

III. *The Figure of the Mustela fossilis; communicated from Dr. Gronovius at Leyden to Mr. Peter Collinson, F. R. S.*

Read March 12. 1746-7. **M**USTELA fossilis, sive Cobites cœrulescens, lineis quinque nigris longitudinalibus. Artcd. Ichthyol. gen. xi. 3. \*. Vide TAB. II. Fig. 1.

This Fish was kept alive in a Jar of Water a Year wanting 9 Days, without changing the Water, and without any other Food than what the Water afforded. They dig them out of the Sands near *Wesel* in *Holland*.

IV. *Some Observations on the Belluga-Stone, by Mr. Peter Collinson, F. R. S.*

Read March 12. 1746-7. **T**HESSE Stones of the *Belluga* were collected by Dr. *Cook* at *Astracan*, and sent to Dr. *Sanches* at *Petersburgh*, by whose Favour they came to me. I have applied to those Gentlemen to satisfy my Inquiries about them, and the Accounts they have communicated, with my own Observations, are as follows:

The *Calculus* of the *Belluga* is found of various Shapes and Sizes; it is mostly of a flatted oval Figure,

\* Willoughby, *Hist. Pisc.* p. 124. TAB. G, 3, 4. Raii *Syn. Pisc.* p. 69.

gure, sometimes roundish, globular with unequal Depressions, and of a yellowish white Colour externally, and a smooth polished Surface.

It differs in Magnitude, as it does in Figure, from the Bulk of a Pigeon's Egg up to four or five times that Size.

They are mostly compact, ponderous and solid, not very friable, but requiring a pretty smart Blow of a Hammer to break them. They yield easily to the Saw; but this defaces their internal Texture, which is very remarkably elegant and regular. The Stones consist of concentric Coats firmly adhering to each other, formed about a *Nucleus*, which appeared to be quite an heterogeneous Substance, both from its Colour, Hardness, and Texture.

But another obvious Circumstance in its Structure renders the *Belluga* Stone different from most others, which is its radiated Appearance. It seems composed of an infinite Number of shining Rays, regularly diverging from the central *Nucleus* to the Circumference, representing both in Colour and Form the Flakes of a pure white *Terra foliata Tartari*, or (excepting the Colour, which is yellowish) the striated *Spicula* of Antimony.

This Stone is found in the Fish called the *Belluga*, a Species of Sturgeon, the *Acipenser tuberculis carens Artedii*, Part III. pag. 92. It is commonly called *Lapis Belluga*, by the *Russians Kamer Belluga*, which signifies the same thing.

Of this Fish several Authors have given us the following Account; in Shape it is not much unlike  
a Sturgeon,

a Sturgeon (*a*) ; only its Snout is proportionably shorter and thicker ; the Skin on the Back is light-grey, but under the Belly it is white, and without Scales (*b*) : Its Flesh is whiter than Veal ; whence the Name *Belluga*, or the white Fish ; and affords a much more delicious Dish (*c*) than Sturgeon. Of its Row or Spawn is made the *Cavear* ; and some are found so large as to yield from 156 to 200 Weight of it. They are found in greatest Plenty, and especially those of the largest Size (*d*) in the River *Volga*, about the City of *Astracan* (*e*). *Stralenberg* says, he saw one caught in this River 56 Feet long and 18 Feet thick ; and takes them to be the largest River Fish in the World. They are likewise found in other Rivers, as the *Don*, and those that flow into the *Baltick* and *Caspian* Seas.

I am not certainly informed, neither do Authors agree, in what Part of the Fish this Stone is found ; *Stralenbergh* says, in the Head and Stomach ; some (*f*) say, in the Air-Bladder ; others in a particular Bag near the *Anus* or inferior Gut ; others again in still different Parts. It is found in both Sexes, but ofteneft in the Male, and of all Ages ; but is very rare and scarce, for in a thousand Fish it often happens not to meet with a Stone.

From hence it would appear, that these Stones are preternatural to the Fish ; perhaps morbid Productions, just as the Stone in the human Bladder, notwithstanding its curious and regular Form ; probably

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(*a*) Vide Crull's *History of Russia*. (*b*) Stralenbergh's *History of Siberia*. (*c*) Crull's *History of Russia*. (*d*) Stralenbergh *ibid*. (*e*) Crull's *Hist. of Russia*. (*f*) Dr. Cook's *Letter*.

the Food of the Fish; the Situation of the Parts in which it is generated, and many other Circumstances, may contribute to this Uniformity of Appearance.

A little of this Stone scraped, and laid upon an hot Iron, gave a faint urinous Smell, and calcined into a light, greyish, insipid Earth.

Had it been a real animal Substance, or a constituent Part of the Animal, its Smell would, in all Probability, have at once discover'd it.

The Natives about the *Volga* very much esteem this Stone for its Virtues, being in great Reputation to promote Delivery. The common People take from 10 Grains to 30, 40, or even 60 scraped fine in a little Water, 2, 3, or 4 times in 24 Hours, when the Case is dangerous.

It is also highly commended as a Diuretic and Lithontriptic; and this not only amongst the common People, but amongst such as are more capable of informing themselves of its Effects.

### References to the Figures in TAB. II.

*Fig. 2.* an oval Stone, flat and rugged on its under Side; Part of which *a, b*, has been scraped away, and is broken into two Pieces by the Crack *c, d*. at *e* and *f* appear 2 *Nuclei* or Centers of smaller Incrustations near the Surface of the larger Stone.

*Fig. 3.* Is the larger Fragment of the same Stone, or the Side *b, c, d*. at *g* is a Cavity answering to the Protuberance *b*, in the next *Figure*. *i, i, i*, are the shining Rays diverging from the central *Nucleus*.

*Fig. 4.* The smaller Fragment, or the Side *a, c, d*. in which the smaller *Nuclei e* and *f*. of *fig. 2.* appear. *b* is the central *Nucleus*, which fills up the Cavity *g* in *fig. 3.* and *i, i, i*, are the like Sprays or *Spicula* as in *fig. 3.*

*Fig. 5.* A smooth oval Stone, in Form of a long Egg.

*Fig. 6* and *7.* This Stone split in two Pieces, *a, b* and *c, d*. *e* in *fig. 6.* is the *Nucleus* or Center of the Stone, which seems to have been a Tooth of a Fish, and filled up the Cavity *f* in *fig. 7.* and *i, i, i, i*, are the Sprays or *Spicula* in both *Figures*.

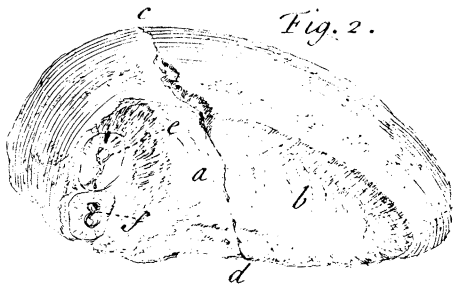


Fig. 2.



Fig. 5.

p. 454.

p. 454.

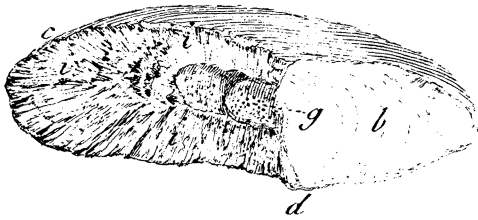


Fig. 3.

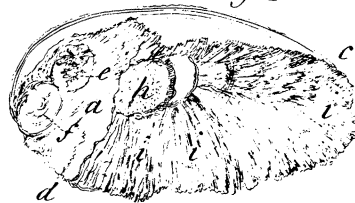


Fig. 4.

Fig. 1. p. 451.

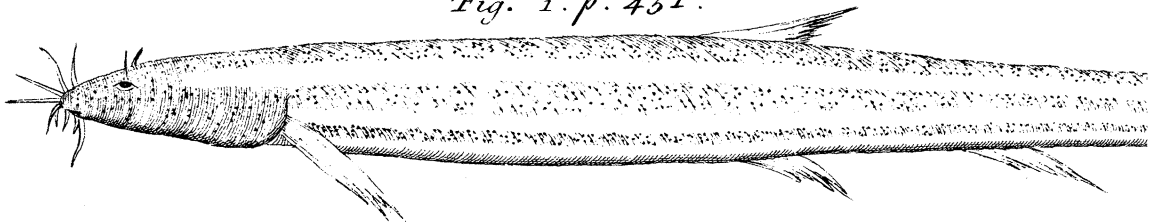
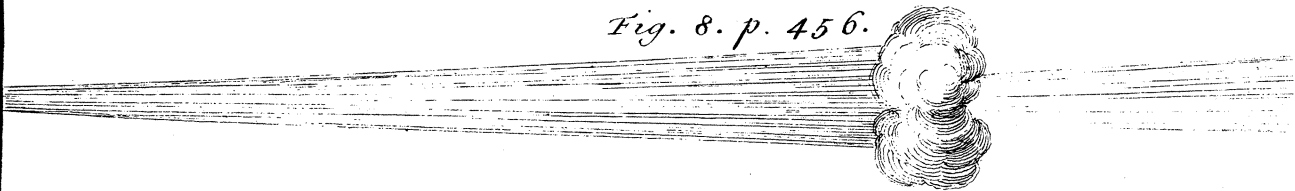


Fig. 8. p. 456.



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Fig. 6.

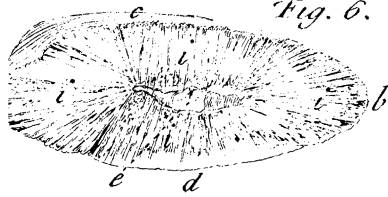
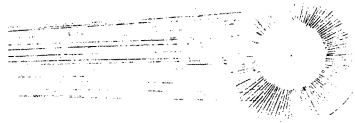
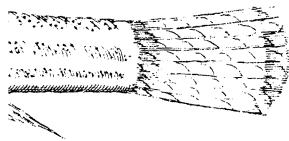
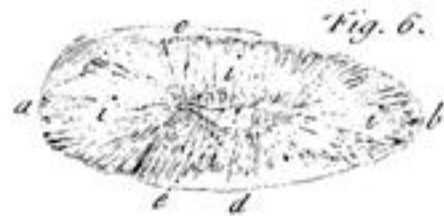


Fig. 7.



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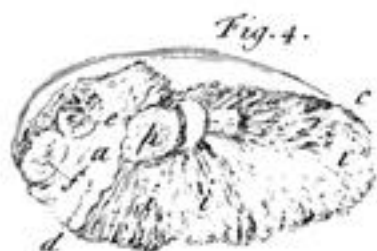
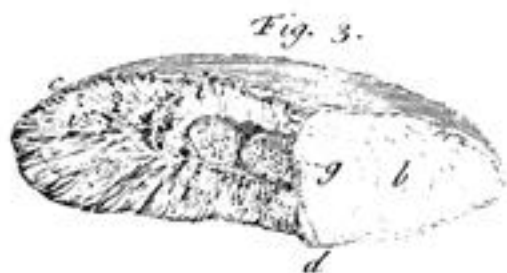


Fig. 1. p. 451.



Fig. 8. p. 456.

