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 but 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 gülclenslädlii* 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 “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 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

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 (*Spatularia, 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 palæontological 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 (1803-1855), 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