Jewellery History Today

Issue 8 · Spring 2010
ISSN 2041-704

The magazine of The Society of Jewellery Historians

The Toadstone – a rather unlikely jewel

By Christopher J. Duffin

Fabled as being formed in the heads of old toads, this gem has a complex associated folklore. In reality, it is a fossilised fish tooth. The dome-like, hemispherical structure is an ideal shape for a cabochon suitable for setting in rings or amulets.

'No need to ask if the crown was set with precious stones. Topaz and toadstones were set in the diamante along with other various stones, amongst which the ugliest one was the most famous.'

Ugly, it might be, but when Huon de Méry, a monk of St. Germain des Prés (now in Paris), wrote these words in his 'The Tournament of Antichrist' around 1226, the toadstone enjoyed a popularity that was to extend well into late Renaissance times. In 1648, for example, Herrick described the walls of Oberon's Palace as being 'enchequered with brownest Toadstones', whilst Rabelais cited a thumb ring which consisted of 'a thick broad silver hoop, wherein was set a good large toad-stone' in his Pantagruel (1532-1535).

The Legend

The 2nd century Kyranides cites the belief that an 'earth toad' possesses a stone 'in the marrow of its head'[1]. This recalls the soliloquy of Duke Frederick in Shakespeare's 'As You like It': 'The toad, ugly and venomous, Wears yet a precious jewel in his head.' According to Kyranides, the stone was to be collected whilst the moon was waning, and kept on a linen cloth for forty days.

Around 1262, Albertus Magnus, the Dominican friar from Cologne, recommended collection whilst the animal was 'still alive and quivering'[2]. The English cleric, Edward Topsell, indicated in 1658 that the living toad should be placed upon a sheet of red cloth. On coughing up the stone, the specimen should be secreted into a pot through a hole in the cloth, before the toad could gulp it back down again[3]. Indeed, the fact that a toad might lunge toward the stone was a means of discriminating true specimens from fakes. This means of procurement is beautifully illustrated in a woodcut from Johannes De Cuba's 'Hortus Sanitatis', 1473 (cover). Anselm Boetius de Boodt (1609), in true scientific manner, set out to test this hypothesis. Seating an old toad on a red cloth as specified, and watching the creature all night, he was disappointed when no stone was ejected however, and 'became convinced all the tales concerning this stone were merely fond imaginings'[4].

Thomas Lupton had another approach. In 1627 he suggested burying the dead toad in an ants' nest, having first placed the animal into an earthenware pot. The ants would then eat the flesh of the toad, leaving the skeleton and, of course, the toadstone, for later collection[5].

True identity

Conrad Gesner gave the first pictorial representation of toadstones in his De Rerum Fossilium, Lapidum et Gemmarum of 1565, the same year as his death from the plague. The first person to appreciate the true nature of the toadstone was the Sicilian painter, Agostino Scilla (1629-1700). He found small fossilised fish teeth, referred to locally as 'Occhi di serpe' or 'serpent's eyes' in the Tertiary rocks on Malta and noted their similarity to the crushing teeth of the Wolf Fish, Anarhichas lupus. At 2m long, this is the largest of the living blennies. To emphasise the similarity and defend his thesis that these were fossilised teeth, rather than 'sports of nature', Scilla illustrated the modern and fossil remains next to each other in the same plate (fig 1)[6].

Extant toadstone rings contain gems that are brownish grey in colour and measure up to 1.5cm in diameter. For the most part, these are the teeth of the predominantly late Jurassic fish, Lepidotus maximus, found throughout north west Europe; spectacular fully articulated fishes have been recovered from the lithographic limestones of southern Germany. Figure 2 shows one such specimen. Isolated toadstones could have been collected as chance finds from marls, clays and limestones, while articulated dentitions could yield up to one hundred specimens, many of which would have been large enough to set in rings.

Uses of the stone

The use of the toadstone is an excellent example of *similia similibus curantur* – 'like cures like'. Frogs and toads produce toxins from specialised glands located beneath the skin. The stones supposedly derived from these animals were therefore employed to treat all manner of poisons by sympathetic magic[7]. Albertus Magnus

Fig 1. Teeth of the extant Atlantic Wolf Fish, Anarhichas lupus, Linnaeus, 1758. Reproduced from Scilla (1724, pl. II). Fig V in the plate depicts toadstones.'

recommended swallowing unmounted stones 'to cleanse the bowels of filth and excrements'; the specimen could then later be retrieved – a unique example of a recyclable medicine! Set in rings, the toadstone was believed to actively sweat in the presence of poison, which, if in contact with the skin, might also be accompanied by a burning sensation. Bites of snakes, insects, spiders and rats could all be healed by touching the stone against the place of injury. Internal poisons due to humoral imbalance could also be treated with toadstones; it is recorded as being useful in cases of tumours, biliousness, fevers, sores, tuberculosis (scrofula), diarrhoea, epilepsy and even plague. Sir Walter Scott (1771-1832) records that his mother's specimen, now displayed at Abbotsford House, was often borrowed in order to offer protection for newborn children and their mothers from the power of the fairies.

Specimens

The toadstone was obviously a highly prized gem. Listed in inventories for, amongst others, Jean, Duc de Berry (1340-1416); Philip the Good, Duke of Burgundy (1396-1467); and Louis, Count of Anjou (1339-1384), it is also amongst the goods specified in a number of wills. The Middlesex Session Rolls record burglaries in 1652 and 1653 in which gold toadstone rings, valued at 15 shillings apiece, were amongst the booty.

Many specimens, set in either silver or gold mounts, are known to be extant in museum collections, and a number of unmounted specimens form part of the Cheapside Hoard (Museum of London). Whilst a single bezel is the norm, one specimen in the Ashmolean Museum (F.691, Fortnum Collection) has a double bezel. The toadstone is usually the only gem in the piece, but in a specimen at Salisbury, it is flanked by a pair of smaller pieces of red coral. The bezel is usually rubbed-over so as to clasp the stone, with a simple decoration surrounding it (fig 3). The back of the bezel may be either open or closed. In one spectacular specimen (AF.1023, British Museum), the gold bezel and hoop are heavily chased, with a lombardic inscription against paroxysmal fits inscribed on the inner surface of the hoop. Rather more unusual occurrences of the gem include 'a toad stone in a silver shield' left on the death in 1364 of Jean le Bon, King of France, and specimens used in the base of a terra sigillata contra-veleno cup. A 16th century locket found in a graveyard at Devizes, Wiltshire, consists of two toadstones placed back to back and bound by a silver hoop; the keyhole passes through one of the stones.

All in all, a toadstone was a valuable asset, combining a gem that could be mounted with the minimum of preparation with many supposed medical benefits.

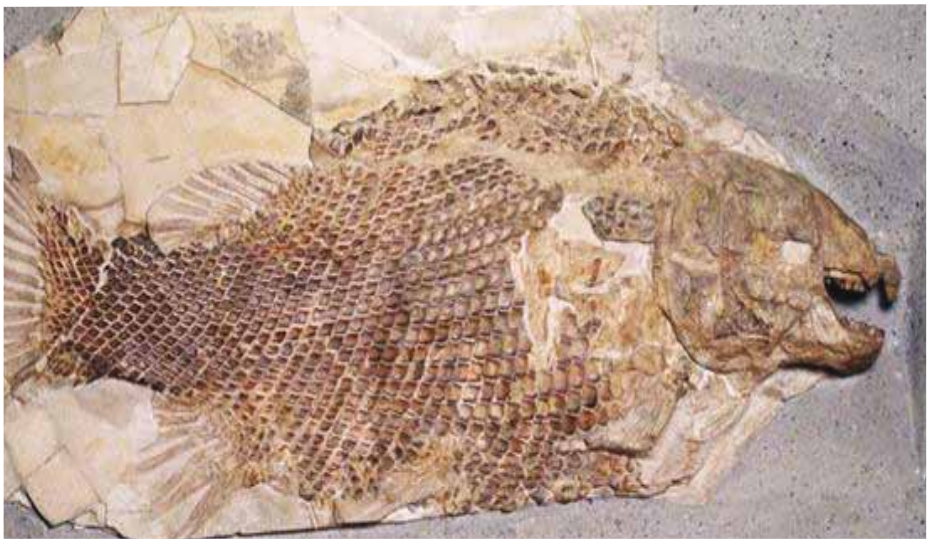

Fig 2. Lepidotus maximus (SMF P 325) from the Plattenkalk (Tithonian, Late Jurassic) of Langenaltheim, Germany. Whole specimen in right lateral view. (Courtesy of the Forschungsinstitut Senckenberg, Frankfurt/Main).

Fig 3. 15th century silver gilt toadstone ring (AF.1025) in the collection of the British Museum. Copyright Trustees of the British Museum.

Following a geology degree, Dr Chris Duffin gained a PhD in Vertebrate Palaeontology and Comparative Anatomy at University College London in 1980. He has published over 100 palaeontological papers and contributions to books, mostly on fossil fishes, and is co-author of the forthcoming Palaeozoic sharks volume of the Handbook of Palaeoichthyology to be published by Dr Freidrich Pfeil Verlag. He is currently researching the folklore of fossils, particularly their use in folk medicine from classical to early modern times. Working as a school teacher, he is Head of Biology, Head of Critical Thinking, and Deputy Head of Sixth Form at Streatham and Clapham High School.

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