

The eyes are lateral and of moderate size; the dentition is quite rudimentary.

Sand-eels are small littoral marine fishes, only one species attaining a length of 18 inches (*Ammodytes lanceolatus*). They live in shoals at various depths on a sandy bottom, and bury themselves in the sand on the slightest alarm. They are able to do this with the greatest ease and rapidity whilst the bottom is covered with water. Many of those which live close inshore are left by the receding tide buried in the sand, and are then frequently dug out from a depth of one or two feet. Other shoals live in deeper water; when they are surprised by fish of prey or porpoises, they are frequently driven to the surface in such dense masses that numbers of them can be scooped out of the water with a bucket or hand-net. In fact, this used to be, in the Channel Islands, the common practice of the fishermen to provide themselves with bait. Some species descend to a depth of 100 fathoms and more; and the greater sand-eel is not rarely taken on the mackerel line far out at sea near the surface. Sand-eels are very rapacious, destroying a great quantity of fry and other small creatures, such as the lancelet (*Branchiostoma*), which lives in similar localities. They are excellent eating, and are much sought after for bait.

Sand-eels are common in all suitable localities of the North Atlantic; a species scarcely distinct from the European common sand-launce occurs on the Pacific side of North America, another on the east coast of South Africa. On the British coasts three species are found:—the Greater Sand-Eel (*Ammodytes lanceolatus*), distinguished by a tooth-like bicuspid prominence on the vomer; the Common Sand-Launce (*A. lobianus*), from five to seven inches long, with unarmed vomer, even dorsal fin, and with the integuments folded; and the Southern Sand-Launce (*A. siculus*), with unarmed vomer, smooth skin, and with the margins of the dorsal and anal fins undulated. The last species is common in the Mediterranean, but local farther northwards. It has been found near the Shetlands at depths from 80 to 100 fathoms, and is generally distinguished from the common species by the fishermen of the Channel Islands, who have a tradition that it appeared suddenly on their coasts some fifty years ago.

SANDEMANIANS. See GLAS, vol. x. p. 637.

SANDERSON, ROBERT (1587–1663), bishop of Lincoln, and one of the worthies celebrated by Izaak Walton, was born at Rotherham, Yorkshire, in 1587. He was educated at the grammar school of his native town and at Lincoln College, Oxford, took orders in 1611, and was promoted successively to several benefices. On the recommendation of Laud he was appointed one of the royal chaplains in 1631, and as a preacher was a great favourite with the king. In 1642 Charles created him regius professor of divinity at Oxford, with a canonry of Christ Church annexed. But the civil war prevented him until 1646 from entering on the office; and in 1648 he was ejected by the visitors whom the parliament had commissioned. He recovered these preferments at the Restoration, and was promoted to the bishopric of Lincoln, but lived only two years to enjoy his new dignities, dying in his seventy-sixth year in 1663. His most celebrated work is his *Cases of Conscience*, deliberate judgments upon points of morality submitted to him. Some of these cases, notably that of Sabbath observance, and that of signing the "Engagement" to the Commonwealth, were printed surreptitiously during his lifetime, though drawn up in answer to private spiritual clients; and a collection, gradually enlarged in successive editions, was published after his death. They are extremely interesting specimens of English casuistry, distinguished not less by moral integrity than good sense, learning, and close, comprehensive, and subtle reasoning. His practice as a college lecturer in logic is better evidenced by these "cases" than by his *Compendium of Logic* published in 1615. A complete edition of Sanderson's works was edited by Dr Jacobson in 1854 (Oxford Press). To this the reader may be referred

for his sermons and his occasional tracts on public affairs during the troubled period of his middle life and old age.

SAND-GROUSE, the name¹ by which are commonly known the members of a small but remarkable group of birds frequenting sandy tracts, and having their feet more or less clothed with feathers after the fashion of Grouse (vol. xi. p. 221), to which they were originally thought to be closely allied, and the species first described were by the earlier systematists invariably referred to the genus *Tetrao*. Their separation therefrom is due to Temminck, who made for them a distinct genus which he called *Pterocles*,² and his view, as Lesson tells us (*Traité*, p. 515), was subsequently corroborated by De Blainville; while in 1831 Bonaparte (*Saggio*, p. 54) recognized the group as a good Family, *Pediophilii* or *Pteroclidæ*. Further investigation of the osteology and pterylosis of the Sand-Grouse revealed still greater divergence from the normal *Gallinæ* (to which the true Grouse belong), as well as several curious resemblances to the Pigeons; and in the Zoological Society's *Proceedings* for 1868 (p. 303) Prof. Huxley proposed to regard them, under the name of *Pterocloromorphæ*, as forming a group equivalent to the *Alectoromorphæ* and *Peristeromorphæ*, for reasons already briefly stated (*ORNITHOLOGY*, vol. xviii. p. 46).³ The *Pteroclidæ* consist of two genera—*Pterocles*, with about fifteen species, and *Syrphaptés*, with two. Of the former, two species inhabit Europe, *P. arenarius*, the Sand-Grouse proper, and that which is usually called *P. alchata*, the Pin-tailed Sand-Grouse. The European range of the first is practically limited to Portugal, Spain, and the southern parts of Russia, while the second inhabits also the south of France, where it is generally known by its Catalan name of "*Ganga*," or locally as "*Grandaulo*," or, strange to say, "*Perdrix d'Angleterre*." Both species are also abundant in Barbary, and have been believed to extend eastwards through Asia to India, in most parts of which country they seem to be only winter-visitors; but in 1880 Herr Bogdanow pointed out to the Academy of St Petersburg (*Bulletin*, xxvii. p. 164) a slight difference of coloration between eastern and western examples of what had hitherto passed as *P. alchata*; and the difference, if found to be constant, may require the specific recognition of each, while analogy would suggest that a similar difference might be found in examples of *P. arenarius*. India, moreover, possesses five other species of *Pterocles*, of which however only one, *P. fasciatus*, is peculiar to Asia, while the others inhabit Africa as well, and all the remaining species belong to the Ethiopian region—one, *P. personatus*, being peculiar to Madagascar, and four occurring in or on the borders of the Cape Colony.

The genus *Syrphaptés*, though in general appearance resembling *Pterocles*, has a conformation of foot quite unique among birds, the three anterior toes being encased in a common "podotheca," which is clothed to the claws with hairy feathers, so as to look much like a fingerless glove. The hind toe is wanting. The two species of *Syrphaptés* are *S. tibetanus*—the largest Sand-Grouse known—inhabiting the country whence its trivial name is derived, and *S. paradoxus*, ranging from Northern China across Central Asia to the confines of Europe, which it occu-

¹ It seems to have been first used by Latham in 1783 (*Synopsis*, iv. p. 751) as the direct translation of the name *Tetrao arenarius* given by Pallas.

² He states that he published this name in 1809; but hitherto research has failed to find it used until 1815.

³ Some more recent writers, recognizing the group as a distinct Order, have applied to it the name "*Pterocletæ*," while another calls it *Heteroclitæ*. The former of these words is based on a grammatical misconception, while the use of the latter has long since been otherwise preoccupied in zoology. If there be need to set aside Prof. Huxley's term, Bonaparte's *Pediophilii* (as above mentioned) may be accepted, and indeed has priority of all others.

sionally, and in a marvellous manner, invades, as has been already briefly described (*BIRDS*, vol. iii. p. 770).¹ Though its attempts at colonization in the extreme west have failed, it would seem to have established itself of late years in the neighbourhood of Astrakhan (*Ibis*, 1882, p. 220). It appears to be the "*Barguerlac*" of Marco Polo (ed. Yule, i. p. 239); and the "*Loung-Kio*" or "*Dragon's Foot*," so unscientifically described by the Abbé Huc (*Souvenirs d'un Voyage dans la Tartarie*, i. p. 244), can scarcely be anything else than this bird.

Externally all Sand-Grouse present an appearance so distinctive that nobody who has seen one of them can be in doubt as to any of the rest. Their plumage assimilates in general colour to that of the ground they frequent, being above of a dull ochreous hue, more or less barred or mottled by darker shades, while beneath it is frequently varied by belts of deep brown intensifying into black. Lighter tints are, however, exhibited by some species,—the drab merging into a pale grey, the buff brightening into a lively orange, and streaks or edgings of an almost pure white relieve the prevailing sandy or fawn-coloured hues that especially characterize the group. The sexes seem always to differ in plumage, that of the male being the brightest and most diversified. The expression is decidedly Dove-like, and so is the form of the body, the long wings contributing also to that effect, so that among Anglo-Indians these birds are commonly known as "*Rock-Pigeons*." The long wings, the outermost primary of which in *Syrphaptés* has its shaft produced into an attenuated filament, are in all the species worked by exceedingly powerful muscles, and in several forms the middle rectrices are likewise protracted and pointed, so as to give to their wearers the name of Pin-tailed Sand-Grouse.² The nest is a shallow hole in the sand. There seems to be the regular complement of eggs laid in each nest, but there are writers who declare (most likely in error) that the full number in some species is four. These eggs are of peculiar shape, being almost cylindrical in the middle and nearly alike at each end, and are of a pale earthy colour, spotted, blotched, or marbled with darker shades, the markings being of two kinds, one superficial and the other more deeply seated in the shell. The young are hatched fully clothed in down (*P. Z. S.* 1866, pl. ix. fig. 2), and though not very active would appear to be capable of locomotion soon after birth. Morphologically generalized as the Sand-Grouse undoubtedly are, no one can contest the extreme specialization of many of their features, and thus they form one of the most instructive groups of birds with which ornithologists are acquainted. The remains of an extinct species of *Pterocles*, *P. sepultus*, intermediate apparently between *P. alchata* and *P. gutturalis*, have been recognized in the Miocene caves of the Allier by Prof. A. Milne-Edwards (*Os. foss. de la France*, p. 294, pl. clxi. figs. 1–9); and, in addition to the other authorities on this very interesting group of birds already cited, reference may be made to Mr Elliot's "*Study*" of the Family (*P. Z. S.*, 1878, pp. 233–264) and Dr Gadow, "*On certain points in the Anatomy of Pterocles*" (*op. cit.*, 1882, pp. 312–332). (A. N.)

SANDHURST, a city of Victoria, Australia, in the county of Bendigo, is situated in 36° 46' S. lat. and 144° 17' E. long., at a height of 758 feet above the sea, on Bendigo Creek (a sub-tributary of the Murray), 100½ miles north-north-west of Melbourne by the railway to Echuca. Built on an exhausted part of old goldfields of Bendigo (1851), and long better known by that name, Sandhurst, which became a municipality in 1855, a borough in 1863, and a city in 1871, has been gradually working itself clear of the irregularity and disorder characteristic of abandoned mines and quartz-crushing enterprises. Pall Mall, the principal street, consists of good houses of two and three stories; and, besides banks, insurance offices, hotels, and churches (many of which are

¹ Some slight additions to and corrections of that account may here be given. A sixth example is stated (*Ibis*, 1871, p. 223) to have been killed in Europe in 1859, namely, at Perpignan in France. One is believed to have been obtained at or near Archangel (*Ibis*, 1873, p. 66); but the report of one in Sicily proves to have been a mistake, and Rimini, on the Adriatic, remains the most southern Italian locality reached in 1863. Since 1872 a male obtained near Modena in May 1876 (*Ibis*, 1881, p. 206), and a pair, one of which was shewn to the writer, in the county of Kildare in Ireland, the following October (*Zoologist*, 1877, p. 24), are all that are known to have occurred in Western Europe.

² These were separated by Bonaparte (*Comptes Rendus*, xlii. p. 880) as a distinct genus, *Pteroclorurus*, which later authors have justly seen no reason to adopt.

substantial buildings), there are in Sandhurst Government and municipal offices, a hospital, a benevolent asylum, a mechanics' institute and school of mines, a theatre, and several halls. Rosalind Park, opposite Pall Mall, the Camp Reserve, and the Botanical Gardens are the principal pleasure grounds. A good supply of water has been secured by the construction of five large reservoirs capable of storing in the aggregate upwards of 622,600,000 gallons. Besides gold-mining, which in the Sandhurst district employs 6800 miners, the local industries are brewing, iron-casting, coach-building, the working of bricks and tiles and earthenware, and tanning. The population of the city (which is divided into three wards—Sutton, Darling, and Barkly) was 28,662 in 1881. The value of rateable property is £1,663,910.

SAN DIEGO, a city and port of entry of the United States, chief town of San Diego county, California, 15 miles north of the Mexican frontier. It has a land-locked harbour 5½ miles long and next to San Francisco the best on the Pacific coast of the States, is the selected terminus of the Texas and Pacific Railroad, and has recently become a fashionable winter resort owing to the remarkable steadiness of its winter climate (mean annual temperature 62°). San Diego was founded by Roman Catholic missionaries in 1769. In 1880 it had only 2637 inhabitants, but they have since increased to upwards of 5000. In the county is a lake of boiling mud half a mile long by 500 yards wide.

SAN DOMINGO, or SANTO DOMINGO. See HAYTI.

SANDOMIR, or SEDOMIERZ, a town of Russian Poland, in the province of Radom, is one of the oldest towns of Poland, being mentioned in annals as early as 1079; from 1139 to 1332 it was the chief town of the principality. Under Casimir III. it received extensive privileges and reached a high degree of prosperity and strength. In 1429 it was the seat of a congress for the establishment of peace with Lithuania, and in 1570 the well-known "*Consensus Sandomiriensis*" was held there for uniting the Lutherans, Calvinists, and Moravian Brethren. Subsequent wars, and especially the Swedish, ruined the town still more than numerous conflagrations, and in the second part of the 18th century it had only 2060 inhabitants. It is now a quite unimportant place, but retains a few remarkable monuments of its past. The beautiful cathedral, rising on a high hill above the Vistula, and facing the plains of Galicia, was built between 1120 and 1191; it was rebuilt in stone in 1360, and is thus one of the oldest monuments of old Polish architecture. The churches of St Paul and St James are fine relics of the 13th century. In 1881 the population was 6265, or, including the suburbs, 14,710.

SANDOWAY, a district in the south of the Arakan division of British Burmah, ceded to the British by treaty in 1826, embracing an area of 3667 square miles, and bounded on the north by the Ma-i river, on the west by the Bay of Bengal, on the east by the Arakan Mountains, and on the south by the Khwa river. The whole face of the country is mountainous, the Arakan range sending out spurs which reach down to the coast. Some of the peaks in the north attain an elevation of over 4000 feet. Not more than one-eighteenth part of the surface can be called plain; and, except there, where rice cultivation is carried on, and on the hill-sides, where clearings are made for *toungya* or nomadic cultivation, the country is covered with dense forest. There is nothing in the district that can be called a river, the streams draining it being but mountain torrents to within a few miles of the coast; the mouth of the Khwa forms a good anchorage for vessels of from 9 to 10 feet draught. So far as is known of the geology of the district, the rocks in the Yoma range and its spurs are metamorphic, and comprise clay, slates, ironstone, and indurated sandstone; towards the south, ironstone, trap, and

rocks of basaltic character are common; veins of steatite and white fibrous quartz are also found in the district.

Only 135 square miles of the total area are cultivable, and of these out 75 are cultivated. The chief crops are rice, sesamum, tobacco, cotton, sugar-cane, *dhani* palms, and yams. The revenue in 1883-84 was £13,978, the land tax realizing £6749 of that amount. This mountainous and forest-clad country, with such a small cultivable area, is sparsely inhabited, the population as returned by the census of 1881 being only 64,010 (males 32,706, females 31,304); of this number 56,458 were Buddhists. There are no towns with a population exceeding 2000. Sandoway, the chief town and headquarters, on the river of the same name, in 18° 27' 35" N. lat. and 94° 24' 36" E. long., is a very ancient town, and is said to have been at one time the capital of a kingdom, or more probably of a petty chieftainship.

SANDPIPER (Germ. *Sandpfeifer*), according to Willughby in 1676 the name given by Yorkshiremen to the bird now most popularly known in England as the "Summer-Snipe,"—the *Tringa hypoleucos* of Linnæus and the *Totanus*, *Actitis*, or *Tringoides hypoleucos* of later writers,—but probably even in Willughby's time of much wider signification, as for more than a century it has certainly been applied to nearly all the smaller kinds of the group termed by modern ornithologists *Limicola* which are not PLOVERS (vol. xix. p. 227), or SNIPES (*q.v.*), but may be said to be intermediate between them. Placed by most systematists in the family *Scelopacidae*, the birds commonly called Sandpipers seem to form three sections, which have been often regarded as Subfamilies—*Totaniinae*, *Tringinae*, and *Phalaropodinae*, the last indeed in some classifications taking the higher rank of a Family—*Phalaropodidae*. This section comprehends three species only, known as Phalaropes or swimming Sandpipers, which are at once distinguished by the membranes that fringe their toes, in two of the species forming marginal lobes,¹ and by the character of their lower plumage, which is as close as that of a Duck, and is obviously connected with their natatory habits. The distinctions between *Totaniinae* and *Tringinae*, though believed to be real, are not so easily drawn, and space is wanting here to describe them minutely. The most obvious may be said to lie in the acute or blunt form of the tip of the bill (with which is associated a less or greater development of the sensitive nerves running almost if not quite to its extremity, and therefore greatly influencing the mode of feeding) and in the style of plumage—the *Tringinae*, with blunt and flexible bills, mostly assuming a summer-dress in which some tint of chestnut or reddish-brown is very prevalent, while the *Totaniinae*, with acute and stiffer bills, display no such lively colours. Furthermore, the *Tringinae*, except when actually breeding, frequent the sea-shore much more than do the *Totaniinae*.² To the latter belong the GREENSHANK (vol. xi. p. 173) and REDSHANK (vol. xx. p. 317), as well as the Common Sandpiper of English books, the "Summer-Snipe" above-mentioned, a bird hardly exceeding a Skylark in size, and of very general distribution throughout the British Islands, but chiefly frequenting clear streams, especially those with a gravelly or rocky bottom, and most generally breeding on the beds of sand or shingle on their banks. It usually makes its appearance in May, and from thence during the summer-months may be seen in pairs skimming gracefully over the water from one bend of the stream to another, uttering occasionally a

¹ These are *Phalaropus fulicarius* and *P. (or Lobipes) hyperboreus*, and on that account were thought by some of the older writers to be allied to the COOTS (vol. vi. p. 341). The third species is *P. (or Steganopus) wilsoni*. All are natives of the higher parts of the northern hemisphere, and the last is especially American, though perhaps a straggler to Europe.

² There are unfortunately no English words adequate to express these two sections. By some British writers the *Tringinae* have been indicated as "Stints," a term cognate with Stunt and wholly inapplicable to many of them, while recent American writers restrict to them the name of "Sandpiper," and call the *Totaniinae*, to which that name is especially appropriate, "Willetts."

shrill but plaintive whistle, or running nimbly along the margin, the mouse-coloured plumage of its back and wings making indeed but little show, though the pure white of its lower parts often renders it conspicuous. The nest, in which four eggs are laid with their pointed ends meeting in its centre (as is usual among Limicoline birds), is seldom far from the water's edge, and the eggs, as well as the newly-hatched and down-covered young, so closely resemble the surrounding pebbles that it takes a sharp eye to discriminate them. Later in the season family-parties may be seen about the larger waters, whence, as autumn advances, they depart for their winter-quarters. The Common Sandpiper is found over the greater part of the Old World. In summer it is the most abundant bird of its kind in the extreme north of Europe, and it extends across Asia to Japan. In winter it makes its way to India, Australia, and the Cape of Good Hope. In America its place is taken by a closely kindred species, which is said to have also occurred in England—*T. macularius*, the "Peetweet," or Spotted Sandpiper, so called from its usual cry, or from the almost circular marks which spot its lower plumage. In habits it is very similar to its congener of the Old World, and in winter it migrates to the Antilles and to Central and South America. Of other *Totaniinae*, one of the most remarkable is that to which the inappropriate name of Green Sandpiper has been assigned, the *Totanus* or *Helodromas ochropus* of ornithologists, which most curiously differs (so far as is known) from all others of the group both in its osteology³ and mode of nidification, the hen laying her eggs in the deserted nests of other birds,—Jays, Thrushes, or Pigeons,—but nearly always at some height (from 3 to 30 feet) from the ground (*Proc. Zool. Society*, 1863, pp. 529-532). This species occurs in England the whole year round, and is presumed to have bred here, though the fact has never been satisfactorily proved, and our knowledge of its erratic habits comes from naturalists in Pomerania and Sweden; yet in the breeding-season, even in England, the cock-bird has been seen to rise high in air and perform a variety of evolutions on the wing, all the while piping what, without any violence of language, may be called a song. This Sandpiper is characterized by its dark upper plumage, which contrasts strongly with the white of the lower part of the back and gives the bird as it flies away from its disturber much the look of a very large House-Martin. The so-called Wood-Sandpiper, *T. glareola*, which, though much less common, is known to have bred in England, has a considerable resemblance to the species last mentioned, but can at once be distinguished, and often as it flies, by the feathers of the axillary plume being white barred with greyish-black, while in the Green Sandpiper they are greyish-black barred with white. It is an abundant bird in most parts of northern Europe, migrating in winter very far to the southward.

Of the section *Tringinae* the best known are the Knot (vol. xiv. p. 129) and the Dunlin, *T. alpina*. The latter, often also called Ox-bird, Plover's Page, Purre, and Stint, — names which it shares with some other species,—not only breeds commonly on many of the elevated moors of Britain, but in autumn resorts in countless flocks to the shores, where indeed a few may be seen at almost any time of year. In seasonal diversity of plumage it is scarcely excelled by any bird of its kind, being in winter of a nearly uniform ash-grey above and white beneath, while in summer the feathers of the back are black, with deep rust-coloured edges, and a broad black belt occupies the breast. The

³ It possesses only a single pair of posterior "emarginations" on its sternum, in this respect resembling the RUFF (*supra*, p. 54). Among the PLOVERS (vol. xix. p. 227) and SNIPES (*q.v.*) other similarly exceptional cases may be found.

Dunlin varies considerably in size, and to some extent according to locality, examples from North America being almost always recognizable from their greater bulk, while in Europe, besides the ordinary form, there appears to be a smaller race which has received the name of *T. schinzii*, but no other difference is perceptible. In the breeding-season, while performing the amatory flights in which like all Sandpipers he indulges, the male Dunlin utters a most peculiar and far-sounding whistle, quite impossible to syllable, and somewhat resembling the continued ringing of a high-toned but yet musical bell. Next to the Dunlin and Knot the commonest British *Tringinae* are the Sanderling, *Calidris arenaria* (to be distinguished from every other bird of the group by wanting a hind toe), the Purple Sandpiper, *T. striata* or *maritima*, the Curlew-Sandpiper, *T. subarquata*, and the Little and Temminck's Stints, *T. minuta* and *T. temmincki*, but want of space forbids more than the record of their names; and for the same reason no notice can here be taken of the many other species, chiefly American,¹ belonging to this group. Two other birds, however, must be mentioned. These are the Broad-billed Sandpiper, *T. platyrhynchos*, of the Old World, which seems to be more Snipe-like than any that are usually kept in this section, and the marvellous Spoon-billed Sandpiper, *Eurynorhynchus pygmaeus*, whose true home has still to be discovered, according to the experience of Baron Nordenskjöld in the memorable voyage of the "Vega." (A. N.)

SANDROCOTTUS (CHANDRAGUPTA), founder of the Maurya kingdom in India. See INDIA, vol. xii. p. 787, and PERSIA, vol. xviii. p. 586.

SANDUSKY, a city of the United States, the capital of Erie county, Ohio, lies at the mouth of Sandusky river, 210 miles by rail north-east of Cincinnati, and is handsomely built of limestone from the subjacent strata on ground rising gradually from the shore of Lake Erie. The court house and the high school are both of considerable architectural note. Besides being the centre of a great vine-growing district, Sandusky has the largest freshwater fish market in the United States, is the seat of the State fish-hatchery (which annually puts about 3,000,000 young whitefish into the lake), and has attained a reputation for the manufacture of such wooden articles as handles, spokes, "bent work" for carriages, carpenters' tools, &c. The city is coextensive with Portland township. Its population was 13,000 in 1870 and 15,838 in 1880.

SANDWICH, an English borough, market-town, and Cinque Port, is situated in the east of Kent, opposite the Downs, on a branch of the South-Eastern Railway, and on the Stour, 2 miles from the sea, 12 miles east of Canterbury, and 4 north-west of Deal. The streets are narrow and the houses irregularly built. The old line of the walls on the land side is marked by a public walk. The Fishers' Gate and a gateway called the Barbican are interesting; but the four principal gates were pulled down in the last century. St Clement's church has a fine Norman central tower, and St Peter's, said to date from the reign of King John, has interesting mediæval monuments. The grammar school founded by Sir Roger Manwood in 1564 is now in abeyance. There are three ancient hospitals; St Bartholomew's has a fine Early English chapel of the 12th

¹ A "Monograph of the *Tringinae* of North America" by Prof. Cones was published in the *Proceedings of the Philadelphia Academy* for 1861 (pp. 190-205), but is of course now out of date. Schlegel's list of "*Scelopacinae*" in the *Museum des Pays-Bas* is the best general description we have, but that is only a few years later (1864), and requires much modification to be put on a level with the knowledge of the present day. The very rare *Tringa leucoptera* of the older systematists, figured by Latham (*Synopsis*, pl. 82), the type of the genus *Prosbombia* of Bonaparte, seems to be really a *Ralline* form (*Comptes Rendus*, xxxi. p. 562 and xliii. p. 598).

century. Until the beginning of the 16th century Sandwich was of considerable importance as a port, but after the filling up of the harbour with sand about the beginning of the 16th century it fell into decay. The principal industries of the town are market-gardening, tanning, wool-sorting, and brewing. Coal, timber, and iron are imported. Sandwich returned two members to parliament till 1880, and was merged in the St Augustine's division of the county in 1885. The parliamentary borough, which included Deal and Walmer (area 2684 acres), had in 1881 a population of 15,653, while that of the municipal borough (area 706 acres) was 2846.

In the Norman survey Sandwich is described as a borough. It rose into importance on the decline of the *Portus Rutupensis*, its name denoting the situation on the sands. The Danes frequently attacked it in the 10th and 11th centuries; and it was repeatedly plundered by the French in the 15th century. It was fortified by Edward VI. Sandwich was incorporated by Edward the Confessor, and received its last charter from Charles II.

SANDWICH, EDWARD MONTAGU, EARL OF (1625-1672), general and admiral, was the son of Sir Sidney Montagu, youngest brother of Edward Lord Montagu of Boughton, and was born 27th July 1625. In August 1643 he raised a regiment in the service of the Parliament, with which he specially distinguished himself at Marston Moor, Naseby, and the siege of Bristol. He was a member of the "Little Parliament" (1653), and one of the committee for regulating the customs. In November he was elected to the council of state. In the first Protectorate parliament he sat for Huntingdonshire. In January 1656 he succeeded Penn as admiral, and he was associated with Blake in his expedition to the Mediterranean in the same year. After the treaty with France against Spain in 1657 he held command of the fleet sent to prevent the relief of the three coast towns—Gravelines, Mardike, and Dunkirk—besieged by the French, and was successful in defeating an attempt by a great Spanish force to retake Mardike. After the death of Cromwell he was sent with a fleet to the North Sea to enter into negotiations with the Northern powers, but, communications having been opened with him on behalf of Charles II., he returned to England only to find that the conspiracy of Sir George Booth had miscarried, whereupon, after a lame explanation, he was dismissed from his command. At the Restoration, having commanded the fleet which conveyed the king to England, he was made Knight of the Garter, and soon afterwards elevated to the peerage as Baron Montagu of St Neots, Viscount Hinchinbroke, and Earl of Sandwich. During the war with the Dutch in 1664-65 he commanded the Blue squadron under the duke of York, and specially distinguished himself in the great battle of 3d June 1665. After his return to England he was sent to negotiate a peace between Spain and Portugal, and also a treaty of commerce with Spain. On a renewal of the war in 1672 he again commanded the Blue squadron under the duke of York, and during the fight in Southwold Bay, on the 28th May, his ship, the Royal James, was set on fire by the Dutch, when he leaped overboard and was drowned. His body was found a fortnight afterwards, and was interred in Henry VII.'s Chapel, Westminster Abbey.

Lord Sandwich's translation of a Spanish work on the *Art of Metals* by Alvaro Alonso Barba (1640) appeared in 1674. Several of his letters during the Spanish negotiations have been published in *Arlington's Letters*, and various letters to him by Cromwell will be found in Carlyle's *Cromwell*. See also *Original Letters and Negotiations of Sir Richard Fanshawe, the Earl of Sandwich, the Earl of Sunderland, and Sir William Godolphin, wherein Divers Matters between the Three Crowns of England, Spain, and Portugal from 1603 to 1678 are set in a clear light*.

SANDWICH, JOHN MONTAGU, FOURTH EARL OF (1718-1792), was born 3d November 1718, and succeeded

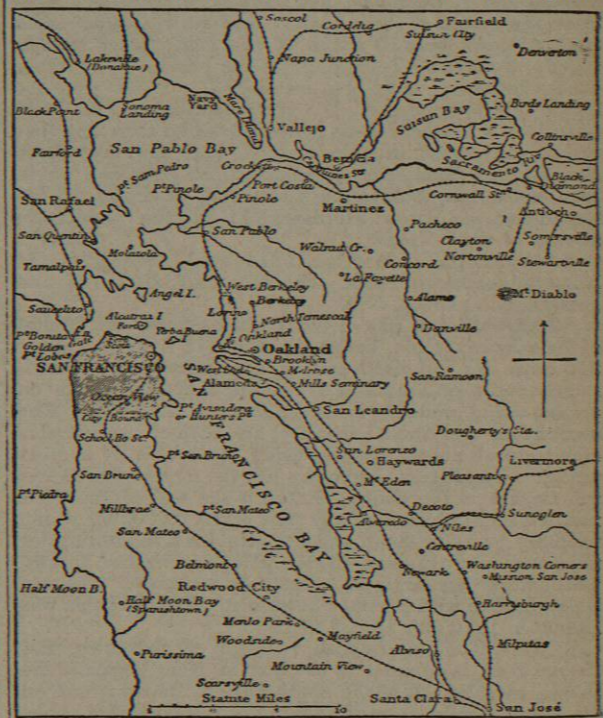
his grandfather in the earldom, 20th October 1729. He was educated at Eton and at Trinity College, Cambridge, which he entered in 1735. After a voyage round the Mediterranean, he returned to England and began to take an active interest in politics as a supporter of Sir Robert Walpole. A clear and lucid rather than a brilliant debater, his style of address always won the attention of his audience, and his accurate knowledge secured their respect. The high opinion the Government entertained of his judgment and his diplomatic abilities was evidenced by his appointment in 1746 as plenipotentiary to the congress at Breda, which was continued till peace was negotiated at Aix-la-Chapelle in 1748. On his return he became first lord of the admiralty, retaining the post until June 1751. He held the same office from 1763 to 1765, and again from 1771 till the dissolution of Lord North's administration in 1782. He died 30th April 1792. His *Voyage Round the Mediterranean* was published posthumously in 1799, accompanied with a memoir.

SANDWICH ISLANDS. See HAWAIIAN ISLANDS.
SANDYS, GEORGE (1577-1644), famous in the reigns of James I. and Charles I. as a traveller and a metrical translator. He was born in 1577, the youngest son of an archbishop of York, studied at St Mary Hall, Oxford, and afterwards probably at Corpus Christi, and began his travels in 1610. The record of them was a substantial contribution to geography and ethnology, written in a style always interesting and often eloquent, interspersed with versified scraps of quotations from classical authors. He travelled from Venice to Constantinople, thence to Egypt, thence by way of Mount Sinai to Palestine, and back to Venice by way of Cyprus, Sicily, Naples, and Rome. Later on in his life he published translations of Ovid's *Metamorphoses*, the first book of the *Aeneid*, and various books of Scripture. His verse was praised by Dryden, and deservedly so, for it has vitality as well as a clearly marked rhythm. He died in 1644. Selections from his poetry were published by the Rev. H. J. Todd in 1839.

SAN FERNANDO, formerly ISLA DE LEON, a fortified city of Spain, in the province of Cadiz, near the head of the inner bay, and 9½ miles by rail from the city of Cadiz (see vol. iv. p. 627), is a modern town with straight and level streets, two churches, two hospitals, several barracks, and a school of navigation, with an observatory. It has considerable trade in the salt produced in the neighbouring "salinas." The population within the municipal limits (which include the "poblacion" of San Carlos and the naval arsenal of La Carraca) was returned as 26,346 in 1877.

SAN FRANCISCO, a city of the United States, the largest commercial city of California and of the Pacific coast, is situated in 37° 47' 22" 55 N. lat. and 122° 25' 40" 76 W. long., on the end of a peninsula which has the Pacific Ocean on one side and the Bay of San Francisco on the other. The width of this tongue of land within the city limits is about 6 miles, and its whole length about 26. The original site of San Francisco was so uninviting that many of the pioneers doubted if a place of much importance could ever spring up there. The hills (Russian Hill, 360 feet; Telegraph Hill, 294 feet; and a number of others, ranging from 75 to 120 feet) were barren and precipitous, and the interspaces, especially on the westerly side, were made up largely of shifting sand-dunes; on the east side, however, the land sloped gently towards the bay, and there was the further advantage of a small cove extending inland nearly to the present line of Montgomery Street. This cove has since been filled up and built over. After an attempt to found the commercial metropolis at Benicia, 30 miles north on the Straits of Carquinez, it was evident that no other place within easy distance from the ocean possessed so many advantages for the site of a city as this barren

peninsula. The Bay of San Francisco is reached from the ocean through the Golden Gate, a strait about 5 miles long and averaging 1 mile in width, with a depth of 30 feet on the bar at the entrance and from 60 to 100 feet within. The bay, which extends past the city in a south-south-east direction for about 40 miles, is about seven miles wide in front of the city, while its greatest width is 12. Connected with the Bay of San Francisco on the north by a strait 3 miles wide is San Pablo Bay, about 10 miles in length and the same in breadth, having at its extreme northerly end Mare Island, the site of the navy yard. This bay, again, is connected by the Straits of Carquinez with Suisun Bay, 8 miles long and 4 wide. The total length of these bays and connecting straits is 65 miles. This great inland water, sheltered and for the most part navigable by the largest craft, receives the two great



Environs of San Francisco.

rivers of California, the Sacramento and the San Joaquin. In the Bay of San Francisco are Alcatraz Island (30 acres), strongly fortified; Angel Island (800 acres), fortified; and Yerba Buena, or Goat Island (about 300 acres).

The presidio or fortified settlement of San Francisco was founded on 17th September 1776, and the mission (San Francisco de los Dolores) in the following October. In 1830 the population of the presidio consisted of about fifty Spanish soldiers and officers; these added to the number at the mission made an aggregate population of about 200. Beechy, who visited the harbour and presidio in 1826, has left the following description:—

"The governor's abode was in a corner of the presidio, and formed one end of a row of which the other was occupied by a chapel; the opposite side was broken down, and little better than a heap of rubbish and bones, on which jacks, dogs, and vultures were constantly preying. The other two sides of the quadrangle contained stone houses, artificers' shops, and the jail, all built in the humblest style with badly burned bricks and roofed with tiles. The chapel and the Government house were distinguished by being whitewashed."

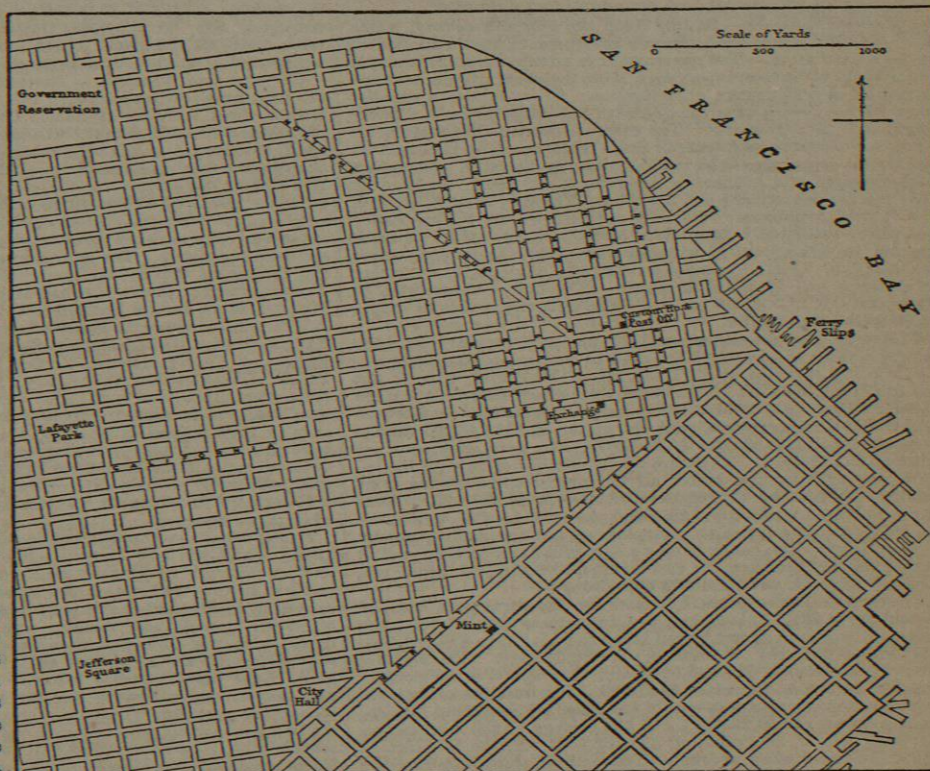
The presidio enclosure was about 300 yards square. In 1834, when it was secularized and began to be known by the secular name of Yerba Buena, the mission Dolores had a population of 500. In the summer of 1846 an American man-of-war took possession of the place. In the early part of 1849 the inhabitants numbered about 2000, and the embryo city had already come to be known by its future name of San Francisco. In consequence of the discovery of gold in California a strong drift of population set in towards the placer mines, and at the end of 1849 there were 20,000 people in the city. The first legislature of California granted a charter to San Francisco on 1st May 1850. Prior to that date the government of the pueblo had been administered by an alcalde. The pueblo grant originally made by the king of Spain contained four square (Spanish) leagues of land; this grant was subsequently confirmed to San Francisco by an Act of Congress. The jurisdiction of the municipality extends over the islands in the bay. The area included in the limits of the city exceeds the original four square leagues considerably, including what were originally denominated "swamp and overflowed lands" (see Dwinelle's *Colonial History*).

In the first stages of its history the buildings were chiefly of wood,—in many cases the frames and coverings having been brought from the Atlantic States round Cape Horn in sailing vessels. Within a few months of the establishment of municipal government the city suffered severely on more than one occasion from fire. The fire of 4th May 1850 destroyed property to the value of about \$3,000,000; another in the following month was still more destructive (\$4,000,000); and the damage resulting from a third in September was estimated at \$500,000.

These occurrences naturally led to the employment of more substantial building material in some cases, granite being imported from China for some buildings, and iron and brick being used to a considerable extent on others; but to this day nearly all the private dwellings of the city are of wood. Since 1850, however, the damage from fire in the portion of the city occupied by private houses has been remarkably small,—partly because of the use of redwood instead of pine. In the business houses erected recently the increase of solidity and costliness has been very marked.

Throughout a considerable part of the city the streets are laid out in rectangular form, and nowhere with any reference to the natural elevations. The most important business thoroughfare is Market Street, extending from the water front at the ferry landings to the hills on the

west, a distance of 3 miles or more. The more important streets are paved for the most part with cobble stones and basalt blocks; but asphalt on a stone or concrete foundation has begun to be used. Among the public buildings and institutions of San Francisco are the mint, appraisers' stores, subtreasury, custom-house, merchants' exchange, stock exchange, city-hall, industrial school, house of correction, almshouse, Masonic Temple, new Oddfellows' building, safe deposit, and seven theatres and opera-houses. The Palace Hotel cost \$3,250,000, and can accommodate 1200 guests. The city has eleven public squares. Its greatest attraction is the Golden Gate Park of 1050 acres, 3 miles long and half a mile wide, having the ocean for its extreme westerly boundary. The greater part of this area was formerly a shifting sand-dune. An extensive glass-house in a central position is filled with the rarest tropical and semi-



San Francisco (north-eastern part).

tropical plants and shrubs; a large part of the area is planted with forest trees, or is laid down in grass; the walks and drives are well planned and well kept.

San Francisco is traversed in various directions by horse railroads, which extend from the water front to the suburbs. There are also 50 miles of wire cable roads, which are yearly increasing. These cable tramways extend 2 miles on Clay Street, overcoming an elevation of 120 feet. The cost of their construction and equipment has ranged from \$100,000 to \$125,000 per mile. The speed is usually about 5 miles an hour. San Francisco is the terminus of two continental railways, viz., the Union and Central Pacific and the Southern Pacific; while a third, the Atlantic and Pacific, enters the city over a leased line from Mohave. Two narrow-gauge lines and one broad-gauge, each less than a hundred miles long, to

important points in the State, are connected with the city by means of ferries.

The population of San Francisco, as shown by the census returns, was 34,000 in 1850; in 1860, 56,802; in 1870, 149,473; and in 1880, 233,959 (132,608 males, 101,351 females); in 1885 it was estimated, on the basis of the school census, at 275,000 (Chinese, 30,000). At the last presidential election (1884) the total vote cast in the city was 50,167, the total foreign vote being 25,254; of these 12,837 were British (10,206 of them Irish) and 7052 Germans. Of the 90,468 children in the city under seventeen reported for the fiscal year 1884-85, 50,973 had foreign-born parents, and 15,460 more had one parent of foreign origin. In social customs, trade usages, amusements, and religious observances, the large foreign population of San Francisco contributes materially to the formation of its liberal and cosmopolitan character.

Administration, &c.—In July 1856 the city and county, which until then had maintained separate governments, were consolidated in one organization. The government is administered by a mayor and a board of twelve supervisors, with the usual officers common to municipal and county organizations. There is also a superior court having twelve departments, with one judge for each, a police court, and justices' courts. The supreme court of the State holds a number of terms each year in San Francisco. The U. S. district and circuit courts also hold regular terms in the city. There is a well-organized and efficient police force of 400 men. On 1st July 1884 the fire department had 315 men. The city is supplied with gas by two companies. Water is supplied by the Spring Valley Company, principally from San Mateo county. The water is brought in three lines of wrought-iron pipe; the largest, which connects the Crystal Springs reservoir with the city, is 44 inches in diameter and 23 miles in length. The daily consumption of water is about 18,000,000 gallons. The company is able to supply 25,000,000 gallons daily.

Finance.—The assessment roll of personal property in 1885 showed a value of \$56,634,860,—that of real estate and improvements being returned at \$171,433,126. The actual value is not less than \$350,000,000. The debt of the municipality is 3½ million dollars. There are twelve incorporated commercial or discount banks, with an aggregate paid-up capital of \$21,047,965, and a surplus (1st July 1885) of \$3,945,647. The total assets are set down at \$50,894,972. There are also a number of private banks. There are eight savings banks, all but one of these having some paid-up capital, the aggregate of which is \$1,651,200. These banks on the 1st of July 1885 held deposits to the amount of \$52,577,746; they had also a surplus beyond the paid-up capital of \$2,067,209. The banks having a subscribed and paid-up capital pay regular dividends on the entire amount of nominal capital and about 4½ per cent. per annum to depositors.

Commerce.—The exports by water for the fiscal year 1884-85 amounted to \$37,170,800, and the imports to \$37,171,100; the items of import and export by rail bring the total up to \$80,000,000. The duties collected on imports were \$6,610,400. The treasure shipped amounted to \$17,540,000; and the exports of quicksilver were 14,900 flasks, valued at \$433,800. The receipts of treasure from all productive sources west of the Missouri, including Mexico, reached a total of \$40,253,635, and the coinage at the mint in San Francisco was of the value of \$23,750,000, with an addition of \$1,500,000 on foreign account. The sailing ships entering the port numbered 619 (604,200 tons); the steamers were 225. Among the imports were—coffee, 19,505,800 lb; sugar, 152,374,870 lb; coal, 900,000 tons; lumber, 297,234,000 feet (92,754,000 feet red-wood, 177,305,000 feet pine, the remainder miscellaneous). The exports of wheat were 1,001,900 tons, valued at \$26,791,500; this quantity was exported in 366 ships, the freights to Europe ranging from 25s. to 48s. 6d. per ton. British iron sailing vessels have the preference for wheat exportation, and obtain the highest rates. A much larger class of vessels is employed in this trade than formerly, the cargoes now averaging about 3000 tons. There are regular steamship lines connecting San Francisco with Mexican, Central American, Australian, Hawaiian, Japanese, and Chinese ports, and with the chief port of British Columbia. The Pacific Whaling Company owns five or six ships, principally steamers, employed in the Arctic whale fishery. The same company has also extensive works for refining the oil in San Francisco. There is one stone dry dock admitting vessels of 6000 tons, and two or more floating docks which can take on vessels from 500 to 800 tons burthen. A sea-wall is in process of construction by State authority round the deep-water front to prevent the shoaling of the water in the slips resulting in part from the gradual washing down of debris from the hills and steep slopes of the city.

Manufactures.—For many years manufactures made slow pro-

gress. The city was remote from the great centres of population, and labour was very costly. But these disadvantages have been gradually overcome. In 1875 there were 18,000 persons employed in manufacturing establishments, and the value produced was \$40,000,000. In 1885 38,919 persons were so employed, and the estimated value for the business year ending 1st July was \$86,417,200. Subjoined are some of the leading manufactures, with the number of persons employed and the annual value of their production:—bags, 300, \$1,500,000; boots and shoes, 3500, \$5,300,000; cigar-boxes, 260, \$5,000,000; wooden boxes, 350, \$1,000,000; brass-foundries, 350, \$535,000; breweries, 450, \$2,450,000; cigars, 8000, \$4,850,000; clothing, 1900, \$3,750,000; coffee and spices, \$900,000; cordage and ropes, 150, \$600,000; crackers, 150, \$620,000; dry docks (stone), 6, \$675,000; flour, 175, \$2,230,000; foundries, 2000, \$5,500,000; furs, 170, \$500,000; furniture, 1000, \$2,000,000; gas-works, 460, \$12,000,000; harness, 440, \$1,150,000; jewellery, 165, \$600,000; linseed oil, 55, \$600,000; pickles and fruits, 2000, \$1,700,000; provision-packing, 250, \$1,900,000; rolling-mills, 550, \$1,880,000; sashes, doors, &c., 1550, \$5,010,000; ship-yards, 200, \$503,000; shirts, 2550, \$1,000,000; soap, 190, \$715,100; sugar-refineries, 360, \$8,700,000; tanneries, 335, \$1,700,000; tinwares, 180, \$525,000; woollen-mills, 1500, \$1,900,000. In the laundries, it may be added, 935 whites and 1300 Chinese were employed.

Churches and Charities.—There are 70 Protestant churches in the city, representing nearly all the denominations of the country. Besides these there are 19 Roman Catholic churches and a number of chapels connected with the various hospitals and schools. There are 7 synagogues and 1 Greek church (Russian). Including the chapels, the total number of places of worship may be set down at 100. With few exceptions, the church edifices are not imposing. In consequence of the rapid growth of the city wood has been employed in a majority of cases, but this is now being discarded for stone. The asylums and benevolent associations are numerous and well-supported. The more prominent of these institutions are the Protestant Orphan Asylum (214 children), Catholic Orphan Asylum, Pacific Hebrew Orphan Asylum, Magdalen Asylum, Old People's Home, Ladies' Protection and Relief Society, Little Sisters' Infant Shelter, Seamen's Friends Society, San Francisco Benevolent Society, Ladies' United Hebrew Benevolent Society, San Francisco Fruit and Flower Mission, Young Men's Christian Association, Pacific Homoeopathic Dispensary, Lying-in Hospital. Besides these there are a great number of associations which care for their members, and in some instances provide the best medical attendance in private hospitals. Nearly all classes of foreign nativity have established benevolent associations; British, French, and German institutions have large resources, and are managed with great efficiency. Nearly all the secret orders (Masonic, Oddfellows, &c.) devoted in whole or in part to works of benevolence are strongly represented.

Public Schools.—The first public school was established in April 1849. There are now sixty-one free schools, with 43,265 pupils and an average daily attendance of 32,183. The number of children in the city between the ages of five and seventeen years according to the census report of 1880 was 69,000. The number of teachers, male and female, employed in the public school department was 734, the number of schoolhouses 65, and the expenditure for the fiscal year \$817,168. The public schools are graded, the highest grades being two high schools for boys and girls respectively. Besides the day schools a number of evening schools are provided. There are upwards of 25,000 children who are to a large extent provided with instruction in public and private schools other than those belonging to the free-school department. There are about 100 schools in the city, of all grades, which are supported wholly by fees and voluntary contributions. Of these the Roman Catholics have the greatest number, the latter including two colleges and a number of convent schools. The Protestant denominations also have a number of classical and secondary schools of great excellence. The public-school system of the State culminates in the university of California, which has an aggregate endowment equal to about \$3,000,000. The institution is situated in the beautiful suburban town of Berkeley, on the opposite side of the bay (named in honour of Bishop Berkeley). Instruction is furnished free to all pupils who comply with the terms of admission. There are also a number of professional schools in the city, chief among which are the law, medical, and dental departments of the university, the Cooper Medical College, the Hahnemann Medical College, the San Francisco Theological Seminary, and an art school with an average attendance of about 75 students. The late James Lick left a bequest of \$540,000 for the endowment of a School of Mechanic Arts, and among other bequests a large one for the Academy of Sciences, founded in the early period of the city. The public-school department of San Francisco is under the immediate supervision of a superintendent and twelve school directors, one for each ward of the city. There are eighteen public libraries, including the free library with 52,970 volumes. The Mercantile Library Association has 52,000 volumes, the Mechanics'

Institute 38,000, the Oddfellows' Library Association 39,000, and the Law Library 23,355. There is also a rich and extensive State mineralogical collection. (W. C. B.)

SANGALLO, the surname of a Florentine family, several members of which became distinguished in the fine arts.

I. GIULIANO DI SANGALLO (1443-1517) was a distinguished Florentine architect, sculptor, tarsiatore, and military engineer. His father, Francesco di Paolo Giamberti, was also an able architect, much employed by Cosimo de' Medici. During the early part of his life Giuliano worked chiefly for Lorenzo the Magnificent, for whom he built a fine palace at Poggio-a-Cajano, between Florence and Pistoia, and strengthened the fortifications of Florence, Castellana, and other places. Lorenzo also employed him to build a monastery of Austin Friars outside the Florentine gate of San Gallo, a nobly designed structure, which was destroyed during the siege of Florence in 1530. It was from this building that Giuliano received the name of Sangallo, which was afterwards used by so many Italian architects. While still in the pay of Lorenzo, Giuliano visited Naples, and worked there for the king, who highly appreciated his services and sent him back to Florence with many handsome presents of money, plate, and antique sculpture, the last of which Giuliano presented to his patron Lorenzo, who was an enthusiastic collector of works of classic art. After Lorenzo's death in 1492, Giuliano visited Loreto, and with great constructive skill built the dome of the church of the Madonna, in spite of serious difficulties arising from its defective piers, which were already built. In order to gain strength by means of a strong cement, Giuliano built his dome with pozzolana brought from Rome. Soon after this, at the invitation of Pope Alexander VI., Giuliano went to Rome, and designed the fine panelled ceiling of S. Maria Maggiore. He was also largely employed by Julius II., both for fortification walls round the castle of S. Angelo, and also to build a palace adjoining the church of S. Pietro in Vincoli, of which Julius had been titular cardinal. Giuliano was much disappointed that Bramante was preferred to himself as architect for the new basilica of St Peter, and this led to his returning to Florence, where he was warmly received by the gonfaloniere Pier Soderini, and did much service to his native state by his able help as a military engineer and builder of fortresses during the war between Florence and Pisa. Soon after this Giuliano was recalled to Rome by Julius II., who had much need for his military talents both in Rome itself and also during his attack upon Bologna. For about eighteen months in 1514-1515 Giuliano acted as joint-architect to St Peter's together with Raphael, but owing to age and ill-health he resigned this office about two years before his death in 1517. But little remains to enable one to judge of Giuliano's talents in the artistic side of his profession; the greater part of his life was spent on military works, in which he evidently showed great skill and practical knowledge of construction.

II. ANTONIO DI SANGALLO (1448?-1534) was the younger brother of Giuliano, and took from him the name of Sangallo. To a great extent he worked in partnership with his brother, but he also executed a number of independent works. As a military engineer he was as skilful as Giuliano, and carried out important works of walling and building fortresses at Arezzo, Montefiascone, Florence, and Rome. His finest existing work as an architect is the church of S. Biagio at Montepulciano, in plan a Greek cross with central dome and two towers, much resembling, on a small scale, Bramante's design for St Peter's. He also built a palace in the same city, various churches and palaces at Monte Sansavino, and at Florence a range of, monastic buildings for the Servite monks.

Antonio retired early from the practice of his profession, and spent his latter years in farming.

III. FRANCESCO DI SANGALLO (1493-1570), the son of Giuliano di Sangallo, was a pupil of Andrea Sansovino, and worked chiefly as a sculptor. His works have for the most part but little merit,—the finest being his noble effigy of Bishop Leonardo Bonafede, which lies on the pavement of the church of the Certosa, near Florence. It is simply treated, with many traces of the better taste of the 15th century. His other chief existing work is the group of the Virgin and Child and St Anne, executed in 1526 for the altar of Or San Michele, where it still stands.

IV. BASTIANO DI SANGALLO (1481-1551), Florentine sculptor and painter, was a nephew of Giuliano and Antonio. He is usually known as Aristotile, a nickname he received from his air of sententious gravity. He was at first a pupil of Perugino, but afterwards became a follower of Michelangelo. His life is given at great length by Vasari, in spite of his being an artist of very mediocre powers.

V. ANTONIO DI SANGALLO, the younger (?-1546), another nephew of Giuliano, went while very young to Rome, and became a pupil of Bramante, of whose style he was afterwards a close follower. He lived and worked in Rome during the greater part of his life, and was much employed by several of the popes. His most perfect existing work is the brick and travertine church of S. Maria di Loreto, close by Trajan's column, a building remarkable for the great beauty of its proportions, and its noble effect produced with much simplicity. The lower order is square in plan, the next octagonal; and the whole is surmounted by a fine dome and lofty lantern. The lantern is, however, a later addition. The interior is very impressive, considering its very moderate size. Antonio also carried out the lofty and well-designed church of S. Giovanni dei Fiorentini, which had been begun by Jacobo Sansovino. The east end of this church rises in a very stately way out of the bed of the Tiber, near the bridge of S. Angelo; the west end has been ruined by the addition of a later façade, but the interior is a noble example of a somewhat dull style. Great skill has been shown in successfully building this large church, partly on the solid ground of the bank and partly on the shifting sand of the river bed. Antonio also built the Cappella Paolina and other parts of the Vatican, together with additions to the walls and forts of the Leonine City. His most ornate work is the lower part of the cornice of the Farnese palace, afterwards completed by Michelangelo, a very rich and well-proportioned specimen of the then favourite design, a series of arches between engaged columns supporting an entablature, an arrangement taken from the outside of the Colosseum. A palace in the Via Giunia built for himself still exists under the name of the Palazzo Sacchetti, but is much injured by alterations. Antonio also constructed the very deep and ingenious rock-cut well at Orvieto, formed with a double spiral staircase, like the well of Saladin in the citadel of Cairo.

For other architects called Sangallo who lived during the 16th century see Ravioli, *Notizie sui lavori . . . dei nove Da San Gallo*, Rome, 1860. (J. H. M.)

SANGERHAUSEN, an ancient town of Prussian Saxony, is situated on the Gonna, near the south base of the Harz Mountains, and 30 miles to the west of Halle. In 1880 it contained 9136 inhabitants, chiefly occupied in the manufacture of beetroot sugar, machinery, buttons, &c., in agriculture, and in the coal and copper mines of the neighbourhood. Sangerhausen is one of the oldest towns in Thuringia, being mentioned in a document of the 10th century. The Romanesque church of St Ulrich is said to have been founded by Louis the "Springer," margrave of Thuringia, in 1079.