

# *Ichthyologie ; ou, Histoire Naturelle des Poissons*

Special Collections featured item for April 2011 by  
Fiona Melhuish, UMASCS Librarian.

**Marcus Elieser Bloch. *Ichthyologie; ou, Histoire naturelle des poissons, en six parties avec 216 planches dessinées et enluminées d'après nature*. 6 v. Berlin : chez l'auteur, 1796.**

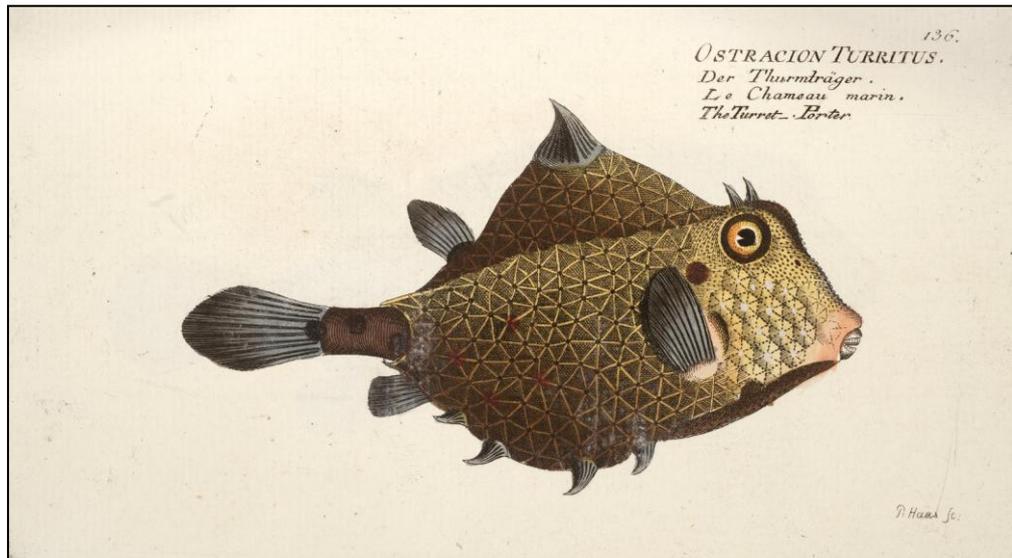
**COLE LIBRARY X394 Vol.1-6, University of Reading Special Collections Services.**



This publication by the German ichthyologist Marcus Elieser Bloch (1723-99) has been described as one of the finest illustrated works on fish ever to be published and a landmark in the field of ichthyology. Bloch [shown left] was born in Ansbach in 1723 to a poor family. His father held a high religious position as a Torah writer in a Jewish community but his salary was low. As a result, Bloch's early education was very limited and by the age of nineteen, he was almost illiterate. However, he worked hard on his education and, with some knowledge of Hebrew and rabbinical

literature, he was able to get a job as a teacher at a Jewish surgeon's house in Hamburg. In this post he learnt German and Latin and acquired some basic

knowledge of medicine, which he extended in Berlin by studying anatomy with the financial support of relatives.



*Ostracion turritus* / The turret porter

As a Jew, Bloch was not allowed to receive his doctorate in Berlin so he moved to Frankfurt-an-der-Oder where he lived from 1760 to 1762. At the age of 42 he received his licence as a physician in Berlin. Bloch married three times - in 1765, 1774 and 1784. His second wife, Cheile, came from a wealthy family and brought a considerable fortune to the Bloch household. However, like his first wife, she died young. Bloch's third wife, Rahel who was 44 years younger than him, survived him by 34 years.



*Lophius histrio* / The American toad fish

Bloch became well-known as a successful doctor and co-founder of the Jewish hospital. He also published several medical papers, including a prize-winning paper on the origin and control of intestinal worms in 1782, a copy of which is held in the Cole Library at the University of Reading Special Collections, together with a French translation edition. However, Bloch's international fame was based on his work on the study of fish, or ichthyology, and the remarkable publications he produced on the subject, which he undertook in his spare time.

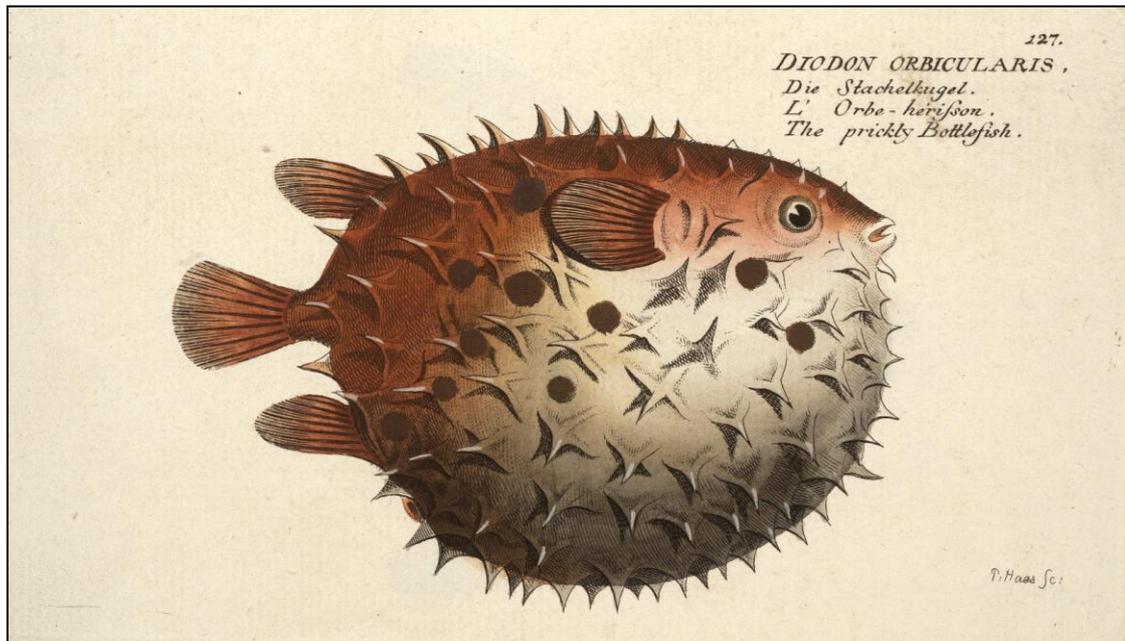


*Chimaera monstrosa* / The chimera

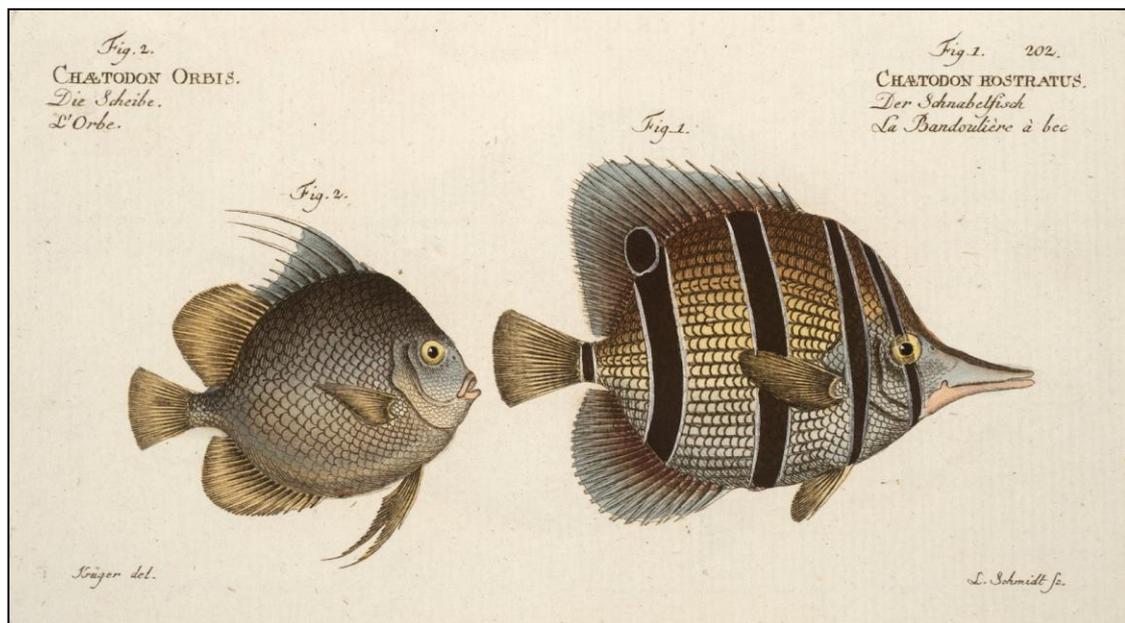
Through this work, Bloch acquired many national and international contacts, although he travelled very little and instead sent his son through Germany, Switzerland, England, Holland and Denmark to gather fish specimens for his collection. In 1797, at the age of 74, Bloch embarked on his only great journey, to Paris and Holland. During this trip he met the scientists Georges Cuvier and Achille Valenciennes, as well as other great scientists of the time. However, Bloch did not return from this journey as he died of a stroke at Carlsbad (Carlovy Vary) on 6th September 1799.

Bloch began by studying the fish of his home country of Germany, before expanding his studies to include the world's oceans as well as the freshwaters of tropical

countries. In 1779, he published his first ichthyological work, *Naturgeschichte der Maraene*, followed in 1780 by *Oeconomische Naturgeschichte der Fische der Preußischen Staaten*. In 1782-84, Bloch published his work on German fish, the three-volume *Oeconomische Naturgeschichte der Fische Deutschlands*, a copy of which is held in the Cole Library, and this was followed in 1785-1795 by his work on fish from other parts of the world, the nine-volume *Naturgeschichte der Ausländischen Fische* (also in the Cole Library).

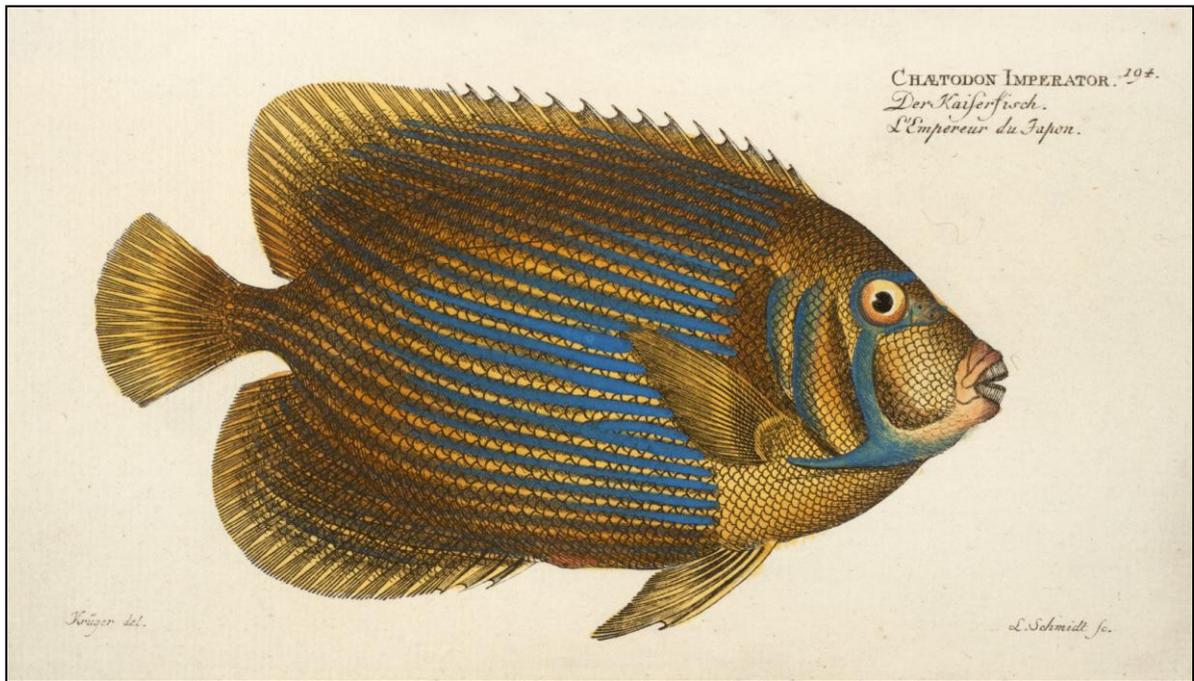


*Diodon orbicularis* / The prickly bottlefish



*Chaetodon orbis* and *Chaetodon rostratus*/ The orb chetodon and the beak chetodon

At about the same time, Bloch combined the last two multi-volume works as *Allgemeine Naturgeschichte der Fische* in twelve folio volumes, illustrated with 432 coloured copperplate engravings, and providing detailed descriptions of about 500 fish species. The copy of this work held in the Cole Library is a six-volume French translation with the title *Ichthyologie ; ou, Histoire Naturelle des Poissons*, produced in a reduced octavo format in 1796 with 216 plates and is the subject of this featured item.

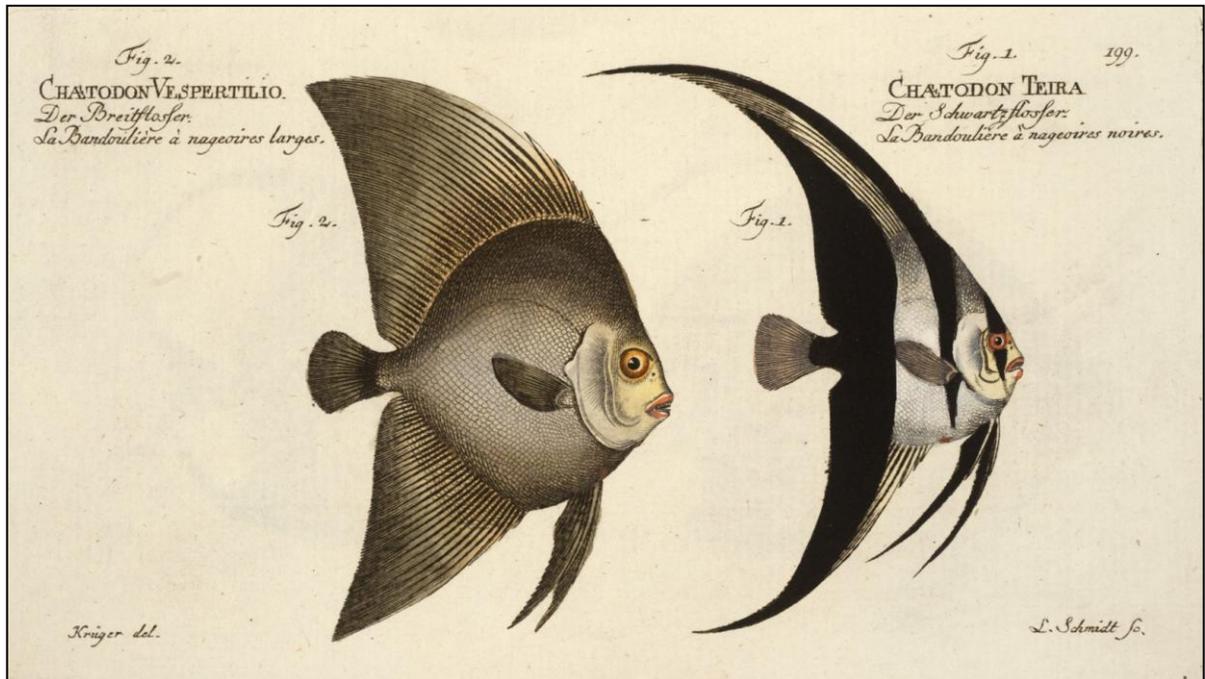


*Chaetodon imperator* / The emperor fish

Bloch's *Systema Ichthyologiae* (1801), which contains descriptions of 1,254 fish species, was planned as the crowning achievement of his ichthyological work, but he did not live to see its completion, and it was later revised and published by his friend Johann Gottlob Schneider (1750-1822).

Bloch was one of the first scientists to produce a wide-ranging ichthyological work based on Linnaean principles. No other scientist before him produced work that carefully described and illustrated so many of the then known fish species, some of which were introduced to a wider audience in colour for the first time. Bloch gave full descriptions of every species known to him, illustrated with high quality drawings which resulted in some of the most magnificent publications on fish ever

produced. In Bloch's time it had still been feasible to contemplate undertaking such an ambitious project as by the nineteenth century there were too many species known to make such a survey possible.

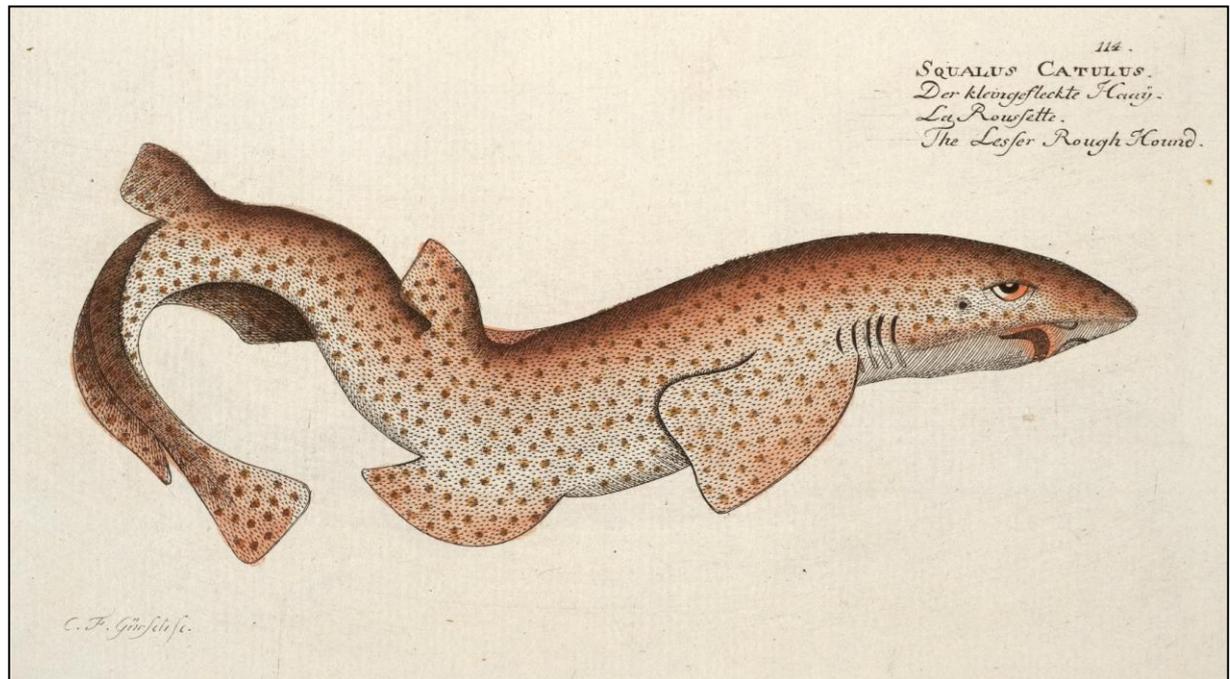


*Chaetodon Vespertilio and Chaetodon Teira*

The illustrations were mostly produced by Johann Friedrich August Krüger (b. 1754) and engraved by a variety of artists including F.W. Schmidt. Each engraving is meticulously hand-coloured, and silver paint is often used to give an exquisitely realistic sheen to the fish scales. The names of the fish are given in several languages, with Latin names included to settle any classification problems. Bloch built up a study collection of fish as the emphasis of his work was on descriptions and illustrations drawn from actual specimens wherever possible.

However, Bloch's descriptions and engravings were criticised as the number of fin rays, body proportions and colouration features are incorrect in a number of cases. Although Bloch's survey of German fishes, described and drawn from actual specimens, was still reported to be serviceable a century later, many of the descriptions of foreign fishes contained errors as Bloch was forced to rely on the

drawings and descriptions of travellers with varying degrees of ichthyological knowledge and specimens with doubtful provenance.

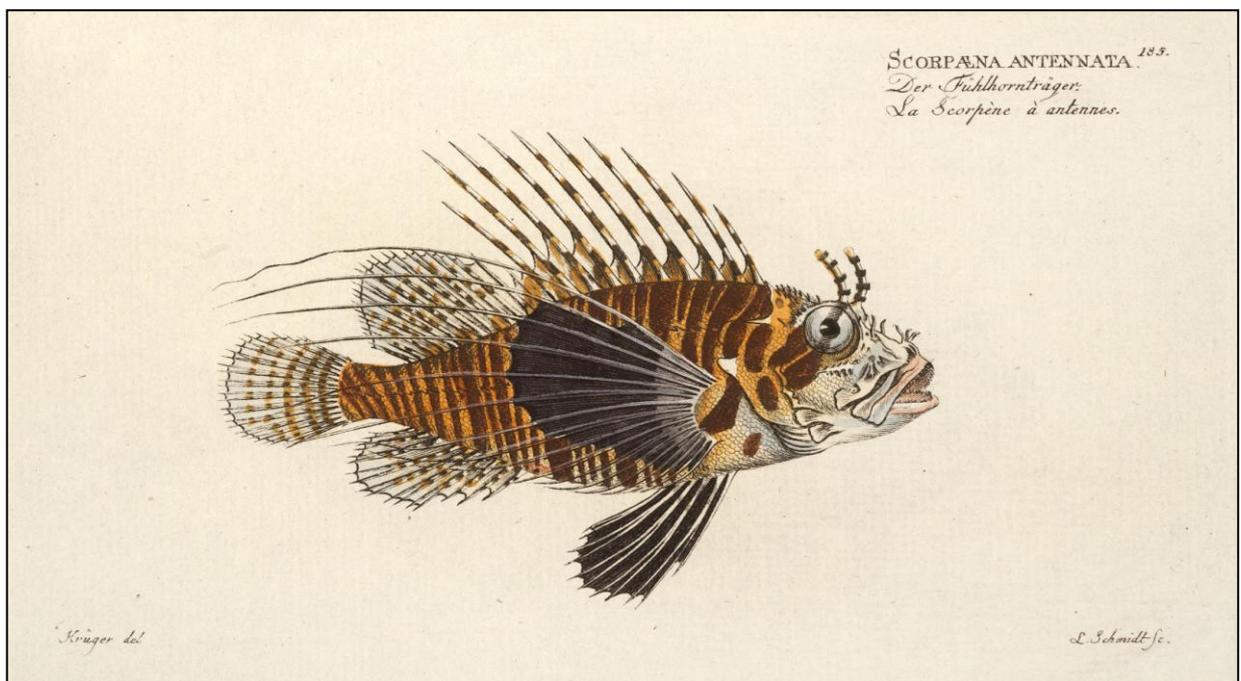


*Squalus catulus* / The lesser rough hound

Bloch's collection of fish specimens is among the oldest existing ichthyological collections in the world and is now preserved at the Museum for Natural History (Naturhistorisches Museum) of the Humboldt University of Berlin, along with Bloch's handwritten catalogues of the collection. Of the original 1,400 specimens, 800 now remain and include many specimens of immense value. However, Bloch's interest in the natural world was not confined to fish, and his extensive collection of natural objects also included 400 stuffed birds, more than 200 amphibians and reptiles and 600 molluscs.

## References

- Ford, Brian J. *Images of science : a history of scientific illustration*. London : British Library, 1992. Available in Special Collections: REFERENCE-741.64-FOR
- Knight, David. *Zoological illustration : an essay towards a history of printed zoological pictures*. Folkestone : Dawson, 1977. Available in Special Collections open access reference: 743.609 KNI
- Paepke, Hans-Joachim. *Bloch's fish collection in the Museum für Naturkunde der Humboldt Universität zu Berlin : an illustrated catalog and historical account*. Liechtenstein : A.R.G. Gantner, 1999.



*Scorpaena antennata*