which is best met if, with Robinson, Stanley, Palmer, and others, the plain is taken to be that of al-Râhe and the overhanging mountain to be Jebel Sufsafeh. The latter is over 6300 feet high, and consists of pasture ground; it does not fit all the details in Exodus, but this objection is quite as strong against the traditional site on Jebel Mûsâ (Mount Moses), which lies farther to the south. Jebel Mûsâ has been accepted by Tischendorf, Laborde, Ritter, Strauss, Farrar, and many others; on this view the Israelites must have encamped in the narrow Wâdy al-Seba'iyeh, north of the mount. But the absence of exact topographical detail on the part of the Biblical narrators, who always speak of Sinai as if it were a single summit and give no hint about several summits of which it is one, shows that in their time there was no real tradition on the matter, and that all attempts at identification are necessarily vain.

Literature.—Burckhardt, *Travels in Syria, &c.*, London, 1822; Leon de Laborde, *Voyage de l'Arabie Pétrée*, Paris, 1830–36; Robinson, *Biblical Researches*, London, 1841; Lepsius, *Reise*, Berlin, 1845; Stanley, *Sinai and Palestine*; Fraas, *Aus d. Orient*, Stuttgart, 1867; *Ordnance Survey of the Pen. of Sinai*, Southampton, 1869, 3 vols.; Palmer, *Desert of the Exodus*, Cambridge, 1871; Ebers, *Durch Gosen zum Sinai*, 2d ed., Leipzig, 1881; Baker Greene, *The Hebrew Migration*, London, 1883; Hull, *Mount Seir, Sinai, and West Palestine*, London, 1885. See also the Palestine Society's *Quarterly Statement*, *passim*. (A. SO.)

SINCLAIR, SIR JOHN, BART. (1754–1835), a voluminous Scottish author, was descended from the Sinclairs of Ulbster, a branch of the noble house of Caithness. He was the eldest son of George Sinclair and Janet, daughter of William, Lord Strathnaver, and was born at Thurso Castle, 10th May 1754. For a short time he had Logan the poet as a private tutor, and, after studying Greek and Latin at the high school of Edinburgh, entered the university in his thirteenth year. He was admitted a member of the faculty of advocates in 1775, and was subsequently called to the English bar (Lincoln's Inn), but, preferring politics to law, was in 1780 elected member of parliament for his native county. As Caithness was then only alternately represented with Bute, he was in 1784 chosen for Lostwithiel, Cornwall, and in 1796 for Petersfield, Hampshire, his parliamentary career extending almost uninterruptedly over thirty years till July 1811. In 1782 he began the issue of those pamphlets on various subjects connected with the welfare of the nation which made him perhaps the most voluminous author of his time, his separate publications, as given in his *Memoirs*, amounting in all to three hundred and sixty-seven. His reputation as a financier and political economist was firmly established by his publication in 1784 of the *History of the Public Revenue of the British Empire*, to subsequent editions of which was added a *Review of the Financial Administration of the Right Hon. William Pitt*. The adoption of his plan for the issue of exchequer bills during the great commercial stagnation of 1793 prevented the ruin of a large number of merchants and manufacturers; and in 1797 Pitt consulted him when the treasury threatened to become exhausted, with the result that the scheme known as the "loyalty loan" was established. On 4th February 1786 Sinclair was created a baronet of Great Britain. After succeeding his father in 1770 he had set himself to improve the family estates, thus changing in a great degree the aspect of Caithness and affording employment to a largely increased number of the population. In 1791 he established at Edinburgh a society

for the improvement of breeds of sheep; and in 1793 he circulated a plan for a board of agriculture and internal improvement. When the board was shortly afterwards established by a charter from the crown he was nominated its first president. From the agricultural reports published by this society he compiled his *Code of Agriculture*, published in 1819. About 1790 he conceived a plan for a *Statistical Account of Scotland*, and the work was published in twenty-one volumes, 1791-1799.

Sir John Sinclair was also the author of a number of tracts on naval and military subjects; and in 1794 he raised for the defence of the kingdom a regiment of a thousand men, at first called the "Caithness Fencibles," afterwards the "Rothesay and Caithness Fencibles;" a second battalion of a thousand men was raised by him in 1795, which took part in suppressing the rebellion in Ireland in 1798. Though originally a supporter in parliament of the war policy of Pitt, he afterwards joined the "armed neutrality" party, which advocated retrenchment and reform. In 1805 he was appointed by Pitt a commissioner for superintending the construction of roads and bridges in the north of Scotland. He was a member of most of the agricultural societies of the Continent, and held as many as twenty-five foreign diplomas. He was a fellow of the Royal Societies of London and Edinburgh, a fellow of the Antiquarian Society of London, and president of the Highland Society of London. No man of his time took a more comprehensive and enlightened interest in the general welfare of the country or conferred on it more substantial benefits. He enjoyed the esteem and intimate friendship of many eminent contemporaries both at home and abroad, with several of whom he kept up an extensive correspondence. He died 21st December 1835.

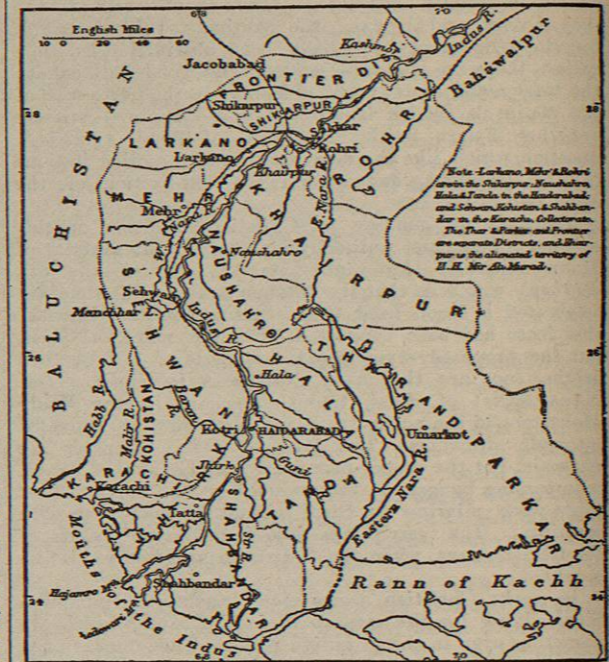
By his first wife, a daughter of Alexander Maitland of Stoke Newington near London, he had two daughters, of whom the elder, Hannah, was the authoress of a work on the *Principles of the Christian Faith*. By his second wife, the Hon. Diana Macdonald, only daughter of Alexander, first Lord Macdonald, he had thirteen children, of whom the eldest son, George (1790-1860), who succeeded to the baronetcy, was a schoolfellow of Byron and Peel at Harrow, and is styled by Byron the "prodigy of our school days"; the third son, John (1797-1875), became archdeacon of Middlesex, and, besides the *Memoirs* of his father, wrote several theological works; and the fourth daughter, Catherine (1800-1864), who for many years acted as his secretary, after his death achieved some distinction as an authoress, her principal works being *Modern Accomplishments*, 1836; *Scotland and the Scotch*, 1840; *Modern Flirtation*, 1841; and *Popular Legends and Bible Truths*, 1852.

See *Correspondence of the Right Hon. Sir John Sinclair, Bart., with Reminiscences of Distinguished Characters*, 2 vols., London, 1831; and *Memoirs of the Life and Works of the Right Hon. Sir John Sinclair*, 2 vols., Edinburgh, 1837.

SIND, the westernmost territorial subdivision of India, and a frontier province of considerable importance in a geographical and political aspect, lies between the 23d and 28th parallels of N. latitude and between the 66th and 71st meridians of E. longitude. Its length from north to south is estimated at 360 miles, and the average of its breadth from east to west at 170. On the north it is bounded by the Khelat state (see BALUCHISTAN), the Punjab, and Bahawalpur; on the E. by Jaisalmir and Mulani, or generally the more desert tracts of Western Rajputana; on the S. by the Rann of Cutch (Rann of Kachh) and the Indian Ocean; and on the W. by Khelat, which overlaps it on the north. Including the alienated district of Khairpur and the extensive tract to the south called the political superintendency of the Thar and Parkar, its area is set down as between 56,000 and 57,000 square miles.

The one great geographical feature in Sind is the lower Indus, passing, as it does, through the entire length of the province, first in a south-westerly direction, then turning somewhat to the east, then returning to a line more directly south, and finally inclining to the west, to seek an

outlet at the sea. Though there is much similarity in the appearance of the landscape on the two sides of the broad river, the distant line of mountains between Sakhar and Sehwan, the steep pass overhanging the water at Lakki, and the hill country below Sehwan give a distinctive character to the right bank, and lend it special attraction when contrasted with the flat lowlands, merging into desert, on the left. Sind has been aptly likened to Egypt. If the one depends for life and fertility on the Nile, so does the other on the Indus. The cities and towns are not so readily to be compared. Hyderabad, notwithstanding its remarkable fortress and handsome tombs, can



Map of Sind.

scarcely vie in interest as a native capital with Cairo; nor can Kurrachee, as a Europeanized capital, be said to have attained the celebrity of Alexandria. Yet there are some respects in which this particular province would not be wholly eclipsed, even in its outside pictures. It contains many monuments of archaeological and architectural interest, and to the traveller descending the river from the Punjab, or ascending it from Kotri, the *coup d'oeil* on the approach to Rohri is at times singularly striking. The beautiful little island of Khwaja Kidhr is a gem in itself; and there is at certain seasons undoubted poetry in the very dreariness of Sakhar and Bakhar.

Owing to the deficiency of rain, the continuance of hot weather in Sind is exceptional. Lying between two monsoons, it just escapes the influence of both. The south-west monsoon stops short at Lakhpat Bandar, the north-west monsoon at Kurrachee, and even here the annual rainfall is not reckoned at more than six or eight inches. At times there is no rainfall for two or three years, while at others there is a whole season's rainfall in one or two days. The average temperature of the summer months rises to 95° F., and the winter average is 60°, the summer maximum being 120° and the winter minimum 32°. The temperature on the sea-coast is much more equable than elsewhere. In Northern Sind we find frost in winter, while both there and in Lower Sind the summer heat is extreme and prolonged. This great heat, combined with the poisonous exhalations from the pools left after the annual inundation and the decaying vegetable deposits, produces the fever and ague with which the name of the country is associated, and to which even the natives themselves fall a prey.

The soil is largely dependent on the river overflow. This grand provision of nature is, however, uncertainly exercised; and not only is the actual volume of water supplied from the upper Indus liable to fluctuation, but the particular lands inundated or untouched by inundation vary according to the caprices of the river. Questions of alluvion and diluvion are therefore of frequent occurrence; and it is often as hard to say whether newly-thrown-up lands belong to the state or an individual proprietor as it is to decide who is the loser in the case of lands newly submerged. In the lands which, as a rule, are reached annually and in fair proportion by the inundation, the soil is so rich as to produce two crops or even more in the year without the assistance of manure. Salt is present in great quantity. The two principal yearly crops are the vernal, known as *rabi*, sown in autumn and reaped in spring, and the autumnal, known as *khari*, sown in summer while the river is high and reaped from October to December. In some districts there is a distinct third crop called *pehras*, sown in March and reaped in July and August. The implements of husbandry are the plough (*haar*), drawn by two bullocks; the harrow (*sahar*), a heavy log of wood drawn by four bullocks, a man standing on each end; the seed-sower (*nari*), a tube fixed to the plough with a wooden funnel on the top, used while the ground is being ploughed for the last time; a curved hook (*datro*) with teeth like a saw, for reaping; and a hoe (*kuriak*), for weeding.

The principal products are *bajri* (a well-known Indian grain), and *judri* (the Indian millet), rice, cotton, sugar-cane, tobacco, oil-seeds, wheat, barley, and indigo. Of these, wheat may be considered the staple produce of Upper, and *bajri* and *judri* of Middle and Lower Sind. Dates, plantains, mangoes, limes, oranges, pomegranates, citrons, figs, grapes, apples, tamarinds, mulberries, and melons are said to be fruits common to the country; and it is added that of late years nectarines, peaches, apricots, and other fruit trees have been successfully introduced, but the statement must be received with some reservation in respect of quantity and quality. There is no doubt that the fruits imported by the Afghan traders find more favour than any home products.

Among the chief manufactures may be mentioned the gold, silver, and silk embroideries, carpets, cloths, lacquered ware, horse-trappings and other leather-work, paper, pottery, tiles, swords, and matchlocks, and the boxes and other articles of inlaid work introduced more than a century ago from Shiraz. The lac work, a widely extended industry in India, is also in vogue in Sind. Various coloured lac is laid in succession on the boxes, &c., while turning on the lathe, and the design is then cut through the different colours. Hyderabad has long been famous for its silks and cottons, silver and gold work, and lacquered ornaments, and the district could once boast of skilled workmen in arms and armour; but, unless the demand for the products of its industries increase, it is to be feared that its old reputation will not long be maintained. In the cloths called *sudi*, silk is woven with the striped cotton—a practice possibly due to the large Mohammedan population of the country, as no Moslem can wear a garment of pure silk without infringement of the law. As regards the carpets, Sir George Birdwood states that those from Sind are the cheapest, coarsest, and least durable of all made in India. Formerly they were fine in design and colouring, but of late years they have greatly deteriorated. The cheap rugs, which sell for about 9s each, are made with the pile (if not altogether) of cow hair, woven upon a common cotton foundation, with a rough hempen shoot. The patterns are bold and suited to the material, and the dyes good and harmonious.

In 1837 the zoology of Sind was reported by Burnes to comprise of genera and species 20 mammals, 191 birds, 36 fishes, 11 reptiles, besides 200 in other departments of natural history. Of wild animals we find the tiger (in the jungles of Upper Sind), the hyena, the *garkhar* or wild ass (in the south part of the Thar and Parkar district), the wolf, jackal, fox, wild hog, antelope, *pharho* or hog deer, hares, and porcupines. Of birds of prey, the vulture and several varieties of falcon may be mentioned. The flamingo, pelican, stork, crane, and Egyptian ibis frequent the shores of the delta. Besides these there are the *ubara* (bustard) or *tibir*, the rock-grouse, quail, partridge, and various kinds of parrots. Waterfowl are plentiful; in the cold season the lakes or *dhanahs* are covered with wild geese, *kulang*, ducks, teal, curlew, and snipe. Among other animals to be noted are scorpions, lizards, centipedes, and many snakes.

The domestic animals include camels (one-humped), buffaloes, sheep and goats, horses and asses (small but hardy), mules, and bullocks. Of fish there are, on the sea-coast, sharks, saw-fish, rays, and skate; cod, *sir*, *cavalho*, red-snapper, *gassir*, *begti*, *dangara*, and *buru* abound. A kind of sardine also frequents the coast. In the Indus, the finest flavoured and most plentiful fish is the *palo*, generally identified with the *hilsa* fish of the Ganges. *Dambhro* (*Labeo rohita*) and mullet, *morako* (*Cirrhinia mrigala*), *gandan* (*Notopterus kapirati*), *khago* or catfish (*Pila buchhanani*), *yopri* (*Barrus sarana*), *shaktir*, *jerkho*, and *singhari* (*Macrones aor*) are also found. Otter, turtle, and porpoise are frequently met with; so too are long-snouted alligators and water-snakes.

The extent of forest land is relatively small. The forests (about eighty-seven in number) are situated for the most part on the banks of the Indus, and extend southward from Ghotki in the Rohri deputy collectorate to the middle delta. They are described as narrow strips of land, from two to three miles in length, and ranging from two furlongs to two miles in breadth. The largest are between 9000 and 10,000 acres in area, but are subject to diminution owing to the encroachments of the stream. The wood is principally *babul* (*Acacia arabica*), *bahan* (*Populus euphratica*), and *kandi* (*Prosopis spicigera*). The *tali* (*Dalbergia Sissu*) grows to some extent in Upper Sind; the iron-wood tree (*Tocoma undulata*) is found near the hills in the Mehar districts. There are, besides, the *nim* (*Melia Azadirachta*), the *pipal* (*Ficus religiosa*), the *ber* (*Zizyphus Jujuba*). The delta has no forests, but its shores abound with mangrove trees. Of trees introduced by the forest department we have the tamarind (*Tamarindus indica*), several Australian wattle trees, the water-chestnut (*Tropha natans*), the *avla* (*Emblica officinalis*), the *bahera* (*Terminalia Bellerica*), the carob tree (*Ceratonia Siliqua*), the China tallow (*Stillingia sebifera*), the *bc*, *Egls Marmelos*, and the *manah* (*Bassia latifolia*). There is a specially organized forest department.

For administrative purposes the province has five well-understood divisions:—(1) *Frontier, Upper Sind*, of which the principal town is Jacobabad, named after the late General John Jacob, C.B., its founder; the hamlet which occupied its site in 1843 was a mere speck in the desert, and its name, Khangarh, can hardly be associated with the fine canal and abundant vegetation now marking the locality; (2) *Shikarpur*, with its capital of the same name and Sakhar, both notable places on the right bank of the Indus; in this division also are the towns of Larkhano and Rohri, the last on the left bank of the river; (3) *Hyderabad (Haidarabad)*, of which the chief town, having the same name, was the capital of the province prior to the British occupation; (4) *Kurrachee (Karachi)*, with its modern Europeanized capital and harbour and Tatta, a town of interesting local associations; (5) *Thar and Parkar*, an outlying district on the south-east, more or less part of the desert tract extending far and wide in that particular quarter. Besides these there is the territory of Mir 'Ali Murad, Talpur, greatly curtailed of its original dimensions, but still forming a large lanc alienation in Upper Sind.

Where cultivation depends so much on the character of the year's inundation, it is natural that the revenue should be uncertain. In 1833-34, for instance, the river was abnormally low. Consequently the area of cultivation was contracted, and, while considerable remissions had to be granted, collections were with difficulty carried out. The rainfall, moreover, except in the Thar and Parkar district, was not only scanty but unseasonable. In Thar and Parkar the rainfall was especially favourable, and owing to an early inundation and wise preparations lands never before cultivated were brought under the plough.

The gross canal revenue in Sind amounted in 1833-34 to Rs. 3,686,754, and the land revenue to Rs. 1,171,925. In round numbers and English figures—without reference to the deterioration of the rupee—the total is about £487,000, of which three-fourths is due to canal irrigation.

The population may be roughly reckoned at two millions and a half, an estimate which is borne out by the census of 1881. Kurrachee is now the most populous of the capitals, and its numbers far exceed those of Shikarpur and Hyderabad. But the character of its inhabitants differs from that of other large towns in Sind. They are for the most part foreign and migratory, and do not represent the true Sindis.

Of the two great divisions of the people in Sind the Mohammedans comprise about two-thirds of the whole, the Hindus the remaining third. The Mohammedans may be divided into two great bodies—the Sindis proper and the naturalized Sindis. The Sindis proper is a descendant of the original Hindu. In religion he is a Sini, though some of the Sindis belong to the Shia sect. There are probably more than three hundred families or clans among the Sindis. There is, as a rule, no distinction of caste, except that followers of certain vocations—such as weavers, leather-workers, sweepers, huntsmen—are considered low and vile. The six different classes of naturalized Sindis are—the four families of the Saiyids (the Bokhari, Mathari, Shirazi, and Lakhirayi); the Afghans, from Khorasan; the Baluchis; the slaves or Sidis—originally Africans; the Memans; and the Khwajas. The Hindu population of Sind may be divided into the following principal castes:—the Brahmans, Kshatrias, Waishias, and Sudras, with their subdivisions. Besides these there are the Sikhs, and the religious mendicants—the Sanasi, Jogi, Gosain, and Ogar,—all of Brahman origin.

The educational progress made in Sind during the quarter of a century succeeding the mutiny has been very great. In 1858 there was but one Government English school; with 82 boys, at Kurrachee, and one with 25 boys at Hyderabad; and of the 82 only 8 of the pupils were Sindi. In 1884-85 Sind could boast of a Government high school at Kurrachee with 400 pupils, of another high school at