

Robert II, who earned by his ferocity the title of the "Wolf of Badenoch," inherited by his wife the earldom of Ross, but died without legitimate issue, although from his illegitimate offspring were descended the Stewarts of Belladrum, of Athole, of Garth, of Urrard, and of St Fort. On the death of the "Wolf of Badenoch" the earldom of Buchan passed to his brother Robert, duke of Albany, also earl of Fife and earl of Menteith, but these earldoms were forfeited on the execution of his son Murdoch in 1425, the earldom of Buchan again, however, coming to the house of Stewart in the person of James, second son of Sir James Stewart, the black knight of Lorn, by Johanna, widow of King James I. From Murdoch, duke of Albany, were descended the Stewarts of Ardvoirlich and other families of the name in Perthshire, and also the Stewarts of Inchbreck and Laithers, Aberdeenshire. From a natural son of Robert II. were descended the Stewarts of Dalguise, Perthshire, and from a natural son of Robert III. the Shaw Stewarts of Blackhall and Greenock. The direct male line of the royal family terminated with the death of James V. in 1542, whose daughter Mary was the first to adopt the spelling "Stuart." Mary was succeeded in her lifetime in 1567 by her only son James VI., who through his father Lord Darnley was also head of the second branch, there being no surviving male issue of the family from progenitors later than Robert II. In James V., son of James IV. by Margaret, daughter of Henry VII., the claims of the English junior branch became merged in the Scottish line, and on the death of Queen Elizabeth of England, last surviving offshoot of Henry VIII., James VI. of Scotland, lineally the nearest heir, was proclaimed king of England, in accordance with a declaration of Elizabeth that no minor person should ascend the throne, but her cousin the king of Scots. The accession of James was, however, contrary to the will of Henry VIII., which favoured the Suffolk branch, whose succession would probably have marvellously altered the complexion of both Scottish and English history. As it was, the only result of that will was a tragedy initiated by Elizabeth, but consummated by James, so as to clothe his memory with deep disgrace. In the Scottish line the nearest heir after James VI., both to the Scottish and English crowns, was Arabella Stuart, only child of Charles, earl of Lennox, younger brother of Lord Darnley,—Lady Margaret Douglas, the mother of Darnley and his brother, having been the daughter of Archibald, sixth earl of Angus by Margaret, queen dowager of James IV. James VI. (I. of England) was thus nearest heir of the junior English branch by a double descent, Arabella Stuart being next heir by a single descent. On account of the descent from Henry VII., the jealousy of Elizabeth had already caused her to imprison Arabella's mother (Elizabeth, daughter of Sir William Cavendish) on learning that she had presumed to marry Lennox. The daughter's marriage she was determined by every possible means to prevent. She objected when King James proposed to marry her to Lord Esme Stuart, whom she had created duke of Lennox, but when the appalling news reached her that Arabella had actually found a lover in William Seymour, grandson of Catherine Grey, heiress of the Suffolk branch, she was so deeply alarmed and indignant that she immediately ordered her imprisonment. This happened immediately before Elizabeth's death, after which she obtained her release. Soon after the accession of James a conspiracy, of which she was altogether ignorant, was entered into to advance her to the throne, but this caused no alteration in her treatment by James, who allowed her a maintenance of £800 a year. In February 1610 it was discovered that she was engaged to Seymour, and, although she then promised never to marry him without the king's consent, the marriage took place

secretly in July following. In consequence of this her husband was sent to the Tower, and she was placed in private confinement. Though separated, both succeeded in escaping simultaneously on 3d June 1611; but, less fortunate than her husband, who got safe to the Continent, she was captured at the Straits of Dover, and shut up in the Tower. Her hopeless captivity deprived her of her reason before her sorrows were ended by death, 27th September 1615.

By the usurpation of Cromwell the Stuarts were excluded from the throne from the defeat of Charles I. at Naseby in 1645 until the restoration of his son Charles II. in 1661. Carlyle refers to the opinion of genealogists that Cromwell "was indubitably either the ninth or the tenth or some other fractional part of half a cousin of Charles Stuart," but this has been completely exploded by Walter Rye, in the *Genealogist* ("The Steward Genealogy and Cromwell's Royal Descent," new ser., vol. ii. pp. 34-42). On the death of Charles II. without issue in 1685, his brother James, duke of York, ascended the throne as James II., but he so alienated the sympathies of the nation by his unconstitutional efforts to further the Catholic religion that an invitation was sent to the prince of Orange to come "to the rescue of the laws and religion of England." Next to the son of James II., still an infant under his father's control, Mary, princess of Orange, eldest daughter of James II., had the strongest claim to the crown; but neither were the claims of the prince, even apart from his marriage, very remote, since he was the son of Mary, eldest daughter of Charles I. The marriage had strengthened the claims of both, and they were proclaimed joint sovereigns of England on 12th February 1689, Scotland following the example of England on the 11th April. They had no issue, and the Act of Settlement passed in 1701, excluding Catholics from the throne, secured the succession to Anne, second daughter of James II., and on her death without issue to the Protestant House of Hanover, descended from the princess Elizabeth, daughter of James I., wife of Frederick, count palatine of the Rhine. On the death of Anne in 1714, George, elector of Hanover, eldest son of Sophia, electress of Hanover (only surviving child of the princess Elizabeth), and Ernest, youngest son of George, duke of Brunswick, consequently became sovereign of Great Britain and Ireland, and, notwithstanding somewhat formidable attempts in behalf of the elder Stuart line in 1715 and 1745, the Hanoverian succession has remained uninterrupted, and has ultimately won universal assent. The female line of James II. ended with the death of his daughter, Queen Anne. James, called James III. by the Jacobites and the Old Pretender by the Hanoverians, had two sons,—Charles Edward, the Young Pretender, who died without legitimate issue in 1780, and Henry, titular duke of York, commonly called Cardinal York, at whose death in 1807 the male line of James II. came to an end. He was also the last lineal male representative of any of the crowned heads of the race, so far as either England or Scotland was concerned, and excepting of course the Hanoverian line. In the female Stuart line there are, however, still nearer heirs to the throne than those of the Hanoverian line, viz., the descendants of Henrietta, duchess of Orleans, daughter of Charles I., represented now only in Maria Theresia, married to Prince Louis Leopold of Bavaria, and their nine children. The male representation of the family, being extinct in the royal lines, is claimed by the earls of Galloway and also by the Stewarts of Castlemilk, but the claims of both are more than doubtful.

See Sir George Mackenzie's *Defence of the Royal Line of Scotland*, 1685, and *Antiquity of the Royal Line of Scotland*, 1686; Crawford's *Genealogical History of the Royal and Illustrious Family of*

the Stuarts, 1710; Duncan Stewart's *Genealogical Account of the Surname of Stewart*, 1739; Andrew Stuart's *Genealogical History of the Stuarts*, 1798; Stothert's *House of Stuart*, privately printed, 1855; An Abstract of the Evidence to prove that Sir William Stewart of Jedburgh, the Paternal Ancestor of the Present Earl of Galloway, was the Second Son of Sir Alexander Stewart of Darnley, 1801; Townend's *Descendants of the Stuarts*, 1858; Bailey, *The Succession to the English Crown*, 1879. (T. F. H.)

STUART, GILBERT (1755-1828), a distinguished American portrait-painter, was born in Narragansett, Rhode Island, U.S., December 3, 1755. His father, a native of Perth, Scotland, and the son of a Presbyterian minister, had set up a snuff-mill in Narragansett, in company with another Scotsman, Dr Thomas Moffatt, and was known as "the snuff-grinder." The father removed early to Newport, where his son had the advantage of good instruction. He began to draw early, but none of his sketches have been preserved. His first known pictures are of two Spanish dogs, and two portraits, the latter painted when he was thirteen years old, and now in the Redwood Library, Newport. In 1770-71 he received some instruction from a Scottish artist named Cosmo Alexander, who took him to Scotland with him; but, this patron dying soon after his arrival, Stuart, after struggling for a while at the university of Glasgow, had to work his way home in a collier. In the spring of 1775 he sailed again for England, and became the pupil and assistant of Benjamin West, with whom he painted until 1785, when he set up a studio of his own. One of his best pictures of this period is a full-length portrait of W. Grant of Congalton skating in St James's Park, now at Moor Court, Stroud, in the possession of Lord Charles Peilham Clinton. Two fine half-lengths by Stuart are in the National Gallery—his preceptor Benjamin West and the engraver Woollett. Stuart married in London and remained there, with the exception of a short visit to Dublin in 1788, until 1792, when he returned to America. Early in 1795 Stuart painted his first head of Washington. This portrait exhibits the right side of the face, and, although the least familiar, is undoubtedly the truest of the three portraits of Washington from his hand. The second was a full-length for the marquis of Lansdowne, and the third a vignette head now belonging to the Athenæum in Boston, U.S. These last two show the left side of the face, and, although they are the readily recognized "Stuart's Washington," are unsatisfactory as portraits and inferior as works of art. There are sixty-one replicas of these three pictures, and they have been engraved more than two hundred times. In the catalogue of Stuart's works are recorded seven hundred and fifty-four portraits. Stuart remained in Philadelphia, where he painted many of the prominent men of the country, until 1803, when he removed to Washington; two years later he went to Boston, where he died July 27, 1828.

Stuart's pictures have been little injured by time, which is doubtless owing to his use of pure colours and to his manner of employing them. His practice was to lay all the tints in their places separately and distinctly alongside of each other before any blending was used, and then they were united by means of a large soft brush and without corrupting their freshness. It is this method that gives the firmness and solidity to his flesh work. A marked feature of Stuart's work is the total absence of all lines, his work being painted in with the brush from the beginning. It is this process that gives to his modelling its strength and rotundity. Stuart was pre-eminent as a colourist, and his place, judged by the highest canons in art, is unquestionably among the few recognized masters of portraiture.

STUART, JOHN M'DONALD (1818-1866), a South-Australian explorer, was born in England in 1818 and arrived in the colony about 1839. He accompanied Captain Sturt's 1844-45 expedition as draughtsman, and between 1858 and 1862 he made six expeditions into the interior, the last of which brought him on July 24 to the shores of the Indian

Ocean at Port Darwin, the first to have crossed the island continent from south to north. It was this transcontinental expedition which led to the territorial rights, and, in defiance of geographical position, the name of South Australia being extended over so much of central and north Australia. Stuart was rewarded with £3000 and a grant of 1000 square miles of grazing country in the interior rent free for seven years. His name is perpetuated by Central Mount Stuart. He died in England June 5, 1866.

STUHLWEISSENBURG (Hung. *Székcs-Fehérvár*; Lat. *Alba Regia*), the capital of the county of Fehér, and in former times also of Hungary, is situated in 47° 11' N. lat. and 18° 25' E. long., in a fertile plain. It is the see of one of the oldest bishoprics in the country, and has a number of religious charities, convents, and nunneries, a seminary, a gymnasium, and a real school. It was the coronation and burial place of the Hungarian kings from the 10th to the 16th century, but has sunk into comparative insignificance. A few years ago some very remarkable excavations were made here. The town is now chiefly agricultural; its fairs, especially for horses, are famous. The population (1885) numbers 27,000.

STURGEON. Sturgeons (*Acipenser*) are a small group of fishes, of which some twenty different species are known, from European, Asiatic, and North American rivers. The distinguishing characters of this group, as well as its position in the system, have been sufficiently indicated in the article ICHTHYOLOGY (vol. xii. p. 687). They pass a great part of the year in the sea, but periodically ascend large rivers, some in spring to deposit their spawn, others later in the season for some purpose unknown; only a few of the species are exclusively confined to fresh water. None occur in the tropics or in the southern hemisphere.

Sturgeons are found in the greatest abundance in the rivers of southern Russia, more than ten thousand fish being sometimes caught at a single fishing-station in the fortnight during which the up-stream migration lasts. They occur in less abundance in the fresh waters of North America, where their capture is not confined to the rivers, the majority being caught in shallow portions of the shores of the great lakes. In Russia the fisheries are of immense value; yet but little is known of the sturgeon's habits, life, and early stages of development or growth. Early in summer the fish migrate into the rivers or towards the shores of freshwater lakes in large shoals for breeding purposes. The ova are very small, and so numerous that one female has been calculated to produce about three millions in one season. The ova of some species have been observed to hatch within a very few days after exclusion. Probably the growth of the young is very rapid, but we have no knowledge as to the length of time for which the fry remain in fresh water before their first migration to the sea. After they have attained maturity their growth appears to be much slower, although continuing for many years. Frederick the Great attempted to introduce the sterlet into Prussia, and placed a number of this fish in the Görland Lake in Pomerania about 1780; some of these were found to be still alive in 1866, and therefore had reached an age of nearly ninety years. Prof. Von Baer also states, as the result of direct observations made in Russia, that the hausen (*Acipenser huso*) attains to an age of from 200 to 300 years. Sturgeons ranging from 8 to 11 feet in length are by no means scarce, and some species grow to a much larger size.

Sturgeons are ground-feeders. With their projecting wedge-shaped snout they stir up the soft bottom, and by means of their sensitive barbels detect shells, crustaceans, and small fishes, on which they feed. Destitute of teeth, they are unable to seize larger prey.

In countries like England, where few sturgeons are

caught, the fish is consumed fresh, the flesh being firmer than that of ordinary fishes, well-flavoured, though somewhat oily. The sturgeon is included as a royal fish in an Act of King Edward II., which assigns to the sovereign all wrecks and whales, although it probably rarely graces the royal table of the present period, or even that of the lord mayor of London, who can claim all sturgeons caught in the Thames above London Bridge. Where sturgeons are regularly caught in large quantities, as on the rivers of southern Russia and on the great lakes of North America, their flesh is dried, smoked, or salted. The ovaries, which are of large size, are prepared for caviare; for this purpose they are beaten with switches, and then pressed through sieves, leaving the membranous and fibrous tissues in the sieve, whilst the eggs are collected in a tub. The quantity of salt added to them before they are finally packed varies with the season, scarcely any being used at the beginning of winter. Finally, one of the best sorts of isinglass is manufactured from the air-bladder. After it has been carefully removed from the body, it is washed in hot water, and cut open in its whole length, to separate the inner membrane, which has a soft consistency, and contains 70 per cent. of glutin.

The twenty species of sturgeons (*Acipenser*) are nearly equally divided between the Old and New Worlds. The more important are the following:—

(1) The Common Sturgeon of Europe (*Acipenser sturio*) occurs on all the coasts of Europe, but is absent in the Black Sea. Almost all the British specimens of sturgeon belong to this species; it crosses the Atlantic and is not rare on the coasts of North America. It reaches a large size (a length of 12 feet), but is always caught singly or in pairs, so that it cannot be regarded as a fish of commercial importance. The form of its snout varies with age (as in the other species), being much more blunt and abbreviated in old than in young examples. There are 11-13 bony shields along the back and 29-31 along the side of the body.

(2) *Acipenser guldenstädtii* is one of the most valuable species of the rivers of Russia, where it is known under the name "Ossétr"; it is said to inhabit the Siberian rivers also, and to range eastwards as far as Lake Baikal. It attains to the same large size as the common sturgeon, and is so abundant in the rivers of the Black and Caspian Seas that more than one-fourth of the caviare and isinglass manufactured in Russia is derived from this species.

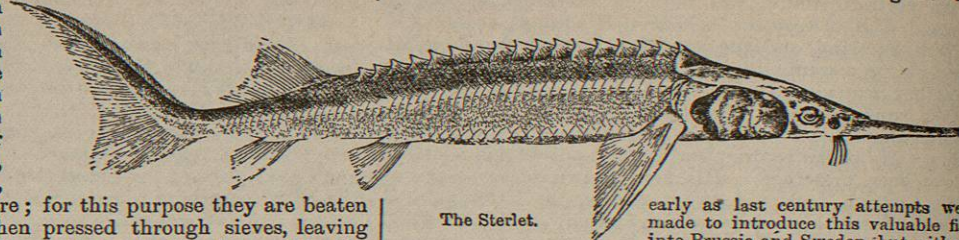
(3) *Acipenser stellatus*, the "Seuruga" of the Russians, occurs likewise in great abundance in the rivers of the Black Sea and of the Sea of Azoff. It has a remarkably long and pointed snout, like the sterlet, but simple barbels without fringes. Though growing only to about half the size of the preceding species, it is of no less value, its flesh being more highly esteemed, and its caviare and isinglass fetching a higher price. In 1850 it was reported that more than a million of this sturgeon are caught annually.

(4) The sturgeon of the great lakes of North America, *Acipenser rubicundus*, with which, in the opinion of American ichthyologists, the sea-going sturgeon of the rivers of eastern North America, *Acipenser maculosus*, is identical, has of late years been made the object of a large and profitable industry at various places on Lakes Michigan and Erie; the flesh is smoked after being cut into strips and after a slight pickling in brine the thin portions and offal are boiled down for oil; nearly all the caviare is shipped to Europe. One firm alone uses from ten to eighteen thousand sturgeons a year, averaging fifty pounds each. The sturgeons of the lakes are unable to migrate to the sea, whilst those below the Falls of Niagara are great wanderers; and it is quite possible that a specimen of this species said to have been obtained from the Firth of Tay was really captured on the coast of Scotland.

(5) *Acipenser huso*, the "Hansen" of Germany, is recognized by the absence of osseous scutes on the snout and by its flattened, tape-like barbels. It is one of the largest species, reaching the enormous length of 24 feet and a weight of 2000 pounds. It inhabits the Caspian and Black Seas and the Sea of Azoff, whence in former years large shoals of the fish entered the large rivers of Russia and the Danube. But its numbers have been much thinned, and specimens of 1200 pounds in weight have now become

scarce. Its flesh, caviare, and air-bladder are of less value than those of the smaller kinds.

(6) The Sterlet (*Acipenser ruthenus*) is one of the smaller species, which likewise inhabits both the Black and Caspian Seas, and ascends rivers to a greater distance from the sea than any of the other sturgeons; thus, for instance, it is not uncommon in the Danube at Vienna, but specimens have been caught as high up as Ratisbon and Ulm. It is more abundant in the rivers of Russia, where it is held in high esteem on account of its excellent flesh, contributing also to the best kinds of caviare and isinglass. As



The Sterlet.

early as last century attempts were made to introduce this valuable fish into Prussia and Sweden, but without success. The sterlet is distinguished from the other European species by its long and narrow snout and fringed barbels. It rarely exceeds a length of three feet.

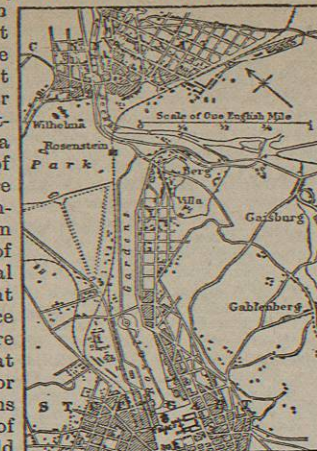
Sturgeons with the snout prolonged in an extraordinary manner, so as to form a long spade-like or conical process (*Spytularia*, *Polyodon*, *Psephurus*), occur in the Mississippi and the great rivers of China and Central Asia. None of them have been made objects of trade, but special interest is attached to them from a geographical as well as paleontological point of view, the two genera last named being represented as far back as the Lias by an allied fossil genus, *Chondrosteus*, and all affording a striking proof of the close affinity of the North-American and North-Asiatic faunas of the recent period.

STURM, JACQUES CHARLES FRANÇOIS (1803-1856), the discoverer of the algebraic theorem which bears his name, was born in Geneva in 1803. Originally tutor to the son of Madame de Stael, he subsequently resolved, in conjunction with his school-fellow Colladon, to try his fortune in the French metropolis. Sturm soon made the acquaintance of the foremost mathematicians in the capital, and obtained employment on the *Bulletin Universel*. On the discovery of his important theorem regarding the determination of the number of real roots of a numerical equation which are included between given limits, on 23d May 1829, he rapidly rose to fortune and public honours. He was chosen a member of the French Academy in 1836, became "repetiteur" in 1838, and in 1840 professor in the Polytechnic School, and finally succeeded Poisson in the chair of mechanics in the Faculty of Science at Paris. He presented numerous memoirs to the Academy, of which his admirers have said, with some pardonable exaggeration, that an impartial posterity will place them by the side of the finest memoirs of Lagrange. Sturm died at Paris on the 18th December 1855.

STURT, CHARLES (d. 1869), a distinguished South-Australian explorer, was born in England, and at an early age entered the army, in which he reached the rank of captain. Having landed in Australia with his regiment (the 39th), he became interested in the geographical problems which at that time were exciting general attention. A first expedition (1828) led to the discovery of the Darling river; and a second, from which the explorer returned almost blind, made known the existence of Lake Alexandrina. For some time Captain Sturt was surveyor-general of South Australia, and he afterwards filled the post of colonial secretary. The first session of the South-Australian legislature (1851) voted him a pension of £600. From his third journey (1844-5), in which terrible hardships had to be endured, he returned quite blind, and he never altogether recovered his sight. He died at Cheltenham, England, June 16, 1869.

STUTTGART, the capital of Würtemberg, lies in the small valley of the Nesenbach, just above its confluence with the Neckar, near the centre of the kingdom and

about 115 miles west-by-north of Munich. It is charmingly situated among vine-clad and wooded hills, and stands at a height of nearly 900 feet above the sea. The town is intersected from south-west to north-east by the long and handsome Königs-Strasse, dividing it into an upper and lower half. In all its main features it is essentially a modern town, and few of its principal buildings are older than the present century. Many of its modern edifices are, however, of considerable architectural importance, and the recent revival of the Renaissance style is perhaps nowhere better illustrated than at Stuttgart. The lower or south-eastern half contains both the small group of streets belonging to old Stuttgart and also the most important part of the new town. A large proportion of the most prominent buildings are clustered round the spacious Schloss-Platz, on or near which are the following edifices:—the new palace, finished in 1806; the old palace, a building of the 16th century, with a picturesque arcaded court; the Königsbau, a huge modern building, with a fine colonnade, containing ball and concert rooms, shops, &c.;



Environs of Stuttgart.

erected in memory of King William I.; in the court-yard of the old palace is a bronze equestrian statue of Count Eberhard with the Beard; and adjacent is a fine statue, designed by Thorwaldsen, of Schiller, who was a native of Würtemberg. Among the other principal buildings are the polytechnic and architectural schools, the Late-Gothic Leonhardskirche and Spitalkirche, the fine modern Gothic church of St John, the new Roman Catholic church, the neat little English church, the synagogue, and several handsome villas and mansions, chiefly in the resuscitated Renaissance style.

The art collections of Stuttgart are numerous and valuable. The museum of art comprises a picture gallery, an almost unique collection of casts of Thorwaldsen's works, and a cabinet of engravings. The royal library contains about 350,000 printed volumes, including what is said to be the largest collection of Bibles in the world, and also 4000 MSS., many of great rarity. To these may be added the industrial museum, the cabinet of coins, the museum of natural history, the fine collection of majolica in the new palace, and the museum of antiquities. The city also contains numerous excellent educational establishments, though the state university is not here but at Tübingen, and its conservatorium of music has long been renowned. Stuttgart is the centre of the publishing trade of South Germany, and has a busy industry in everything connected with the production of books. In various other industrial departments it also takes a high place, its manufactures including machinery, textile fabrics, pianos and other musical instruments, artists' colours, chemicals, sugar, and chocolate. Its trade is considerable. The population of Stuttgart in 1885 was 125,510, showing an increase of 7 per cent. since 1880. Four-fifths of these are Protestants. The town proper contains about 110,000 inhabitants, while the above total is made up by adding the populations of the suburban villages of Berg, Gablingen, and Heslach. Stuttgart is the headquarters of the 13th corps of the German army, and contains a comparatively large garrison, for which accommodation is provided in three extensive barracks within the town and on the outskirts.

To the north-east of the new palace lies the beautiful palace park, embellished with statuary and artificial sheets of water, and extending nearly all the way to Cannstatt, a distance of over two miles. Cannstatt, a town with (1880) 16,205 inhabitants, is not officially incorporated with Stuttgart, but may be looked on as practically forming part of it. Its beautiful situation on the Neckar, its tepid saline and chalybeate springs, and its educational advantages attract numerous visitors. In the environs of Stuttgart and Cannstatt lie Rosenstein, the Solitude, Hohenheim, the Wilhelma, and other royal chateaus.

Stuttgart seems to have originated in a stud ("Stuten Garten") of the early counts of Würtemberg, and the first mention of it occurs in a document of 1229. Its importance is of comparatively modern growth, and in early Würtemberg history we find it overshadowed by Cannstatt, the central situation of which, on the Neckar, seemed to mark it out as the natural capital of the country. After the destruction of the castle of Würtemberg Count Eberhard, however, transferred his residence to Stuttgart (1320), and in 1482 it became the recognized capital of all the Würtemberg territories. Even as capital its growth was slow, and it enjoys little prominence in history. At the beginning of the present century it did not contain 20,000 inhabitants, and its real advance begins with the reign of King William I. (1816-1864), who exerted himself in every way to improve and beautify his capital. In 1849 Stuttgart was the place of meeting of the so-called "Rump Parliament" (Rumpfparlament). Among its eminent natives are Hegel (b. 1770), the philosopher, and Hauff (b. 1802), the poet and story-teller.

STYRAX. See STORAX.

STYRIA (Germ. *Steiermark* or *Steyermark*), a duchy and crownland in the Cis-Leithan part of the Austro-empire, is bounded on the north by Upper and Lower



Plan of Stuttgart.

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| 1. Palace. | 5. Town-house. | 8. Hospital Church. |
| 2. Old Palace. | 6. Theatre. | 9. Orphanage. |
| 3. Princessen Palais. | 7. Crown - Prince's Palace. | 10. Museum of Art. |
| 4. Collegiate Church. | | |

the so-called Akademie, formerly (1775-94) the seat of the Carls-Schule, where Schiller received part of his education, and now occupied by the king's private library and by guard-rooms; the new courts of justice; the palaces of the crown prince and of Prince William; the Stiftskirche, or collegiate church, a fine specimen of 15th-century Gothic; the extensive royal stables; the new post-office; the theatre; and the central railway station, one of the handsomest structures of the kind in Germany. In the centre of the Schloss-Platz is the lofty jubilee column

Austria, on the E. by Hungary, on the S. by Croatia and Carniola, and on the W. by Carinthia and Salzburg. Its area is 8630 square miles. Almost the entire district is mountainous, being occupied by various chains and ramifications of the eastern Alps; and, though Northern (or Upper) and Southern (or Lower) Styria are distinguished, the latter is low only in a relative sense. The North Limestone Alps touch Styria to the north of the Enns, beginning with the huge Dachstein (9830 feet), which rises on the north-west border of the duchy. To the south of the Enns the central chain of the Alps traverses Styria from south-west to north-east in two huge ranges, separated by the valleys of the Mur and the Mürz, and conveniently grouped under the name of Styrian Alps. The more northerly of these two branches, forming a prolongation of the Tanern ridge, is the loftier, and culminates in the Hochgolling (9392 feet), the highest summit in Styria. The lower branch to the south is broken by the valley of the Mur, which turns abruptly to the right at its confluence with the Mürz, and still farther to the north-east is crossed by the Semmering Pass. To the south of the Drave the duchy is traversed by the Karawanken Mountains (highest peak, the Stou, 7346 feet), forming a continuation of the Carnic Alps. The mountains decrease in height from west to east, and the south-east part of Styria may be described as hilly rather than mountainous. There is nowhere level ground enough to form a plain in the proper acceptance of the term, but some of the valleys contain a good deal of fertile land. The rivers of Styria all drain into the Danube; the Save and the Traun are the most important of those not already mentioned. There are numerous small mountain lakes. The climate, of course, varies with the configuration of the surface, and there is a mean annual difference of about 7° Fahr. between the temperature of the north-west and the south-east.

In spite of the irregular nature of the surface, but little of the soil can be called unproductive. About 21.40 per cent. is under tillage, 12.75 in meadow, and 16.75 in pasture, while nearly a half of the total area is covered with fine forests. The chief crops are oats, maize, rye, wheat, buckwheat, potatoes, and flax. Wine is produced in the valleys of Lower Styria, where large quantities of chestnuts are also grown. In the mountains dairy-farming is successfully carried on in the Alpine fashion, and good horses are reared in the valley of the Enns. Sheep are comparatively few, but there are large numbers of goats and swine, while poultry-rearing and bee-keeping are very general in the Slavonic districts to the south. Some fairly successful attempts have also been made to breed silkworms. Trout and other fish are abundant in the rivers and mountain lakes and chamois are hunted among the higher Alps. The great wealth of Styria however, lies underground. Its extensive and important iron mines yield nearly one-third of the iron ore raised in the Austrian empire, and its other mineral resources include brown coal, pit-coal, copper, zinc, lead, graphite, a little gold and silver, nickel, alum, cobalt, salt, dyer's earth, potter's clay, marble, and good mill and building stones. The best known of its numerous mineral springs are the thermal springs of Tüffer, the alkaline springs of Rohitsch, and the brine springs of Aussee.

The chief industry of Styria is determined by its mineral richness, and iron-foundries, machine-shops, and manufactures of various kinds of iron and steel goods are very numerous. A special branch is the making of scythes and sickles, which are sent out of the country in large quantities. Among its other industrial products are glass, paper, cement, oil and perfumery, shoes, cotton goods, chemicals, and gunpowder. Linen-weaving is prosecuted as a household industry. An active trade is carried on in the above-named manufactures, and in brown coal, cattle, wine, and fruit. In addition to three navigable rivers (Drave, Save, Mur), the traffic of the duchy is facilitated by 600 miles of railway. The population of Styria in 1880 was 1,213,527, equivalent to 140 per square mile, a proportion which, while not high in itself, is considerably above the rate in the other mountainous regions of the empire. Nearly the whole of these professed the Roman Catholic faith, the Protestants numbering only 8000 and the Jews about 1000. Two-thirds of the inhabitants are Germans; the remainder, chiefly found in the south parts of the duchy, in the valleys of the Drave and Save, are Slavs (Slovenes). About 65 per cent. are supported by agricultural pursuits, including forestry. The education of the crownland centres in the university of Graz, which is

attended by about 1200 students. The capital and seat of the administration is Graz (100,000 inhabitants), which is also the headquarters of the third corps of the Austrian army; the only other town of any size is Marburg (17,600). The provincial estates consist of 63 members, including the two Roman Catholic bishops, the rector of the university, 12 representatives of the large landowners, 23 of the peasants, 19 of the towns, and 6 of the chambers of commerce. Styria sends 23 members to the imperial parliament.

In the Roman period Styria, which even thus early was famed for its iron and steel, was inhabited by the Celtic Taurisci, and divided geographically between Noricum and Pannonia. Subsequently it was successively occupied or traversed by Visigoths, Huns, Ostrogoths, Langobardi, Franks, and Avars. Towards the end of the 6th century the last-named began to give way to the Slavs (Wends), who ultimately made themselves masters of the entire district. Styria was included in the conquests of Charlemagne, and was henceforth comprised in the German marks erected against the Avar and the Slav. At first the identity of Styria is lost in the great duchy of Carinthia, corresponding more or less closely to the Upper Carinthian mark. This duchy, however, afterwards fell to pieces, and a distinct mark of Styria was recognized, taking its name from the margrave Otocar of Steier (1056). A century or so later it was created a duchy. In 1192 the duchy of Styria came by inheritance to the house of Austria, and from that time it shared the fortunes of Upper and Lower Austria, passing like them to the Hapsburgs in 1282. The Protestant Reformation met an early and general welcome in Styria, but the dukes took the most stringent measures to stamp it out, offering their subjects recantation or expatriation as the only alternatives. At least 30,000 Protestants preferred exile, and it was not till about 100 years ago that religious liberty was recognized. The modern history of Styria has been similar to that of the other Austrian crownlands, and calls for no special remark.

STYX, a river which the Greeks fabled to flow in the world of the dead. Homer speaks of it as a river of Hades by which the gods swore their most solemn oaths, and he couples it with the Cocytus and the Pyriphlegethon, the river of wailing and the river of burning fire. Hesiod says that Styx was a daughter of Ocean, and that, when Zeus summoned the gods to Olympus to help him to fight the Titans, Styx was the first to come and her children with her; hence as a reward Zeus ordained that the most solemn oath of the gods should be by her and that her children (Emulation, Victory, Power, and Force) should always live with him. In another passage he says that Styx (whom, somewhat contradictorily, he describes as abhorred by the immortal gods) dwells far off from the gods in a beautiful house overarched with rocks and supported by tall silver pillars, which may be meant as a description of a stalactitic cave. Again Hesiod tells us that if any god, after pouring a libation of the water of Styx, forswore himself, he had to lie in a trance for a year without speaking or breathing, and that for nine years afterwards he was excluded from the society of the gods. In historical times the Styx was identified with a lofty waterfall near Nonacris in Arcadia. Pausanias describes the cliff over which the water falls as the highest he had ever seen, and indeed the fall is the highest in Greece. The scenery is wild and desolate. The water descends in two slender cascades, which, after winding among the rocks, unite and fall into the river Akrata (the ancient Crathis). The ancients regarded the water as poisonous, and thought that it possessed the power of breaking or dissolving vessels of every material, with the exception of the hoof of a horse or ass, or (according to others) of horn. The Arcadians used to swear by it on important occasions. The people in the neighbourhood still hold that the water is unwholesome, and that no vessel will hold it. They call it the Black Water or the Terrible Water.

Considering the prominence given by the ancients to an oath by the water of Styx, and comparing the effect supposed to follow from breaking that oath with the destructive power supposed to be possessed by the water, we are tempted to conjecture that drinking the water was originally a necessary part of the oath,—that in fact in the stories of the Styx we have traditions of an ancient poison ordeal such as is commonly employed amongst barbarous peoples as a means of eliciting the truth (see ORDEAL).
See Leake, *Travels in the Morea*, III. p. 158 sq.; M. G. Clark, *Peloponnesus*, p. 302 sq.; Curtius, *Peloponnesos*, I. p. 195 sq.; Wordsworth, *Greece*, p. 384.

SUAKIN, or SUWAKIM, more correctly SAWAKIN, the chief port of the Soudan on the Red Sea and the starting-place of caravans for Kassala and Berber, occupies a small island, placed in a deep bay in 19° 5' N. lat. The custom-house and Egyptian Government offices present a good frontage to the sea, and the principal houses are stately white structures, three stories high, not unlike those of Jiddah. With these, however, are intermingled shapeless huts, each with its courtyard walled in with mats. There are also the usual Greek drinking-shops, with their dirty loungers in coats and fez-caps, and a short street of coffee-houses and shops. The mosques are not remarkable. Passing through the bazaar and turning to the right past the tomb of Sheikh 'Alf, one comes to an open space at the head of the recent causeway which unites the island to the mainland town of Al-Kaff (Al-Keif). The main street of Al-Kaff is (or was before the recent war) the busy centre of life and movement, while the side streets are occupied by smiths, forging lance-heads and knives; leather workers, who drive a brisk trade in the amulets—passages of the Koran sewn up in leather cases—which the natives wear on their arms or round their necks; and hairdressers, greasing and powdering with the dust of a red wood the bushy locks of the Hadendoa dandies. Beyond the town is a suburb of straw huts with their simple furniture of a bedstead, a few dishes, and a rubbing stone for the millet which with milk forms the chief food of the natives. Here too are the booths of the silversmiths, who make bracelets, anklets, ear and nose rings, for the women. The Hadendoa, a tall stalwart race, picturesquely draped in huge wrappers, to which the women add a petticoat, are most numerous on the mainland. The population of the island is mixed, with a large infusion of Arab blood. The export trade of Suakin before the revolt of the Soudan yielded a customs revenue of £60,000 a year, the chief articles besides the ivory, which was a Government monopoly, being gum, cotton, sesame, senna, and hides. The total yearly trade was estimated at a million sterling.

The environs of Suakin, though not so absolutely desert as the opposite Arabian coast, are less wooded than some points (e.g., Sheikh Barghit) which lie as conveniently for the inland trade. The island is without water and the harbour indifferent; yet the settlement is ancient. Here as at Massawah traders were presumably attracted by the advantages of an island site which protected them from the nomads. The country inland from all this coast belonged in the Middle Ages to the Boja (Bejah), a rude pastoral race who appear to be identical with the Blemmyes of classical writers and of whom Hadendoa, Bisharin, and Ababdah are the modern representatives. The trading places seem to have been always in the hands of foreigners since Ptolemais Theron was established by Ptolemy Philadelphus for intercourse with the elephant hunters. After Islam many Arabs settled on the coast and mixed with the heathen Boja, whose rule of kinship and succession in the female line helped to give the children of mixed marriages a leading position (Makrizi, *Khitat*, i. 194 sq., translated in Burckhardt's *Travels in Nubia*, App. iii.). Thus in 1830 Ibn Batuta found a son of the emir of Mecca reigning in Suakin over the Boja, who were his mother's kin. Makrizi says that the chief inhabitants were nominal Moslems and were called Hadarib. The emir of the Hadarib was still sovereign of the mainland at the time of Burckhardt's visit (1814), though the island had an aga appointed by the Turkish pasha of Jiddah. The place was settled by the Turks under Selim the Great, but Turkish (or Egyptian) control over the mainland was not effective till the Egyptian conquest of the Soudan. Till the suppression of the slave trade, Suakin was an important slave port; of late years slaves have been secretly run across the Red Sea from less frequented points on the coast. But legitimate commerce was rapidly growing before the revolt of the Soudan, and the port was visited by English, Egyptian, and Italian steamers.

SUARDI, BARTOLOMMEO, usually known as BRAMANTINO from his master Bramante, was a distinguished painter and architect of the Milanese school. He was specially famed for his knowledge of perspective, and Lomazzo (*Tratt. d. Pitt.*, iii. 1) praises him highly for the deceptive realism of his painting. The dates of his birth and death are unknown, but he was probably quite young when,

about 1495, he visited Rome in company with his master Bramante; there he is said to have been employed as a painter by the pope, and he evidently spent much time in studying the remains of classical buildings in Rome. A number of measured drawings by his hand are still preserved in the Brera library at Milan. Vasari mentions that he had seen a book of drawings by Bramantino of the early Lombardic churches of Northern Italy, such as S. Ambrogio at Milan and S. Pietro in Ciel d'Oro at Pavia,—a remarkable thing at a time when these noble structures were usually despised as being barbarous in style. The greater part of Bramantino's frescoes are now lost, partly because he was specially employed to paint the external façades of houses and public buildings, such as the mint at Milan. One, however, still exists over the doorway of S. Sepolcro, a highly foreshortened figure of Christ, with the Madonna and Saints. He also painted some angels which still exist in the church of S. Enstorgio, also in Milan. In 1513 he received eighty gold crowns for a Pietà and Saints painted in the sacristy for the Cistercian monks of Chiaravalle, near Milan. In 1525 he was appointed architect and painter to Francesco II. of Milan, and he was employed as military engineer to reconstruct the walls of the city, which was then threatened by the army of Charles V. The church of S. Satiro in Milan is usually attributed to Bramantino, but it appears to have been mainly designed by Bramante. Bramantino died between 1530 and 1536. He left an able pupil called Agostino di Milano, who worked chiefly as an architect.

SUAREZ, FRANCISCO (1548-1617), Spanish theologian and philosopher, was born at Granada on the 5th of January 1548. After completing his studies at the university of Salamanca, he entered the Society of Jesus in 1564. The accounts of his early years represent him as backward in his development, and it was not without difficulty that he obtained admission to the order. Under the direction of Father Rodriguez, however, he threw off his mental slough and discovered powers of mind of the highest order. He is said to have habitually devoted seventeen hours a day to study, and wonders are reported of his prodigious memory. He was soon appointed to teach philosophy at Segovia, and he afterwards taught theology at Valladolid, at Alcalá, at Salamanca, and at Rome successively. After taking his doctorate at Evora, he was named by Philip II. principal professor of theology in the university of Coimbra. Suarez may be considered almost the last eminent representative of scholasticism, and his works in twenty-three folio volumes treat, after the scholastic method and with scholastic comprehensiveness, all the main subjects of mediæval philosophy and theology. In philosophical doctrine he adhered to a moderate Thomism. On the question of universals he endeavoured to steer a middle course between the pantheistically inclined realism of Duns Scotus and the extreme nominalism of William of Occam. The only veritable and real unity in the world of existences is the individual; to assert that the universal exists separately *ex parte rei* would be to reduce individuals to mere accidents of one indivisible form. Suarez maintains that, though the humanity of Socrates does not differ from that of Plato, yet they do not constitute *realiter* one and the same humanity; there are as many "formal unities" (in this case, humanities) as there are individuals, and these individuals do not constitute a factual, but only an essential or ideal unity ("ita ut plura individua, quæ dicuntur esse ejusdem naturæ, non sint unum quid vera entitate quæ sit in rebus, sed solum fundamentaliter vel per intellectum"). The formal unity, however, is not an arbitrary creation of the mind, but exists "in natura rei ante omnem operationem intellectus." In theology, Suarez attached