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TOADSTONES AND SNAKE EYES FROM THE CABINET OF CURIOSITIES OF THE STRAHOV MONASTERY IN PRAGUE AND FROM THE FORMER IMPERIAL COLLECTION IN VIENNA

ROPUŠÍ KAMENY A HADÍ OČI Z KABINETU KURIOZIT STRAHOVSKÉHO KLÁŠTERA V PRAZE A PŮVODNÍ CÍSAŘSKÉ SBÍRKY VE VÍDNI

RŮŽENA GREGOROVÁ

Abstract

Gregorová, R., 2022: Toadstones and snake eyes from the Cabinet of Curiosities of the Strahov Monastery in Prague and from the former Imperial Collection in Vienna. – Acta Musei Moraviae, Scientiae geologicae, 107, 2, 287–299 (with Czech summary).

Toadstones and snake eyes from the Cabinet of Curiosities of the Strahov Monastery in Prague and from the former Imperial Collection in Vienna

Twelve button-like fossil teeth from the Cabinet of curiosities of Strahov Monastery in Prague and the former Imperial collection in Vienna are analysed. Teeth belong to different systematic groups of various geological ages. Some teeth are modified by grinding and polishing and they were probably used as raw material for an art object or jewellery. These teeth were thought to be so-called toadstones (*crapaudine, lapis bufonis, batrachites*) and snake eyes (*occhi di serpe, oculis serpentum*) in the pre-scientific history. The tradition of toadstones is associated above all with Western Europe (mainly England and France) and its origins can be traced back to the Middle Ages. Snake eyes are only associated with the island of Malta and their tradition is most widespread only from the 16th–17th century. While there are many artefacts, especially toadstone rings, tangible evidence of snake eyes is relatively scarce. Fossil teeth (toadstones and snake eyes) from the Strahov Cabinet of curiosities and Vienna Imperial collection are important relics of the historical understanding of fossils.

Key words: toadstones, snake eyes, *Scheenstia maximus*, *Pagrus cinctus*, Strahov Monastery, Imperial Cabinet Vienna, Malta, History of palaeontology.

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1. INTRODUCTION

Historical sources show that fossils played an interesting and important role in human thought (mythology, philosophy, theology, art, history, medicine, folk culture and science). They were considered as results of the forces *vis plastica* or *vis lapidifica*, as an evidence of the deluge, as relicts of Saints, remains of dragons, unicorns and giants. A large number of fossils have been used medicinally and therapeutically from classical to modern times (ammonites, belemnites, sea urchins, amber, shark and fish teeth and many others), (e.g. DUFFIN 2008).

Direct evidences of this phenomenon are deposited in museums, universities, castles, cabinets of curiosities and historical pharmacies that carefully preserve this tangible evidence of human thought. Among these fossils, shark and fish teeth played a signifi-

cant role in this field. Shark teeth have been called many names and there are many articles related to their folklore, (e.g. Brignon 2020). Among fish teeth there are mainly button-shaped teeth of the Jurassic to the Early Cretaceous Mesozoic lepisosteiform species *Scheenstia maximus* (Wagner) and Tertiary species *Pagrus cinctus* (Agassiz). *Scheenstia* teeth were thought to be toadstones (*bufonites, lapis bufonis, crapaudines, batrachites*), coming from the heads of old toads and *Pagrus* teeth were thought to be snake eyes (*occhi di serpe*). Both stones were attributed magical, protective and curative properties based on sympathetic medicine the most important of which was the ability to detect and neutralize poison. While the myth of the toadstones goes back deep into the Middle Ages (e.g. Forbes 1972, Duffin 2008, 2010, Gregorová *et. al.* 2020), the so-called snake eyes are found in written sources later in 16th century (e.g. Freller 1997).

Toadstones were recently identified on an important imperia insignia – the medieval Aachen crown, resting on the bust of Charlemagne (Gregorová *et al.* 2020). Until this moment, the use of toadstones was mainly known as cabochons for rings. In addition a *Scheenstia* tooth was identified in 2021 as a toadstone in the gem decoration of the reliquary of St. Maurus at Bečov Castle in western Bohemia. The richly decorated shrine is widely held to be the most important historical artefact in the Czech lands, apart from the crown jewels of Bohemia. Adding to its incalculable value and mystique is the recent discovery of an inlaid "toadstone", one of the world's oldest (Gregorová in preparation).

The Cabinet of curiosities of the Strahov Monastery in Prague is a unique example of a pre-museum Baroque installation that has no equivalent in the Czech Republic and is one of the most well-preserved cabinets in Europe. In the original showcases, we can find typical attributes of cabinets of curiosities, such as an ostrich egg, a narwhal tooth, a whale's penis, and two basilisks made of stingrays (Gregorová 2019). In addition to the zoological collections, the cabinet also preserves an interesting historical collection of cut and polished stones arranged in a cassette or adjusted in framed pictures.

In the historical cabinet, there are also several small boxes with stones, mostly shaped into oval and round cabochons. These are mainly semi-precious varieties of quartz such as agates, opals and chalcedony. Six button-shaped, round or slightly oval fossil teeth were identified among these cabochons.

A similar set, also of six teeth, is kept in the collections of the palaeontological department of the Natural History Museum in Vienna, which comes from the original Imperial collection (Ortwin Schultz – personal communication). A Court Natural History Cabinet was established by Emperor Franz Stephan von Lothringen (1708–1765). The basis of the mineralogical and paleontological collection was the famous 'museo' of Jean de Baillou, who had worked as a director of gardens and mines in Tuscany (Klemun 2004).

2. MATERIAL AND METHODS

The following material was studied:

1. A set of six specimens of button-shaped teeth (without locality) belonging to both the Mesozoic lepisosteiform species *Scheenstia maximus* (3 specimens) and representative of the Sparidae family (*Pagrus cinctus*, 3 specimens) from the Cabinet of curiosities of Strahov Monastery in Prague (fig. 1A, B).
2. A set of six specimens of button-shaped teeth (without locality) belonging to both the Mesozoic species *Scheenstia maximus* (4 specimens) and representative of the Sparidae family *Pagrus cinctus* (2 specimens), from the Imperial collection in Vienna (fig. 2).
   Comparative material: *Scheenstia maximus* from the collections of the palaeontological department of the Natural History Museum in Vienna (2019/0147/0001. NHMW). Collection of isolated sparid teeth *Pagrus cinctus* from Děvínská Nová Ves from the Department of geology and palaeontology of the Moravian Museum Brno.

The material was studied under an Olympus SZX10 microscope and photographed with a Canon EOS1100D and Nikon D90 digital cameras.
The terminology of the tooth structure follows that of Sasagawa *et al.* (2009), Germain and Meunier (2020) and Hughes *et al.* (1994).

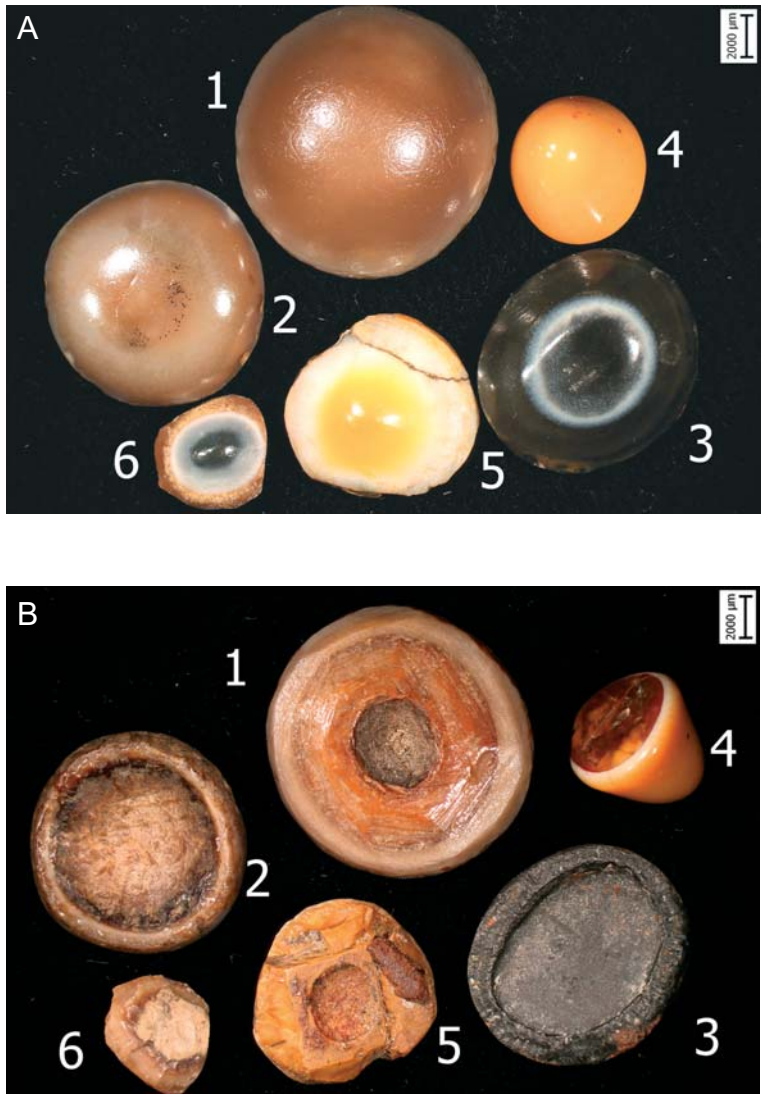

Fig. 1. A set of the six teeth from the collection of Cabinet of curiosities of Strahov Monastery: A – occlusal view, B – basal view.

Obr. 1. Soubor zubů ze sbírky kabinetu kuriozit strahovského kláštera v Praze: A – okluzální pohled, B – bazální pohled.

Fig. 1. A4 A detail of parallel odontoblastic canalicles.
Obr. 1. A4 Detail paraleních odontoblastických kanálků.

Fig. 2. A set of the six teeth (occlusal view) from the Imperial collection (NHMW).
Obr. 2. Soubor zubů z císařské sbírky (okluzální pohled), nyní na geologicko-paleontologickém oddělení NHMW.

Abbreviations

ac – acrodin; ce–collar enameloid; cpd – circumpulpal dentine; de – dentine; en – enamel layer; pd – pallial dentine; pc – pulp cavity; NHMW – Naturhistorisches Museum Wien, MZM – Moravian Museum Brno.

3. DESCRIPTION OF TEETH

Teeth of Mesozoic *Scheenstia maximus* and of the Tertiary sparid *Pagrus cinctus* are represented in both sets. These teeth have some differences in their histological structure. Functional teeth of the genus *Scheenstia* have a thicker enameloid layer (acrodin) that surrounds the dentine, which is not differentiated (fig. 3). But the teeth in non-functional positions have only an acrodin layer (LEUZINGER *et al.* 2020). Enameloid layer pass downwards into a histologically different ganoin tissue the collar enameloid, (fig. 4). Teeth of sparid are composed of three different hard substances: a thick bulk of orthodentine (= circumpulpal dentine) around the pulp cavity, a thick layer of "modified dentine" (= pallial dentine) above the former and a thin hypermineralized enamel layer that overlays the crown of the teeth (fig. 5A,B). A typical concentric rings relief is developed at the base of the teeth (fig. 6).

Fig. 3. Vertical section of *Scheenstia maximus* tooth, Mikulov, Turold, NHMW, 2019/0147/0001.
Obr. 3. Příčný řez zubem *Scheenstia maximus*, Mikulov, Turold, NHMW, 2019/0147/0001.

Fig. 4. A side view on the tooth no. 2 showing the line between acrodin and collar dentine leyers, NHMW.
Obr. 4. Boční pohled na zub č. 2 ukazující hranici mezi akrodinem a enameloidního límce, NHMW.

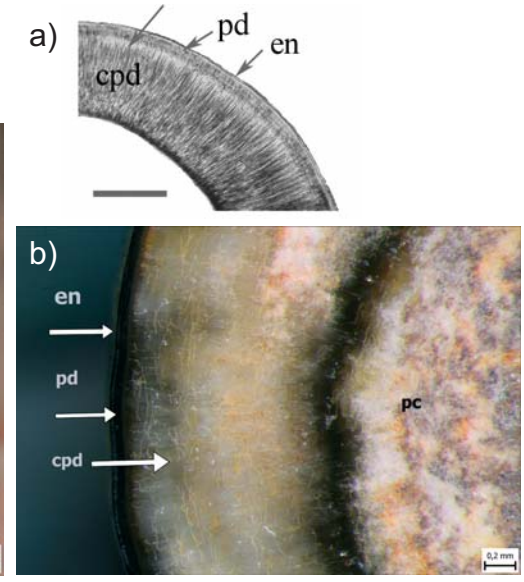

Fig. 5. (a) Detail of a cross-section of a molariform tooth showing the histological structure of the crown (a) *Sparus aurata* according Germain and Meunier 2020, (b) (*Pagrus cinctus* – Ge 26523 MZM.
Obr. 5. Detail příčného řezu molariformního zubu ukazující histologickou strukturu korunky (a) *Sparus aurata* podle GERMAIN AND MEUNIER (2020), (b) (*Pagrus cinctus*, Ge 26523 MZM).

Fig. 6. *Pagrus cinctus* with concentric ring's relief at the tooth base, NHMW.
Obr. 6. *Pagrus cinctus* koncentrické prstence na bázi zubu, NHMW.

4. COLLECTION OF TEETH FROM THE STRAHOV MONASTERY IN PRAGUE

1. *Scheenstia maximus.* A light brown to cinnamon tooth is the largest in the collection and has an almost regular round outline. An opalescent light stripe is developed at the base. Fine grooves running in all directions can be seen under binocular on the occlusal surface, which may have been caused by scratching. At the same time, a natural structure consisting of dense shallow depressions is also observable. No colour inclusions are recorded on the tooth. The inner side of the tooth is artificially aligned and filled with inorganic material with a small hole in the middle. It is probable that the hole represents the remain of an adjustment.
2. *Scheenstia maximus*. A slightly smaller tooth, its surface is artificially modified by grinding and polishing in contrast with the previous tooth. It is slightly lighter in colour than the previous one. In the middle, there is a concentric darker circle that occupies about one third of the diameter of the tooth. It likely corresponds to the boundary between the enameloid (acrodin) and the dentine. Small dark spherical inclusions are scattered in the middle of the circle. Towards the outer edge of the ring, the inner structure of the enameloid shines through. Similar enameloid fibrous structure can be observed at the base of the tooth.
3. *Scheenstia maximus.* The third tooth is slightly oval and is strongly processed by grinding. The upper and basal parts of the tooth are dark grey and are separated by a concentric light ring with a smooth transition to a dark colour. The ring corresponds to the boundaries between enameloid and dentine.
4. *Pagrus cinctus.* An orange-yellow shiny conical tooth from the labial series. The parallel odontoblastic canalicles of dentine are observable under the enameloid layer (fig. 1 A4)
5. *Pagrus cinctus.* A yellow-white tooth is prepared by cabochon grinding, the top of the tooth is yellow corresponding to the deepest layer of enameloid, then towards the base the colour change to white, probably because of wear until the outer pallial dentine layer. The basal side of the tooth is formed from a recrystallized honey-coloured layer with a conch shell fracture of the original inner circumpulpal dentine, and in the middle the apex of the pulp cavity can be seen. There are clear traces of the original adjustment. The tooth is incomplete and glued. The base itself is in addition artificially aligned, probably for adjustment.

6. *Pagrus cinctus:* the smallest tooth is whitish at the base with a grey eye on the top of the tooth. It is heavily grounded down to inner beige circumpulpal dentine.

5. COLLECTION OF TEETH FROM THE IMPERIAL CABINET IN VIENNA

(now Department of Geology and Palaeontology of NHMW)
The set contains two teeth of *Scheenstia maximus* and four teeth of *Pagrus cinctus*.

1. *Scheenstia maximus:* A light grey shiny tooth with an almost regular round outline at the base with a diameter of 11 mm. The occlusal side of the tooth forms a low apex. The tooth enameloid is smooth and bears no traces of artificial polishing. The basal side of the tooth is however artificially aligned.
2. *Scheenstia maximus:* A dark grey shiny tooth with a slightly oval outline at the base with a diameter of 10 mm. As the previous tooth the enameloid is smooth and bears no traces of artificial polishing. However, we can observe an area of natural grinding on the tooth from the animal's use of the tooth. The basal side is lined by collar enameloid (fig. 4).
3. *Pagrus cinctus:* yellow orange tooth with an almost regular round outline at the base with a diameter of 13 mm. The original tooth was cut from the basal side and is therefore low. On the occlusal surface fine grooves are oriented in all directions and are caused by an animal rather than an artificial treatment. The parallel odontoblastic canalicles of dentine are observable under enameloid layer.
4. *Pagrus cinctus:* yellow orange tooth with white eye in the middle and with an almost regular round outline at the base. This tooth is the only one that is artificially polished from the occlusal side and the polishing traces have a parallel character. Polishing traces are also visible on the collar enamel. In contrast, the basal side of the tooth is not modified in any way.
5. and 6. *Pagrus cinctus:* two black teeth with a diameter of 10 and 7 mm are in their original condition and have not been artificially modified in any way.

6. DISCUSSION AND CONCLUSION

The collection of teeth from the Strahov Monastery contains three teeth of *Scheenstia maximus* and three teeth of *Pagrus cinctus*. Except for the largest tooth (*Scheenstia*), which has a regular natural shape, the five other teeth are artificially modified by grinding and polishing. In four teeth, the inner dentine shines through the enameloid and creates an eye at the top of the tooth, which was probably the intention of the artisan. The teeth with an eye in the middle have had the greatest healing effects since the time of Albertus Magnus. An indistinct eye is often observable even on unpolished teeth. This is due to the natural staining of teeth during diagenesis. In the entire collection of cabochons (minerals and teeth) from the Strahov Monastery in which the fossil fish teeth were identified, there is an imitation of toadstone from a banded rock (fig. 7). An analogous example of such imitation of a toadstone is given by Duffin (2008) from the collection of the Staatliches Museum für Naturkunde in Stuttgart. It is likely that the entire collection of polished stones together with the fossil teeth represented raw material for further use on an art object or jewellery. Fossil remains belonging to the genus *Scheenstia* are widespread in Upper Jurassic – Lower Cretaceous deposits of Europe. Gregorová *et al.* 2020 summarized geological characteristic of the most important European localities of isolated teeth of *Scheenstia maximus* and also possible historical sources for these particular stones.

In the case of the *Scheenstia* teeth from the Strahov Monastery, two resemble in colour to teeth from English localities near Oxford. The provenance of the 3rd dark grey tooth is difficult to determine, also because the tooth is considerably abraded. Both teeth of *Scheenstia* from the Imperial collection in Vienna probably have a different provenance. They are comparable in colour, lustre and smooth surface to teeth from Štramberk (Czech Republic) or Falkenstein (Austria).

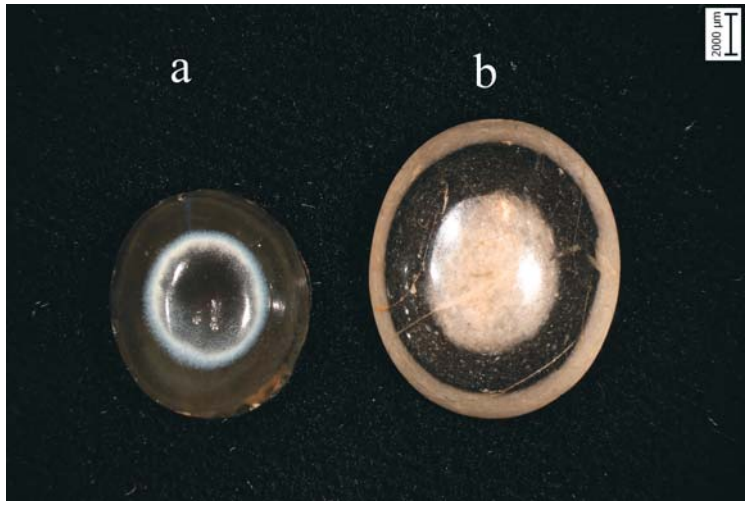

Fig. 7. Two cabochons: a – *Scheenstia maximus*;, b – banded rock – imitation of the toad stone, Strahov collection.

Obr. 7. Dva kabošony: a – *Scheenstia maximus*;, b – páskovaná hornina – imitace ropušího kamene, strahovská sbírka.

Isolated sparid teeth (*Pagrus cinctus*) are widespread in Miocene to Pliocene fish assemblages of the Paratethys and Mediterranean regions (Italy, Malta, France, Libya, Spain, Algeria, Slovenia, Slovakia, Czech Republic, Poland, Austria, Ukraine). Summary and overview can be seen e.g. in Šoster and Kovalchuk (2016). Therefore, determining the provenance of these teeth from the two historical collections would seem to be complex. However, we know from historical sources that above all the yellow-orange teeth of *Pagrus cinctus* played an important role in the traditional folk medicine. They were believed to be snake eyes (*occhi di serpe*) and this tradition is originally associated only with the Mediterranean island of Malta, hence their Latin name *oculi serpentum melitenses*. Here a strong so-called Pauline cult arose in connection with the biblical shipwreck of Saint Paul on the Island recorded in Acts of the Apostles, chapter 28. According to the legend St. Paul cursed the snakes on the island, who left behind snake tongues and eyes, which, together with clay, had miraculous or healing effects above all against poisons. This issue is elaborated in detail by many authors (e.g. Thompson 1932; Zammit-Maempel 1975 a,b, 1978, 1989, Freller 1997, Savona Ventura 2010). Shark teeth played a significant role in the debate about the origin of fossils in the 16th century. The very first depicted shark tooth *Otodus megalodon* (Agassiz 1835) comes from the island of Malta and can be found in the work of the French traveller André Thevet (1516–1592) Cosmographie universelle (1554). Already in this work, the author relates the teeth as "langues de serpens" – snake tongues to the biblical shipwreck of St. Paul in Malta. These shark teeth are discussed in the encyclopaedias of the most famous modern scholars such as Conrad Gesner (1516–1565), Ulisse Aldrovandi (1522–1605) and many others. While there is a wealth of literature relating to the Maltese shark teeth (see for details Brignon 2019, 2020), the small knob-like sparid teeth found in Malta have received much less attention. A Prague doctor, dean of the Faculty of Medicine and traveller Alois Šimon Tudecius (1630–1699), sailed around the Mediterranean and visited Malta. He gives us an interesting testimony concerning the popularity of snake eyes (fig. 8). Among other things, he writes that the said eyes and tongues of serpents are found only in the island of Malta and that the apostle Paul already took them

away from the island. He describes, *"In such rocks, therefore, everywhere in the island, these precious stones are dug up, in some places, however, in greater quantity than in others, and the inhabitants carry them into the city to sell. I myself bought many such eyes and tongues from a certain islander at a fairly favourable price, some were still on the stone, and one eye, more beautiful than the others I took with me to Vienna"*. In addition, his mention of the colour of the found snake eyes is important: *"Some are grey, others liver-coloured, others black, others blackish, and these are rarer and more expensive, and I have seen them on a noble countess, used in beautiful gold bracelets. Others are white-eyed, with a white pupil, and these are the most beautiful, because they really look like an eye, they are also often found coloured golden. Eyes, like precious stones, are placed in rings so that they touch the skin directly and are worn on the fingers, while tongues are tied to the arms or hung around the neck. They enter the body with water, wine or other liquid in which the eyes or tongues have been immersed for some time"*. A similar way of use of serpents' eyes as a sympathetic medicine against snakebites involved either boiling the fossil fish teeth in water, or adding the teeth in powdered form to water or wine (Worm 1686). Šimon Tudecius was also familiar to the modern views on the origin of snake tongues already promoted by scientists Fabio Collona (1567–1640) and Niels Steensen (1638–1686). But only an Italian artist Agostino Scilla (1629–1700) is the first to comment on snake eyes – fish teeth alongside those of sharks. He is an important figure in the history of palaeontology and demonstrated with an illustration that the snake eyes are comparable to the teeth of the sparid fish (Scilla 1670). Unlike toadstones, far fewer snake eyes exist in royal and noble treasury inventories or other records. Thompson (1932) mentions that an inventory of jewels that belonged to King Henry V of England (1386–1422) includes a number of serpents' eyes garnished in gold. He further states: *They were sometimes set in bracelets, and in the seventeenth century there is a record that one of the Grand Masters of the Order of St. John had a serpents' eye set in a ring, which he wore to preserve him from colic.* Zammit-Maempel (1989, 2010) gives

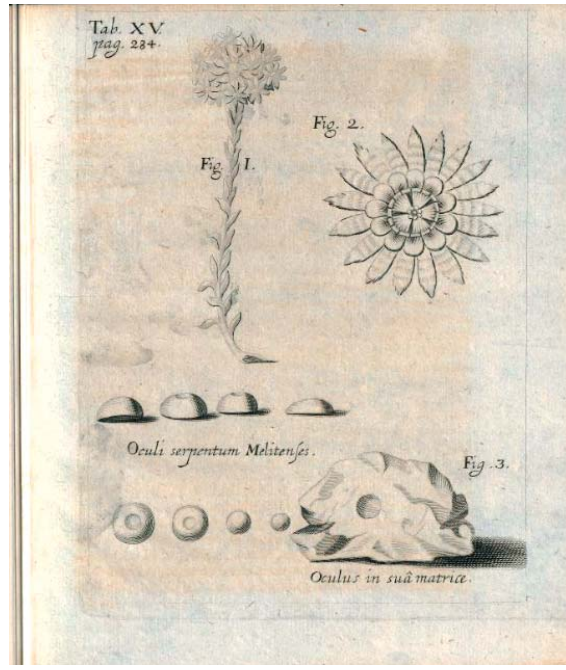

Fig. 8. The oldest depiction of snake eyes (*Oculi serpentum Melitenses*), Tudecius (1680).

Obr. 8. Nejstarší zobrazení hadích očí (*Oculi serpentum Melitenses*), Tudecius (1680).

other examples. So-called leaflets confirming their authenticity proved the fact that snake eyes only from Malta have healing and protective effects. They were consequently in great demand throughout Europe and from the seventeenth century onwards, a number of leaflets extolling the protective and curative powers of "St. Paul's tongues", "Serpents' eyes" and "St. Paul's earth/rock", went into circulation both in Malta and abroad. The earliest-known dated manifesto extolling the virtues and beneficial properties of Malta's fossil sharks' teeth and stone from St. Paul's Grotto, seem to have been the Italian and French versions published in Malta in 1643 (Zammit-Maempel 1975b, 1978). From the beginning of the 18th century, we find numerous records of snake-eyes originating from Malta in the literature of German authors, such as the physician and collector Michael Bernhard Valentini (1704), the physician Johann Jacob Woyt (1709), the physician, numismatist and mineralogist Franz Ernst Brückmann (1734), physician and collector Johann Christian Kundmann (1737), bookseller Heinsius Johann Samuel (1742), physician and naturalist Johann Ernst Hebenstreit (1743).

The Victoria and Albert Museum in London houses a very rare artefact of this Pauline tradition – enamelled gold ring with a circular bezel set with a *Pagrus* tooth (serpent's eye), dated 1670–1700 with a probable Italian provenance. A snake's head fashioned from sediment with two-mounted *"Occhi di Serpe"* is housed in the Sedgwick Museum in Cambridge. It belongs to the collection of the famous naturalist Dr. John Woodward (1665–1728) which also includes many of the specimens that had belonged to the above mentioned Renaissance artist and naturalist Agostino Scilla. Yellow teeth of *Pagrus cinctus* analysed in this paper represent another new interesting evidence of belief in the healing and protective function of snake eyes. But it cannot be said with certainty that all *Pagrus cinctus* teeth analyzed in this article come from Malta. In the case of the Imperial collection, it can even be assumed that the 2 black teeth come from the Slovak locality Děvínska Nová Ves and the yellow teeth were recorded in the past at the localities (Mannersdorf, Wollersdorf) of the Vienna basin in Austria (Ortwin Schultz – personal communication).

Duffin (2019) considers in relation with Maltese snake eyes a stone *Lapis anguium* from the work published by the leading French chemist Nicolas Lémery (1698) to be a fossil sparid teeth. Lémery was actually based on "De anguium lapide" of a Flemish physician, mineralogist working in the service of Emperor Rudolph II in Prague, Anselm Boëtius de Boodt (1550–1632): *"The snake stone, which is highly valued in Bohemia, is as thick as the little finger of a six-year-old boy and has a hole in the middle into which such a finger can be inserted. It is dark saffron in colour and has eyes that look just like a living thing on the outside, except that the irises in them are sky blue. The Czechs believe that many snakes participate in their creation, each of which creates one eye. This is why they call it a "duchanek" as a spirit or breath stone"*. Boëthius explains that it is not a stone but glass beads and his testimony is an important historical proof of the findings of these beads in Bohemia already in his time. These yellow beads with blue-white eyes are found in many archaeological sites of the Czech Republic from the Iron period (Čižmářová, in press), (fig. 9).

Fig. 9. *Lapis anguinum* – "Duchánek": Yellow glass beads with blue-white eyes, which, according to the testimony of Boëtius de Boodt (1609), were considered snakes in Czech folklore, Moravia.

Obr. 9. *Lapis anguinum* – "Duchánek" Žluté skleněné korálky s modrobílými oky, které byly dle svědectví Boëta de Boodt (1609) pokládány v českém folkloru za hady, Morava.

Comment: The serpent, or snake, is one of the oldest and most widespread mythological symbols. Several fossils and rocks were associated with snakes in the original written sources: Snake Stone (ammonite, glass beads, serpentinite), Snake Egg (fossil urchins), Snake Eyes (sparid teeth), snake tongue (shark teeth).

SUMMARY

Button-like teeth from the Cabinet of curiosities of the Strahov Monastery in Prague and the Imperial collection in Vienna belong to two different systematic groups – the extinct Mesozoic genus *Scheenstia* and the Tertiary genus *Pagrus*. The teeth of the genus *Scheenstia* (mainly of the species *S. maximus*) have been believed since the Middle Ages to be toadstones formed in the heads of old toads. The tradition of this myth was spread mainly in Western Europe, where the most preserved artefacts are found. Two *Scheenstia* teeth from the Strahov Monastery resemble in colour to teeth from English localities near Oxford. The provenance of the 3rd dark grey tooth is difficult to determine. Both teeth of *Scheenstia* from the Imperial collection in Vienna are comparable in colour, lustre and smooth surface to teeth from Štramberk (Czech Republic) or Falkenstein (Austria).

In contrast, the teeth of the genus *Pagrus* (mainly of the species *P. cinctus*) were believed to be snake eyes and the tradition of this folklore is originally associated only with Malta, hence their Latin name *oculi serpentum melitenses*. Both collections most likely represent objects of collector's interest in curiosities of the late 18th and 19th centuries. In the case of the Strahov set, some of the teeth bear traces of adjustment and could have been used on some art object.

It cannot be said with certainty that all *Pagrus cinctus* teeth analyzed in this article come from Malta (see discussion). A detailed comparative analysis of the teeth using non-destructive techniques e.g. Raman spectrometry could help determine their provenance.

SOUHRN

Knoflíkové zuby z kabinetu kuriozit Strahovského kláštera v Praze a původní císařské sbírky ve Vídni patří dvěma rozdílným systematickým skupinám – vyhynulému druhohornímu rodu *Scheenstia* a terciérnímu rodu *Pagrus*. Zuby rodu *Scheenstia* (především druhu *S. maximus* byly pokládány od středověku za ropuší kameny vznikající v hlavách starých ropuch. Tradice tohoto mýtu byla rozšířena především v západní Evropě, kde se nachází nejvíce dochovaných artefaktů. Dva zuby rodu *Scheenstia* ze Strahovského kláštera se barvou podobají exemplářům z anglických lokalit okolí Oxfordu. Provenience třetího tmavého zubu nelze s přesností určit. Oba zuby z císařské sbírky jsou barevností podobné exemplářům z locality Štramberk (Česká republika) nebo Falkenstein (Rakousko). Naproti tomu zuby rodu *Pagrus* byly pokládány za hadí oči a tradice tohoto folkloru je původně spojena pouze s Maltou, odtud je i jejich latinský název *oculi serpentum melitenses*. Obě kolekce představují s největší pravděpodobností předměty sběratelského zájmu o kuriozity konce 18. a začátku 19. století. V případě strahovského souboru nesou některé zuby stopy po adjustaci a mohly být použity na nějakém uměleckém předmětu. Nelze z určitostí tvrdit, že všechny zuby *Pagrus cinctus* analyzované v tomto článku pocházejí z Malty (viz diskuze). Podrobná srovnávací analýza zubů pomocí nedestruktivních technik např. Ramanovy spectrometrie by mohla pomoci určit jejich provenienci.

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