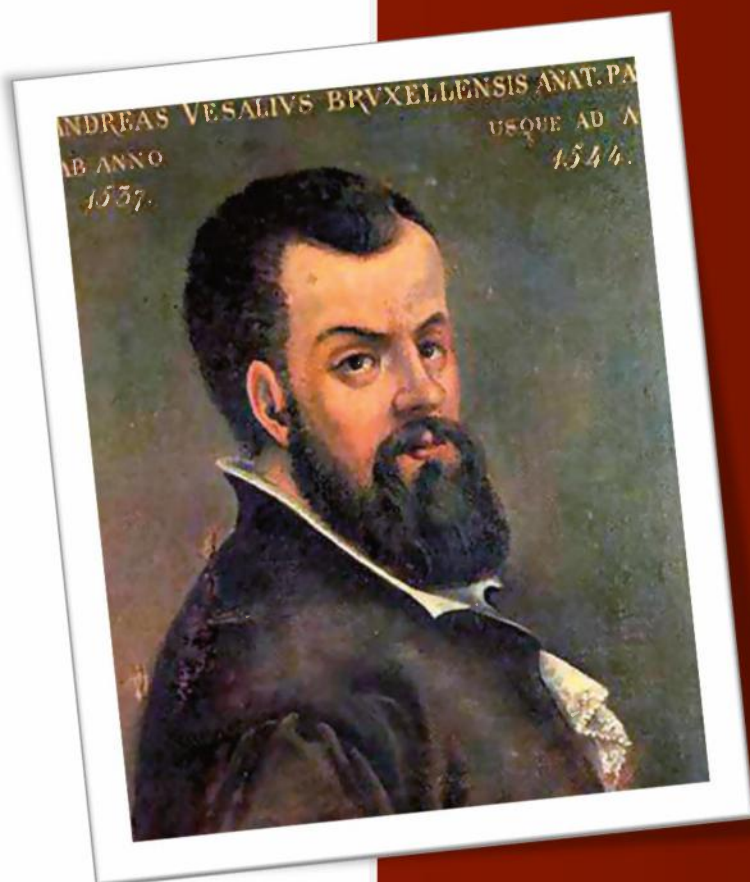




# Vesalius

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Robrecht (Bob) Van Hee

Amulets are a crucial part of preserving health and personal well-being in ancient cultures, standing as an instinctive way to ward off everyday problems. Beneficial empirical observation in the medicinal use of stones and gems should also be considered, magic and empiric experience forming the forefront of medical primitive prevention and cure:

*"Two conceptual lines may be understood in ancient lapidaries: a magic approach not based on rational assumptions and empirical approach, closer to the premises of scientific interpretation of the world. We know more about magic; we are comparatively ignorant of the early course of the development of the belief in the properties of gems apart from their talismanic use and astrological significance."* (Evans 1976, 14-15).

### **Cure by touch**

Cure by touch figures early in ancient written Akkadian texts, belonging to the earliest attested Semitic language, written during the Akkadian Empire (c. 2334-2154 BC), testifying the belief in evil touch and evil eye as causing diseases (Lenormant, 1874, p. 5). Healing touch emerges as a cure. Akkadic and Chaldean magic (neo Aramaic language spoken between the ninth and the sixth century BC) persisted and survived in popular and pagan rites in Middle Ages despite Christianity (Lenormant, 1874, p. 69).

Peter of Spain, born between 1210 and 1215, in Lisbon, was a philosopher, a physician, a Pope, and a leading figure in Portuguese and European medicine. He was educated in Lisbon and Léon (Spain), and at the Universities of Montpellier and Salerno. He taught medicine and philosophy at the University of Paris and Siena, was Physician to The Count of Lavagna, later Pope Hadrian V, and Physician to Pope Gregory X. In 1276 he became Pope with the name John XXI and died eight months later in Viterbo (Schipperges, 1994, pp. 5-8).

His most outstanding medical work, *Thesaurus Pauperum*, was trendy and stands as one of the most important for the history of receipt collections in the Middle Ages (Hunt, 1990, p. 16). More than seventy manuscripts are extant. The Codex 1877, dating from the thirteenth century, housed in the Madrid National Library, is the most extensive manuscript version, with the title *Petri Hispani opera Medica*, and possible edition from the seventeenth century. It was printed in Latin and translated into Spanish, Italian, Portuguese, English and German (Schipperges, 1994, p. 12).

For this article, we used the edition translated by the Portuguese classicist, Maria Helena da Rocha Pereira (1925-2017), who compared seventy manuscripts and chose the manuscript 2235 from the Sainte-Geneviève Library and the manuscript Pal. Lat. 1259 from the Vatican Apostolic Library, dated from the fourteenth century, collecting the most significant number of receipts (Hispanus, 2011, VIII). Five receipts from Peter of Spain's Treasury of the Poor taken from *Lapidarius* mention the virtues of five stones. This article aims to identify the *Lapidarius* and the sources of the receipts signed with this name.

## Medieval lapidaries

Medieval lapidaries continued the ancient traditions of precious stones, mainly by repeating the ideas presented in ancient works (Schuh 2007, 42). Peter of Spain gives receipts from previous sources. Lynn Thorndike has summarized the cited authors, the *Lapidarius* figuring as a source known to the contemporaries, but unknown to us:

*Among his authorities, Peter makes much use of recent works and writers, such as Constantinus Africanus, and Platearius and the 'Antidotarium' of Nicholaus, Walter and Richard and Roger, 'Experimentator' and 'Lapidarius' and 'Liber de natura rerum', Gilbert of England and Albertus Magnus. He, of course, utilizes such Hebrew and Arabic medical writers as Isaac, Rasis, Haly, and Avicenna. It is worth noting as a hint of the superstitious character of parts of his work that he cites the Kiranides a good deal, Galen, and "Dyascorides" — often pseudo, Pliny and Esculapius, are of course not forgotten. (Thorndike, 1923, pp. 495-496).*

In the eleventh century Marbode (1035-1123), Bishop of Rennes wrote a lapidary in verse, *De Lapidibus*, describing the physical, magical and medicinal virtues of stones (Riddle, 1977, pp. 1-22). This poem is preserved in a high number of manuscripts. There are nearly forty in English public collections, and more than a hundred are known in continental libraries. (Studer & Evans, 1924, p. XIII), the sources being the *Damigeron-Evax* lapidaries and Isidore (or Saint Isidore) of Sevilla (560-636 AD). The *Damigeron-Evax* lapidaries are part of the *Greek Lapidaries* which include *Kérygmes*, *Lapidaries of Orpheus*, *Socrates and Denys*, and the *Nautical Lapidary* (Halleux & Schamp 1985). The name *Damigeron* appears as belonging to a magician who lived around the first century A.D. The Latin translation occurred in the fifth century (Rose, 1875, pp. 471-91).

This work was the great lapidary in the time of Peter of Spain and the most credible source for the *Lapidarius*. The Anglo-Norman Lapidaries, a collection of complete or fragmentary manuscripts of thirteen lapidaries are later versions of Marbode's *De Lapidibus*. Three types of mediaeval lapidaries: mineralogical, symbolic and astrological are represented in this collection of manuscripts, written in prose and poetry between the first half of the twelfth century and the thirteenth century. The oldest, in poetry, the *First French Version of the Marbode Lapidary*, was written before 1150. The medical prose lapidaries emphasized the medicinal qualities of the stones (Studer/Evans 1924, 262).

## Receipts from *Lapidarius*

Five receipts taken from Lapidary refer to five stones, the emerald figuring in two receipts. Peter of Spain mentions two other sources for the Chelidonium receipt that will not be part of this study. For the other receipts, the *Lapidarius* is the only source.

1. Chelidonium
2. Sapphire
3. Emerald (2 receipts)
4. Jasper
5. Topaz

## 1. Chelidonium

Chelidonium or swallow stone is a fabulous stone, mentioned by Plinius the Elder (23-79 AD) in a book on remedies used by the magicians in the treatment of epilepsy:

“a little stone, taken from a swallows’ nest and laid on the patient, is said to give immediate relief and worn as a permanent amulet protection” (Henderson, 1963, Pliny NH, Book XXX Chapter XXVII, p. 337).

The British geologist Christopher John Duffin identified the possible real stones that could correspond to the swallow stone:

“Specimens of the swallow stone (Chelidonium) include small clasts of agate, gastropod opercula (calcareous lids sealing the apertures of snails), crayfish gastroliths (paired calcareous concretions in the stomach), and possibly fossil fish teeth and larger foraminiferans (a type of unicellular organism).” (Duffin 2013, pp. 81-103).

Hispanus advises Chelidonium or swallow stone for ‘maniacs’ and ‘lunatics’.

<p>Item lapis celidonium rufus portatus ligatus in panno lineo, positus sub asella sinistra, maniacos et lunaticus sanat. Dyascorides, Gilbertus et <i>Lapidarius</i>.</p>	<p>Item bringing a Chelidonian stone tied to a linen cloth and placed below the left armpit cures maniacs and lunatics, Dioscorides, Gilbert and <i>Lapidarius</i>.</p>
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Hispanus, *Thesaurus Pauperum* VII, 64 in Baptista, 2001, pp. 62- 63. (Note: In this edition *calidonium lapis* is incorrectly translated as *red celandine* (an herbal seed).

The *Damigeron-Évax* lapidary, Marbode’s source, reports on the swallow stones:

“We find the chelidonia stone in the swallow’s entrails. There are two kinds, black and red. Take the swallows (the best being the ones you pick in the nest), open up their belly and take the stones. They will be useful: the red one will cure the lunatics, the fools and the languishing. Do the following: take a piece of linen, wrap the stone in it and put it around the patient’s left arm, and he will get cured three days later. Besides, it turns enjoyable, gentle, eloquent and competent those who carry it.” (Halleux & Schamp, 1985, p. 246).

The back swallow stones have other features and indications. The Marbode’s lapidary provides a similar indication, identifying Peter of Spains’ source.

<p>At chelidonium lapis est, quem gignit hirundo, Ventre gerens pretium quo digna sit ipsa necari. Nec de fulgentum numero lapis iste</p>	<p>The rapid swallow swifter than the airs Within her breast the Chelidonian bears, A fatal gift, deep in her bowels pent, Which with her life is from the owner</p>
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putentur.  
 Parvus et informis, sed nulli viribus  
 impar,  
 Preclaros quosdam lapides preit  
 utilitate.  
 Huius sunt binaespecies geminique  
 coloreres;  
 Nam niger et rufus caeso de ventre  
 trahuntur.  
 Cedit gestato lunática passio rufo.  
 Curat et insanos, et languores  
 diuturnos.  
 Facundos facit et gratos, multisque  
 placentes.  
 Ex lino facto decet nunc involvere  
 panno,  
 Et sic in chela clausum portare  
 sinistra.

rent.  
 The Chelidonian is of might supreme,  
 Though not of those which shoot a  
 brilliant gleam:  
 Yet many a gem that men for beauty  
 praise,  
 Unshapen, small, and dull, its worth  
 outweighs.  
 The feather 'd victims in their bowls  
 stored  
 Two different sorts – the white and red  
 – afford:  
 The pining sickness feels their influence  
 mild,  
 The moonstruck idiot, and the maniac  
 wild.

Riddle, 1977, pp. 54-55.

An illustration from the *Hortus Sanitatis* shows the stone taken from the belly a  
 swallow that seems to be alive, another swallow lying dead after the extraction on the  
 floor (Prüss, 1499, unpaginated). (Figure 1)



Fig. 1 Chelidonium or swallow stone. Ortus Sanitatis

## 2. Sapphire

Sapphire, a variety of an aluminium oxide mineral corundum, in ancient times and the Middle Ages, was an opaque stone, corresponding to lapis-lazuli. The gem as we know figures in medieval Arabic lapidaries as blue jacinth (jakut). It was highly valued since its transparency resembled the sky (Lüschen, 1979, pp. 309-310). (Figure 2)



Fig. 2 Raw sapphire. Author´s collection. Credit: Ivo Miguel Barroso

To touch a sapphire (and an emerald) is said to cure eye pain in the “Treasury of the Poor”.

<p>De dolore oculorum Item saphirus et smaragdus oculos quos sepe tangunt sanat. <i>Lapidarius.</i></p>	<p>Eye pain Item sapphire and emerald cure eyes that are touched by them many times. <i>Lapidarius.</i></p>
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Hispanus, *Tesaurus Pauperum*, VIII, 37 in Baptista, 2001, p. 72-73.

In another receipt, sapphire figures for paralysis of the tongue.

<p>De paralisi lingue Item si lingua infletur superduc saphirum electrum, quo tumorem soluit. <i>Lapidarius.</i></p>	<p>Paralysis of the tongue Item if the tongue is swollen, pass a selected sapphire over it, as this gets rid of the tumour. <i>Lapidarius.</i></p>
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Hispanus, *Thesaurus Pauperum*, XIII, 7 in Baptista, 2001, 7, pp. 130-13.

Marbode's lapidary is the credible source for both receipts by Peter of Spain, stating the cure for eye pain and tongue paralysis.

<p>Sapphiri species digitis aptissima regum,                  Egregium fulgens, puroque simillima coelo,                  Vilior esr nullo virtibus atque decore.                  Hic et Sirtitis lapis Lybicus permixtus arenis,                  Fluctibus expulsus, fervent fretore reperitur.                  Ille sed optimus est, quem tellus medica gignit.                  Qui tamen assertitur nunquam transmitter visum,                  Quem natura potens tanto ditavit honore,                  Ut sacer et merito gemmarum gemma vocetur;                  (...)                  Tollit et ex oculis sordes, ex fronte dolorem;</p>	<p>Fit only for the hands [fingers] of kings to wear,                  With purest azure shines the Sapphire rare:                  For worth and beauty chief of gems proclaimed,                  And by the vulgar oft Syrtitis named.                  Oft in the Syrtis midst their shifting sand                  Cast by the boiling deep on Lybian sand;                  The best sort that Media's mines supply,                  Opaque colour which excludes the eye.                  (...)                  Relieves the aching brow when wracked in pain                  And bids the tongue its wonted vigour gain,</p>
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Riddle, 1977, pp. 42-43.

Sapphire, described as opaque in Marbode's lapidary, was lapis lazuli, a blue opaque aggregate of sodalite minerals (Riddle, 1977, p. 41).

### 3. Emerald

Emerald holds prominence. According to Saint Isidore of Seville:

"The *smaragdus* is named from its extreme greenness, for everything that is very green is called 'bitter' (*amarus*). No gem or plant possesses greater intensity than the *smaragdus*; it exceeds green plants and leaves and imbues the reflected air around it with greenness. Nothing is more soothing for the eyes of gem cutters than this refreshing green. If its surface is broad, it reflects images like a mirror. Indeed the Emperor Nero used to watch gladiator matches using a *smaragdus*." (Barney, 2006, p. 322; Isidore, *Etymologies*, Book XVI, Chapter vii).

The gem, *smaragdus* in Latin, is a variety of beryl rich in chromium, often confused with green copper minerals in Antiquity. Its green colour was credited as benefiting the eyesight (Lüschen, 1979, pp. 320-321). (Figure 3)





Fig. 3 Raw emerald. Author’s collection. Credit: Ivo Miguel Barroso

Hispanus’ receipt concerning the emerald in the treatment of eye pain does not figure in Marbode’s lapidary. Emerald is credited as good for sight in the *Second Prose Lapidary*: “Elle amende les yeux de celui qui la porte” (It ameliorates the eyes of those who carry it.” (Studer & Evans, 1924, p. 121). The English Medieval lapidaries, continuing the Marbode and Anglo-Norman lapidaries also do not provide this indication (Evans & Serjeantson, 1933). Konrad von Megenberg (1309-1374), a German catholic scholar who wrote the first German book on Nature (*Das Buch der Natur*), stated that emerald, the best of which was transparent was good in fortifying the eyes and clearing sight, not mentioning eye pain (Megenberg, 1861, p. 459).

#### 4. Jasper

Jasper is an aggregate of microgranular quartz, or according to Lüschen, unpurified chalcedony (Lüschen, 1979, p. 244). Plinius describes a stone called ‘iaspis’ and a variety resembling the emerald, but having other colours. The varieties called ‘spragides’ or ‘signets’ being “excellent for sealing documents”. However, all the peoples of the East are said to wear them as amulets. (Pliny, NH, Book XXXVII, Chapter XXXVII, in Henderson, pp. 257-261). He refers to no specific medical use. Peter of Spain indicates it in the treatment of epistaxis (nasal haemorrhages).

<p>De fluxu sanguinis narium Item lapis jaspis portatus et applicatus retinet. <i>Lapidarius</i>.</p>	<p>On nasal haemorrhage Item bringing and apply a jasper stone staunches. <i>Lapidarius</i>.</p>
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Hispanus, *Thesaurus Pauperum*, VII, 10 in Baptista, 2001, pp. 122-123.

Jasper figures in Marbode’s Lapidary for with several indications but not for staunching haemorrhages. In Marbode’s lapidary, jasper does not figure with this

indication (Riddle, 1977, p. 40-41). Peter of Spain might refer to the heliotrope, dark-green chalcedony with red spots that "stops the flux of blood and expels poisons" (Riddle, 1977, pp. 67-68). (Figure 4)



Fig. 4 Heliotropos (Bloodjasper). Credit: GNU Free Documentation License

This therapeutic indication figures in the *Second Prose Lapidary* for staunching haemorrhages. Although the colour in the *Treasury of the Poor* is not mentioned, we may presume that it could be the heliotrope, acting by sympathetic magic on blood, because it has the same colour:

*Jaspis De Jaspe*

<p>Jaspes sunt de nef maneres, eles sunt de moutes culurs et sunt troveez en meintes parties del secle; mes cele est la meudre ky est verz cum esmeraude cuntre le jur, mes ele est de plus grasse verdur. E quant ele est entailé de la veyle entaile et ele ad gutes vermeyles, ele est de haute vertu. Ki chastement la porte, ele garde homme de feveres et d'ydropsie. Ele ayde a femme ki enfaunte, et defend celuy de cuntraire ky la porte, et fet homme estre amé et puissaunt. Ele debute fantasmes nuysaunz; ele estaunche de sanc et de meneysun. Sa vertu est greingnur en argent k'en autre metal. Jaspe sue encuntre venim.</p>	<p>There are nine kinds of jasper, many colours, found in many places of the earth; but the best is green like the emerald in the sunlight, but it is more deep green. Moreover, when it is carved, cut in its shaft, it has red drops, it is of excellent virtue. When carried with chastity, it will keep fevers and hydrops away. It helps the childbearing woman and defends from misfortune the one who carries it, making him be loved and powerful. It keeps nightmares away; staunches blood and gives health. Its virtue in bringing money is higher than any other. Jasper is against the venom.</p>
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*Second Prose Lapidary*, IV, Studer & Evans, 1924, p. 122.

## 5. Topaz

Plinius explains the word topaz as deriving from an island with the same name, Topazos, in the Red Sea. He describes two varieties, a green stone, peridot, a 'prasoid' or 'leek-like', and the 'chrysopteros', or 'golden-feathered', resembling the 'chrisoprasus'.



Fig. 5 Topaz. Author's collection. Credit: Ivo Miguel Barroso

Pliny does not mention any medicinal use of the varieties described (Pliny, NH, Book XXXVII, Chapter XXXII, in Henderson, pp. 251-253). In medieval lapidaries, the topaz, a fluor aluminium silicate mineral, appears as a yellow gem (Lüschen, 1979, p. 320). In the "treasury of the Poor", topaz comes up to suffocate the erotic desire.

De suffocation libidinis Item lapis topazius generat castitatem et reprimitt uenerem. <i>Lapidarius.</i>	Suffocating the erotic desire Item topaz stone generates chastity repressing Venus. <i>Lapidarius.</i>
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Hispanus, *Thesaurus Pauperum*, XXXVIII, 25 in Baptista, 2001, XXXVIII, 25, pp. 264-265.

In Marbode's lapidary, it is a 'pure gold' or 'orange bright' gem, mainly used to 'relive under haemorrhoids groan' (Riddle, 1977, pp. 51) (Figure 8) Hispanus' indication does not figure among its properties. This therapeutic indication figures in the *Second Prose Lapidary*.

VI. <i>Topazium De Topace</i> Topace vent d'Árabe del flum de orient, e si en ad de deus maneres et sunt semblables a or esmeré; et l'une	VI. Topaz. On Topaz The topaz comes from an Oriental river, and it has two varieties similar to pure gold, one being lighter than
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est plus clere de l'autre. Ele vaut mult a une maladie ki l'em apele fi, et si sent la lune; kar quant la luneysun deit estre pleveuse la pere est relente et plus truble, mes kaunt il deit fere bel tens, ele est clere et relusanunte. Ele refreidit homme et le rend plus chaste et meins luxurius. Ele deit ser en or.

the other. It is most valuable in a disease so-called when someone feels the moon; for when the lunation must be rainy, the stone is softer and turbid, but when the weather is better, it becomes bright and clear. It refrains men and renders them more chaste and less luxurious.

*Second Prose Lapidary, VI, Studer & Evans, 1924, p. 123.*

## Conclusion

Two receipts of two stones: chelidonium and sapphire from the *Lapidarius* in Peter of Spain's *Treasury of the Poor* figure in Marbode's lapidary. The properties of the jasper and topaz figure in the *Second Prose Lapidary* of the *Anglo-Normand Lapidaries*. Just the indication for the emerald was found neither in the Marbode's nor in later lapidaries. This identification confirms the *Lapidarium* as Marbode's and the Anglo-Normand lapidaries. The stones act by being touched, presenting men craving for the cure by sharing the immortal soul of the stones, as stated insightfully in the *Lapidaire Orphique*:

« the black earth, Mother of the serpents, but also the antidotes. All kinds of stones come from the earth, carrying an infinite and diverse power; plants have high vigour, but the vigour of a stone is higher because its mother has endowed it with a soul that touches neither death nor old age. (Halleux Schamp, 2003, p. 104).

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