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 pf North America. \* It reaches a large size (a length of 12 ft.), 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 güldenstädtii* 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 50 ìb 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 “ Hausen ” 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 ft. and a weight of 2000 lb. 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 ìb 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 early as the 18th 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 ot 3 ft.

The family Aciρenseridae includes one other genus, *Scaphirhynchus,* the shovel-head or shovel-nosed sturgeon, distinguished by the long, broad and flat snout, the suppression of the spiracles, and the union of the longitudinal rows of scales posteriorly. All the species are confined to fresh water. One of them is common in the Mississippi and other rivers of North America, the other three occur in the larger rivers of eastern Asia.

**STURGIS, RUSSELL** (1836-1909), American architect and art critic, was born in Baltimore county, Maryland, on the 16th of October 1836. He graduated from the Free Academy in New York (now the College of the City of New York) in 1856, and studied architecture under Leopold Eidlitz and then for two years in Munich. In 1862 he returned to the United States. He designed the Yale University chapel and the Farnham and Durfee dormitories at Yale, the Flower Hospital, the Farmers’ and Mechanics’ Bank of Albany, and many other buildings, but did comparatively little professional work after 1880. He was in Europe in 1880-1884; and for a short time after his return was secretary of the New York Municipal Civil Service Board. He was president of the Architectural League of New York in 1889-1893, was first president of the Fine Arts Federation in 1895-1897, and was a member of the National Society of Mural Painters, the National Sculpture Society, the National Academy of Design, and the New York chapter of the American Institute of Architects. He lectured on art at Columbia University, the Metropolitan Museum of Art in New York, the Peabody Institute of Baltimore and the Art Institute of Chicago; his lectures in Chicago being published under the title *The Interdependence of the Arts of Design* (1905). He is best known as a writer on art and architecture. He edited *A Dictionary of Architecture and Building* (3 vols., 1901-1902) and the English version of Wilhelm Luebke’s *Outlines of the History of Art* (2 vols.,

1904) , and he wrote *European Architecture* (1896), *How to Judge Architecture* (1903), *The Appreciation of Sculpture* (1904), *The Appreciation of Pictures* (1905), *A Study of the Artist’s Way of Working in the Various Handicrafts and Arts of Design* (2 vols.,

1905) , and an unfinished *History of Architecttire* (1906 sqq.). During his last years he was nearly blind. He died in New York on the 11th of February 1909.

**STURM, JACQUES CHARLES FRANÇOIS** (1803-1855), French mathematician, of German extraction, was born at Geneva on the 29th of September 1803. Originally tutor to the son of Mme de Staël, he resolved, with his schoolfellow Colladon, to try his fortune in Paris, and obtained employment on the *Bulletin universel.* In 1829 he discovered the theorem, regarding the determination of the number of real roots of a numerical equation included between given limits, which bears his name (see Equation, V.), and in the following year he was appointed professor of mathematics at the Collège Rollin. He was chosen a member of the Académie des Sciences in 1836, became " répétiteur ” in 1838, and in 1840 professor in the École Polytechnique, and finally succeeded S. D. Poisson in the chair of mechanics in the Faculté des Sciences at Paris. His works, *Cours d’analyse de l’école polytechnique* (1857-1863) and *Cours, de mécanique de l’école polytechnique* (1861), were published after his death at Paris on the 18th of December 1855.

**STURM, JULIUS** (1816-1896), German poet, was born at Köstritz in the principality of Reuss on the 21st of July 1816. He studied theology at Jena from 1837 to 1841, and was ap­pointed preceptor to the here­ditary prince Henry XIV. of Reuss. In 1851 he became pas­tor of Göschitz near Schleiz, and in 1857 at his native village of Köstritz. In 1885 he retired with the title of *Geheimkirchen- rat.* He died at Leipzig on the 2nd of May 1896. Sturm was a writer of lyrics and sonnets and of church poetry, breathing a spirit of deep piety and patriotism.

His religious poems were published in *Fromme Lieder* (pt. i., Leipzig, 1852; 12th ed., 1893; pt. ii., 1858; pt. iii., 1892), *Zwei Rosen, oder das hohe Lied der Liebe* (Leipzig, 1854; 2nd ed., 1892), *Israelitische Lieder* (3rd ed., Halle, 1881) and *Palme und Krone* (Leipzig, 1888). His chief lyrics were issued in *Gedichte* (6th ed., Leipzig, 1802), *Neue Gedichte* (2nd ed., Leipzig, 1880), *Lieder und Bilder* (2nd ed., 1892), *Kampf- und Siegergedickte* (Halle, 1870),