(1887); the Hoyt Library and the Public Library; a large auditorium, belonging to the city; an armoury; the Germania Institute, with a kindergarten, a gymnastic school and a German library; and a free bathhouse and manual training school (1903), a part of the public school system. There is an annual music festival in May. The city has parks, including Hoyt Park (27 acres), used for athletic sports, Rust Park (150 acres), occupying an island in the river, and Riverside Park, a pleasure resort. Saginaw is situated in a good farming region with a fertile soil, especially adapted to the culture of sugar beets; other important crops are beans, cabbages, tomatoes, cucumbers, hay, apples and grains. In the vicinity of the city there are salt wells, and Saginaw county is the most productive coalfield in the state—in 1907 its output was 1,047,927 tons, more than half the total for the state. The city is an important distributing centre, has a large wholesale trade (especially in groceries, hardware, boots and shoes, and dry goods), and in 1904 in the value of its factory products ($10,403,508, 20.2% more than in 1900) it ranked fifth among the cities of the state. The muni­cipality owns and operates the water-works. The first settlement was made on the west bank of the river in 1815 and was called Saginaw City; the settlement on the east side of the river made in 1849 was called East Saginaw and was financed by Eastern capitalists. East Saginaw in 1855 was incorporated as a village. East Saginaw and Saginaw City each received a city charter in 1859, but in 1890 the two were consolidated as the city of Saginaw, and in 1897 the charter was revised.

SAGITTA (“the arrow” or “dart”), in astronomy, a con- stellation of the northern hemisphere, mentioned by Eudoxus (4th century B.c.) and Aratus (3rd century b.c.), and catalogued by Ptolemy, Tycho Brahe and Hevelius, who each described 5 stars. The fable was that this constellation was one of the arrows with which Hercules killed the vulture which gnawed the liver of Prometheus. 5. *Sagittae* is a short period variable, period 8∙38 days, range in magnitude 5∙6 to 6∙4.

SAGITTARIUS (“ the archer ”), in astronomy, the 9th sign of the zodiac *(q.v.)* denoted by the symbol ■ an arrow or dart. It is also a constellation, mentioned by Eudoxus (4th century B.c.) and Aratus (3rd century b.c.), and catalogued by Ptolemy, 31 stars, Tycho Brahe 14 and Hevelius 22. The Greeks rcpre- sented this constellation as a centaur in the act of shooting an arrow, and professed it to be Crotus, son of Eupheme, the nurse of the Muses. Several short period variables occur in the constellation, *e.g.* X3 *Sagittarii,* Wγ1 *Sagittarii* and Y *Sagittarii,* having periods of 7∙01, 7·59, 5·77 days respectively. *Nova Sagittarii* is a “ new ” star, which was discovered by Mrs Fleming in 1899; the nebula M. 17 *Sagittarii* is an omega or horse- shoe nebula, while the nebula and cluster M. 8 *Sagittarii* is a splendid irregular nebula associated with a great number of faint stars.

SAGO, a food-starch prepared from a deposit in the trunk of several palms, the principal source being the sago palm *(Metroxylon Sagu)* (see fig.), a native of the East Indian Archipelago, the sago forests being especially extensive in the island of Ceram. The trees flourish only in low marshy situations, seldom attaining a height of 30 ft., with a thick-set trunk. They attain maturity as starch-yielding plants at the age of about fifteen years, when the stem is gorged with an enormous mass of spongy medullary matter, around which is an outer rind consisting of a hard dense woody wall about 2 in. thick. When the fruit is allowed to form and ripen, the whole of this starchy core disappears, leaving the stem a mere hollow shell; and the tree immediately after ripening its fruit dies. When ripe the palms are cut down, the stems divided into sections and split up, and the starchy pith extracted and grated to a powder. The powder is then kneaded with water over a strainer, through which the starch passes, leaving the woody fibre behind. The starch settles in the bottom of a trough, in which it is floated, and after one or two washings is fit for use by the natives for their cakes and soups. That intended for exportation is mixed into a paste with water and rubbed through sieves into small grains, from the size of a coriander seed and larger, whence it is known according to size as pearl sago, bullet

sago, &c. A large proportion of the sago imported into Europe comes from Borneo, and the increasing demand has led to a large extension of sago-palm planting along the marshy river-banks of Sarawak.

Sago is also obtained from *Metroxylon Rumphii* as well as from various other East Indian palms such as the Gomuti palm *(Arenga saccharifera),* the Kittul palm *(Caryota urens),* the

cabbage palm *(Corypha umbraculifera),*besides *Corypha Gebagan,Raphia flabelliformis* and *Phoenix farinifera,* also from *Mauritia flexuosa* and *Guilielma speciosa,* two South American species. It is also obtained from the pith of species of *Cycas.*

SAGUENAY, a river of Quebec province, Canada, flowing into the St Lawrence 120 m. N.E. of Quebec. It drains Lake St John, from which it issues by two impassable rapids, La Grande and La Petite Décharge. Thence for 40 m. it flows E.S.E. in a series of rapids, navigable only by skilled boatmen in canoes, to Chicoutimi, the seat of a Roman Catholic bishop, a prosperous little town exporting great quantities of lumber. Six miles farther down is Ha Ha Bay, a favourite summer resort. From Chicoutimi the river is navigable by small steamers, and from Ha Ha Bay to the mouth by vessels of the largest size. It is indeed rather a loch or bay than a river, containing neither rock nor shoal, and having at its mouth a depth of some 600 ft. greater than that of the St Lawrence. Its width varies from three-quarters of a mile to two miles, and the waters are blackened by the shadow of treeless cliffs, over 1000 ft. in height, separated here and there by narrow wooded valleys, and culminating in Capes Trinity and Eternity, 1600 and 1800 ft. in height. Above Chicoutimi it runs through hills of about 400 ft. in height, densely wooded with spruce, maple and birch. Tadoussac, at its mouth, is the oldest European trading post in Canada.

Lake St John is a shallow basin, 26 m. by 20, with an area of 365 sq. m. It receives the waters of the Ashuapmuchuan, often spoken of as the upper course of the Saguenay, the Mistassini, the Peribonka and various other important streams. A numerous farming population live near its shores. It is well known to anglers as containing the celebrated *ouinaniche,* or land-locked salmon, which attains a weight of about 6 lb.