

ORPHIC LITHICA AS A SOURCE OF LATE ANTIQUITY MINERALOGICAL KNOWLEDGE

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ABSTRACT. The *Orphic Lithica* of Pseudo-Orpheus is dated most probably from the IV c. AD and is considered as an example of the Late Antiquity lapidary treatises describing the magical and therapeutic properties of about 30 'stones' (minerals, varieties, aggregates and rocks). Based on an English translation from 1865, a contemporary from mineralogical point of view interpretation of their possible identification has been listed and discussed.

ОРФИЧЕСКАТА ЛИТИКА КАТО ИЗВОР НА КЪСНОАНТИЧНОТО МИНЕРАЛОГИЧНО ЗНАНИЕ

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РЕЗЮМЕ. Орфическата Литика на Псевдо-Орфей се датира най-вероятно от IV век и се разглежда като пример на късноантичните лапидарски трактати, описващи магичните и терапевтичните свойства на около 30 "камъка" (минерали, разновидности, агрегати и скали). Базирана на английския превод от 1865 г., е направена и дискутирана интерпретация от съвременна минералогична точка на тяхната идентификация.

Probably the latest published English translation of the so called *Orphic Lithica* is to be found in the first edition of the classical work of C. W. King from 1865 "*Natural History, Ancient and Modern of Precious Stones and Gems and of Precious Metals*" (London, Bell and Daldy, Cambridge, Deighton, Bell and Co., 442 p.). In this treatise on gemmology, the translation has been added as an application "*Orpheus on Gems*" (King, 1865, 375-396), with a list of the described in the poem 'stones' and notes on its possible authorship. In the next editions of the work of C. W. King this application has been omitted. It has been declared that the text is strongly spoiled and in it have not been included the remarks by Gesner and Tyrwhit (for a commentary on the different aspects of the text compare Giangrande, 1989; 1992; Rebbufat, 1995; Livrea, 1998; 1999). In the present work attention has been paid on the probable or possible better identification of the different 'stones' from a contemporary point of view and knowledge on historical development of the ancient mineralogy. The names of the minerals have been compared with those from the early XIX century Greek edition (*Orphica*, 1805; the numbers of quotations are for paragraphs in the poem as they do not correspond to such in other translations).

This work, which is attributed to the Alexandrine tradition, is known in several late Medieval Greek and Latin editions, as well as translations in other languages in the XIX century. From the end of the XIX century is the most cited edition of *Orphic Lithica* edited by E. Abel with the corresponding epitomes (*Orphei Lithica*, 1881; *Orpheos Lithika Kerigmata*, 1881; de Mély, 1898, 160-173; *Orphei Lithica*, 1971; *Lithica*, 2005). During the XX century the poem has been translated in

French (*Les lapidaires grecs*, 1985; reviewed by Vian, 1986; Scarborough, 1990), modern Greek (Giannakes, 1982; see Hopkinson, 1984; *Concordantia...*, 2005) and Russian (Semenov, Popov, 1997).

As representatives of ancient sources on "stones" ("minerals") in the broad sense on the word after Theophrastus (371-287 BC) with his work "On Stones" can be listed: Sotacus (V century or the beginning of III century BC, probably of Persian origin), Zoroaster (middle of the III century BC) with "On precious stones", Damigeron (probably before the I century) with "Book on stones" (revised in the V century), Pliny the Elder (23-79 AD) with the encyclopedia "Natural History" (the last 37 book of this work is related exclusively to precious and decorative stones), Xenocrates of Ephesus (I century) with "Lithognomon" and Dionysius Periegetes (end of the I – beginning of the II century) with "Description of the World". Data on minerals or metals can be found also in the work of Agatharchides of Cnidus (181-146 BC), in "Historical Library" of Diodorus of Agrigion (I century BC), in *De Rerum Natura* ("On the Nature of the Universe") by Lucretius Carus (99-55 BC), in the "Geography" and "On Mining Facilities" by Strabo (c. 63 BC – 20 AD), in "Natural History Questions" by Seneca (4 BC – 65 AD), in the fifth volume of *De Materia medica* by Pedanius Dioscorides (I century), in the *Lithica* of Socrates and Dyonisius (I-III century) and in *De mirabilibus mundi* (III century; during the Middle ages rewritten under the title "Polyhistor") by Solinus (c. Moore, 1859; Adams, 1938; *Les lapidaires grecs*, 1985; Kostov, 2003). In the fundamental for antiquity work of Pliny the Elder have been mentioned several other authors, cited in the paragraphs about minerals among

them: Sotacus (Persia), Sudines and Zenothemis, Nicander, Democritus, Zoroaster, Callistratus, Metrodorus (Persia), Zacharias of Babylon, Archeus, Yakh and Vokh, King Juba and Asarub (King, 1865, 3-4).

As related to the late Antiquity period and linked also to the Orphic tradition is the treatise "Cyranides" (book I; I or III-IV century) ascribed to Harpocration and Cyran, as well as to the mythical Hermes Trismegistus, and "On Rivers and Mountains" (first quarter of the III century) by Pseudo-Plutarch (de Mély, 1898; Evans, 1922; Adams, 1938). In this epoch has to find its place the poem *Lithica* (IV century) related to the mythical Orpheus.

In the Biblical tradition, the interpretation of gemstones in early Christian treatises can be found in the pioneer work of Epiphanius of Salamis (Cyprus; IV century), "Book on the 12 stones on the breastplate of Aaron" (on the symbolism of the twelve precious stones in different sources throughout the centuries see Kostov, 1994). The late antiquity lapidaries finish with the work of the discussed Damigeron, known in Latin, in which 50 minerals have been described with some of their properties and instructions for their use in glyptic art with corresponding image of symbol (*Orphei Lithica*, 1881; 1971, 161-195; *Les lapidaires grecs*, 1985).

The poem *Orphic Lithica* has been attributed to a Greek from the Asiatic territory from the second half of the IV century (Tyrwhit, cited by King, 1865; *Concordantia...*, 2005) or from the II century (*Les lapidaires grecs*, 1985; for the *Kerygmata* respectively II-XIV century). Most of the researchers of the text, for example Tyrwhit, based on the content, stylistic and composition peculiarities of the text suggest that the author has lived in the period between the time of emperor Constantius (306-337) and that of the emperor Valerian (c. 375-378). According other researchers (Hermann; Ruhnken – cited by Talfourd et al., 1851; Moore, 1859) the authorship has to be attributed to the epoch of emperor Domitianus (81-96 AD) and it has been accepted, that the *Lithica* is earlier in age than the *Orphic Hymns*. King (1865) thing that the poem is earlier than II century BC in age, because he finds some similarities in the work of Pliny the Elder "Natural History" (book XXXVII), related to the magical properties of stones, described by the magi. According this argument, it can be accepted also in a reverse manner – in the *Orphic Lithica* have been included some examples or quotations from the work of Pliny the Elder. The *Orphic Lithica* has been also attributed to Onomacritus (530-480 BC) (Talfourd, 1851, 11), and after Krause (in *Pyrgoteles*, 6) the work has to be dated from the V century BC. It has been even suggested that the poem has been used as an example for *Theriaca* of Nicander (King, 1865, 4). Probably for the first time the poem is linked to Orpheus in the XII century by Ioan Tzetzes in Byzantium (de Mély, 1898, xiv). It is better the author of the poem to be named as Pseudo-Orpheus.

In Antiquity, related to ancient mythological systems, are known different legends about unusual and magic stones, with their cosmogony attribution and astrosymbolism, with theogonic transformations and therapeutic influences (for the mythology-gemmology link see Kostov, 1993a; 1993b). In the *Orphic Lithica* in 774 Greek hexameters (in the edition of Abel from 1881; in the 1805 edition 768 hexameters) are described

some properties together with curative powers and magic characteristics of the following about 30 mineral substances (including minerals, rocks and bioobjects) or their synonyms and varieties (with sign ●; the *agate* is described in two places, and obviously the *galactites* must not to be used as a synonym of the *adamanta*) – in antiquity because of the weak scientific knowledge most species have been described only as some kind of "stones" (Table 1). The possible interpretation of the „stone" in given in a decreasing order of significance (for a more precise mineralogical nomenclature one can compare names and properties in textbooks of gemmology; see Kostov, 2003).

The story tells how the author Orpheus (in the case Pseudo-Orpheus) meets the sorcerer Theodamus (later by the Troy personage Helenus) on his way to the altar of the God of Sun (Helios), who teaches him the magic properties of stones. Most of the magic магически stones are devoted to Apollo-Helios, and not to Hermes, who is to be mentioned in the beginning of the poem. The cult to the Sun (Helios – Apollo) among the Thracians is recorded also by Sophocles in *Tereus*: "O, Helios – name, dear to the Thracian horsemen! O, glorious flame" (Harrison, 1991, 462).

In the poem are mentioned mainly as metaphors some of the most important metals and alloys known in antiquity: gold (golden scepter; golden bed; gold in the sense of jewel and power), silver (shining as silver), iron (iron souls; iron attracted by magnet), copper and bronze. Among the non-metallic mineral deposits as important is the white "gold" – salt (companion of food).

Crystal (170). The most probable interpretation of crystal is rock crystal, transparent non-coloured quartz. In the poem is mentioned the usage of crystal objects (formed as lenses or spheres) for igniting of fire (compare Pliny the Elder, 1991, HN, XXXVII, 9-10; Moore, 1859, 189-190; Kunz, 1913, 163; for the role of quartz and its varieties in humans culture during the centuries see Kostov, 1998).

There is an ancient legend that the transparent quartz is ice, which can not be melted again by the Sun, related to the etymology of "crystal" (in Greek – ice). In the *Iliad* of Homer we learn how in a cold night the shields of the soldiers have been covered by ice. The rock crystal and amethyst are mentioned in the first mineralogical Greek treatise of Theophrastus (Kostov, 2008).

There are evidences for quartz lenses in Ancient Egypt even in the Predynastic Period – IV mill. BC, and for concave lenses – from the time of the Minoan culture, II mill. BC (Temple, 2000; quartz crystal lenses have been found in Nimrod, Troy, Ephesus and Knossos; it has been suggested that the telescope has been known in the ancient world). According to the Pythagorean ideas, the 'Crystal Sun' can be accepted as a universe energy which is transformed by the star (as a lens) and reaching the Earth as light and heat.

Adamant (180). *Adamant* usually is translated as diamond, but even at the time of Pliny the Elder there is a doubt that the hardest mineral was known in the Mediterranean region as a result of trade contacts with India. It is accepted that that is some sort of hard mineral or rock, probably corundum or

emery. *Adamant* has been also used as synonym of the *Lethoan stone* (180). But in the next text it is attributed to a softer white or yellowish stone – *galactites* (milky stone) (180).

Galactites is mentioned in the works of Dioscorides and Pliny the Elder, because of the sweet juice one can obtain from it,

and related in certain case to another stone *melites* (c. Pliny the Elder, 1991, HN, XXXVII, 15, 59; Moore, 1859, 137-138). As an alternative opinion for interpretation of that stone is some kind of zeolite mineral (Mottana, 2005).

Table 1

'Stones' in *Orphic Lithica* and their possible interpretation (in italics – ancient names with unclear origin; ● – variety; synonym)

'Stone' (mineral, rock or biomineral object)	Interpretation	Paragraph
<i>Crystal</i>	Rock crystal; quartz	170
<i>Adamant</i>	Hard mineral – possibly corundum, but not diamond	180
● <i>Lethoan stone</i>	Hard mineral – possibly corundum	180
<i>Galactites</i> [<i>Milkstone</i>]	<i>Galactites</i>	180
<i>Petraces</i> [<i>Agate</i>]	Agate – colourful	230
● <i>Tree-stone</i> (<i>tree-agate</i>)	Agate – moss (dendrite)	230
<i>Staghorn</i>	Staghorn	240
<i>True stone</i>	<i>Bezoar</i> from the brain of a deer	240
<i>Barbarian stone</i>	Stone from Syria (agate?)	250
<i>Jasper</i>	Green jasper; serpentinite; nephrite	260; 600
<i>Lychnis</i>	<i>Crystal</i> ; amber; red mineral	270
<i>Peridot</i> [<i>Topazios</i>]	Glass-like mineral; chrysolite	280
<i>Opal</i>	Opal	280
<i>Opsian</i>	Soft and inflammable material	280
<i>Tears of pine</i>	Amber	280
<i>Mica-like stone</i> [<i>Talc</i>]	Talc; mica; chlorite	280
<i>Chrysolite</i> [<i>Chrysotrix</i>]	Quartz with inclusions of 'golden' rutile (sagenite; Venus hair; arrows of Cupid); sunstone; chrysolite	290
<i>Loadstone</i>	Magnetite	300
<i>Serpentine; Ophite</i>	Serpentinite ("snake stone", <i>exites</i>)	330; 340; 350; 450
● <i>Viper's</i>	-,-	340
<i>Ostrites</i>	Serpentinite; agate; see <i>orites</i>	340
<i>Siderites</i>	Meteorite; <i>exites</i> ; <i>draconites</i>	350; 410
● <i>Vocal stone</i>	Meteorite	350
<i>Orites</i>	See <i>siderites</i> ; <i>mountain stone</i>	450
<i>Jet</i>	Jet; coal; bituminous schist	470
<i>Scorpion's stone</i>	Similar in form or colour stone	480; 490
<i>Coral</i>	Red (noble) coral	500
<i>Agate</i>	Agate	600; 630
● <i>Leontoseras</i>	Agate ("eye"-agate)	610
<i>Emerald</i>	Green mineral or rock; malachite; green beryl (emerald)	600
<i>Sardian</i>	Carnelian or sarder (red to brown chalcedony)	600
<i>Bloodstone</i>	Hematite; heliotrope	640-650
<i>Liparean stone</i>	<i>Lipareon</i> ; obsidian (volcanic glass)	680
<i>Nebrites</i>	Amethyst; agate; nephrite; serpentinite; green jasper	740
<i>Prase</i>	Prase (green jasper); chrysoprase	750
<i>Chalazias</i>	Hard mineral; rounded pebbles of quartz composition	750

Petraces (230). The *petraces* (from Greek – "stone") has been translated as a variety of agate with different colour of the chalcedony layers. In the poem is mentioned also a special kind, called *tree-agate*, known to mineralogist as moss or dendrite agate.

Staghorn (240). Horns, as well as bone and tooth material of vertebrata animals have been used for different purpose from prehistorically times – including as biogemmological materials.

True stone (240). The name *bezoar* is usually used for some stones founded in intestines of animals and this stone has thought to have imaginable magical curative properties (usually

found in goats – bezoar goat; in the poem – from the brain of a deer).

Barbarian stone (250). It has been mentioned that the stone is to be found at the Syrian seashore. In the region of ancient Syria are known deposits of agates.

Jasper (260; 600). In most of the ancient sources the jasper is described as a stone with a green colour, but among green minerals and rocks are known about ten wide spread species or varieties (c. Pliny the Elder, 1991, HN, XXXVII, 37). Besides true green jasper, another interpretation can include serpentinite and nephrite. In some case, the jasper is supposed to be a synonym of *adamant* (c. Moore, 1859, 194).

The magical powers of the green jasper for attracting rain to the fields from the *Orphic Lithica* can be found as well in the work of Damigeron (Kunz, 1913, 90). The jasper and similar in appearance jasperoid or jasper-like rock are mainly quartz-bearing rocks with different mineral inclusions of a metasomatic origin.

Lychnis (270). The name of the stone is for the Greek name of lamp (*lychnos* – lamp, torch). But Pliny the Elder mentions four of its varieties, with properties related to amber (Pliny the Elder, 1991, HN, XXXVII, 29). In most cases the *lychnis* is linked to red or transparent minerals – known in the antiquity as *anthrax* *αημρακς* (in Latin - carbuncle) (compare for stones that give light King, 1865, 145; Kunz, 1913, 163). Such red minerals can be garnets, ruby, spinel, pink tourmaline and zircon. In the poem the *lychnis* is related also to the *crystal*, i.e. rock crystal or quartz.

Topazios (280). In the English translation the peridot has been introduced, duplicating the chrysolite (olivine), mentioned further in the text (in the original Greek text the proper name is *chrysotrix*). Most historians of mineralogy translate *chrysolite* (see also Pliny the Elder; Pliny the Elder, 1991, HN, XXXVII, 42) as topaz, and the ancient *topazios* – as chrysolite. In the poem the stone is described as of a “glassy” nature, which can correspond to the contemporary meaning of the mineral.

Opal (280). In the work of Pliny the Elder there is a number of descriptions of opals, including the name *paederos* (Pliny the Elder, 1991, HN, XXXVII, 21-22; Moore, 1859, 203). It can hardly be judged whether the opal from the poem corresponds to the contemporary meaning of the mineral.

Opsian (280). In the interpretation of *Orphic Lithica* the stone *opsian* is a soft and burning substance, which has to be mixed with amber and other substances in order to provoke the oracle powers (King, 1965, 253). In some cases it has been thought to be a black stone, probably the contemporary obsidian (Blumenbach, 1823).

Tears of pine (280). This poetic metaphor corresponds to amber, known in Ancient Greece as *electron* (c. Pliny the Elder, 1991, HN, XXXVII, 11-12). There are a lot of legends about amber in the Greek mythology (c. Kunz, 1913, 55; Kostov, 19936).

Mica-like (flaky) stone (280). The interpretation of this stone has to be related to some sort of mica-like mineral (mica, chlorite etc.). In the English translation the name talc has been used.

Chrysotrix (290). This name has been used as in the original (*Orphica*, 1805, 391; Moore, 1859, 189-190) instead of the chrysolite in the English translation. *Chrysotrix* can be translated as “golden hair” or that is the contemporary sagenite quartz (with inclusions of rutile needle-like crystals; “Venus hair”, “arrows of Cupid”).

Magnitis (*magnetic stone*; magnetite) (300). In the *Orphic Lithica* the properties of *magnitis* are related to the attraction of love by gods and people (c. King, 1865, 225; Kunz, 1913, 94). In the encyclopedia of Pliny the Elder the *magnitis* is interpreted as well as several other stones – *siderites*,

Heracleon stone, stone from Magnesia and hematite (Pliny the Elder, 1991, HN, XXXVI, 25).

Ophite (330; 340; 350; 450). The *ophite* is a synonym of serpentinite (viper’s stone, “snake stone”; about the folklore compare Halliday, 1921) or some variety of marble. An alternative interpretation discusses the possibility that the stone has been a fossil, imitating in shape the spirals of snake (ammonite) (Duffin, 2005, 60).

Ostrites (340). The description of the stone follows that of the serpentine, both with identical therapeutic powers. According to Kunz the *ostrites* may be also some sort of agate (Kunz, 1915, 224-225). The fact that the stone is hard, black and round suggests a mineral aggregate for example a concretion. It may have been mistaken with the stone *ophites*, as Pliny the Elder interprets it as a crab’s cover (Pliny the Elder, 1991, HN, XXXVII, 65).

Siderites (350; 410). In *Orphic Lithica* the oracle properties of the stone are described for the first time, and that is why it has been names the *Vocal stone* (350). In the text with *siderites* is cited also the *ophites* stone (King, 1865, 280-281; Kunz, 1913, 178). Its description as composed of iron gives the opportunity for an idea that the stone can be a piece of an iron meteorite (D’Orazio, 2007, 222). According to Pliny the Elder *siderites* and *orites* are one and the same stone (Pliny the Elder, 1991, HN, XXXVII, 65, 67), and *ophites* is a synonym of serpentinite or sort of marble (King, 1865, 280-281). The *siderites* as an antidote against snake bites has been related also to the stones *exites* and *draconites*, bearing a sexual symbolism (McMahon, 1998). The contemporary nomenclature mineral siderite is an iron carbonate.

Orites (“mountain stone”) (450). According Pliny the Elder *siderites* and *orites* are synonymous (Pliny the Elder, 1991, HN, XXXVII, 65). The *orites* has been thought as a magical stone, preventing from fires. Its form gives an alternative view to it as a meteorite (D’Orazio, 2007, 222).

Jet (470). In the work of Pliny the Elder this stone has been described owing its name to a river and town in Lycia (Pliny the Elder, 1991, HN, XXXVI, 34). In the gemmological literature jet is a solid, black in colour and used for cutting brown coal. In antiquity under the same name besides coal or bitumen-bearing schist one can find other stones – for example the so called *Thracian stone* (for its interpretation and analogy with the stone *spinos* in antiquity see Kostov, 2007).

Scorpion stone (480; 490). According Pliny the Elder the *scorpion stone*, named by him *scorpitis*, bears its name because of the resemblance of its form with the scorpion, or because of with the identical colouration with that animal (Pliny the Elder, 1991, HN, XXXVII, 72).

Coral (500). The coral as an object of biomineralogy is related to the family *Corallidae*. Theophrastus describes it as a precious stone (Kostov, 2008). In the work of Pliny the Elder the coral is listed among the gifts of the sea (Pliny the Elder, 1991, HN, XXXII, 11), but the stone *coralius* – among the gem stones (Pliny the Elder, 1991, HN, XXXVII, 56). Most prized as a gemological material is the precious red coral (*Corallium*

nobile; *Coralium rubium*) – it has been described in the *Orphic Lithica*.

Agate (600; 630). The agate is a concentric-zonal (geode) or parallel-layered mineral aggregate composed mainly by chalcedony with quartzine, quartz and opal. The magical powers of the agate (see also Pliny the Elder, 1991, HN, XXXVII, 54; Moore, 1859, 217) are cited in a lot of Medieval lapidary treatises, probably copied from the Orphic poem (c. Kunz, 1913, 51). The *leontoceras* (610) is a spotty agate, probably the so called “eye” agate, represented by concentric layers of chalcedony with different colour. In the work of Pliny the Elder one can find a stone stone with similar name – *leontios*, also in close similarity with the patterns on the lion's skin (Pliny the Elder, 1991, HN, XXXVII, 73).

Emerald (600). In the modern mineralogical nomenclature the emerald is a transparent green variety of the mineral beryl. In the ancient natural history literature this name corresponds to different green coloured minerals or rocks (usually malachite or serpentine). Pliny the Elder lists in his work the different sorts and deposits of emeralds (Pliny the Elder, 1991, HN, XXXVII, 16-18). In the poem this could be also a green agate variety.

Sardian (600). The *sard* (*sardian*) in the *Orphic Lithica* and in the work of Pliny the Elder corresponds both to carnelian (red or orange to yellow chalcedony) and sard (brown chalcedony) (Pliny the Elder, 1991, HN, XXXVII, 31). This type of chalcedony has been wide spread in antiquity as a material for glyptic art, mainly for finger rings.

Bloodstone (640-650). In the poem we learn about the friendship between Hector and Dolon, related also to an also to an amulet hematite. In the antique sources the *bloodstone* (from Greek *haima* – blood) is considered to be the iron-bearing mineral hematite (c. Pliny the Elder, 1991, HN, XXXVII, 60). The theogonic role in the origin of hematite has been mentioned as drops of blood of the god Uranus, who has been injured by the god Kronos-Saturn. (King, 1865, 208; Kunz, 1915, 137-138). As a blood-stone can be accepted also the heliotrope – darkgreen jasper with small red spots due to iron-bearing phases (c. one possible interpretation of heliotrope is also the *Thracian stone*; Kostov, 2007).

Lipareon (680). Pliny the Elder describes the stone *liparea*, with etymology of a “greasy stone” (Pliny the Elder, 1991, HN, XXXVII, 62). It is similar in influence as to the one described in the *Orphic Lithica*, but in this case its smoke can chase away animals. Its identification as a stone from Lipari, i.e. obsidian (volcanic glass, known mainly from the Lipari Island, Italy and the Melos Island, Greece) is less reliable (*obsian* according to Pliny the Elder; c. Pliny the Elder, 1991, HN, XXXVII, 64).

Nebrites (740). In the *Orphic Lithica* the stone is described in relation to the god of wine – Dionysius. This directs the attention towards the amethyst – the purple or violet quartz, known since the time of Theophrastus (for the legends and symbolism of amethyst compare Kostov 1992). Stone with a similar name *nebris* (named after the spotty skin of the deer for wear on the body) is also known in ancient sources (Pliny the Elder, 1991, HN, XXXVII, 64). The etymology of this stone is

suitable for some kind of colourful or spotty agate. Other interpretations include some green coloured mineral or rock.

Prase (750). In the work of Pliny the Elder the *prase* corresponds to its contemporary meaning (Pliny the Elder, 1991, HN, XXXVII, 34) – palegreen to leek-green coloured chalcedony or jasper. One of its varieties (green with red inclusions as blood drops) is sure the heliotrope, which is to be described also as *Thracian stone* (for its interpretation in the ancient literature compare Moore, 1859, 215; Kostov, 2007). Similar to prase in colour is also the chrysoprase (green chalcedony). In the Medieval ages lapidaries similar properties as for the prase in the Orphic poem, as an antidote for poison is believed to have the green jasper (King, 1865, 290).

Chalazias (750). According to Pliny the Elder the *chalazias* looks like hailstone (Greek – *chalaza*), but is very hard (Pliny the Elder, 1991, HN, XXXVI, 43; XXXVII, 73). A possible interpretation of the stone is small quartz pebbles or pieces. Another alternative explanation is the diamond (Mottana, 2005).

As to the sequence of order of the stones in the *Lithica* of Pseudo-Orpheus one can find a tendency for colour symbolism white(transparent) – green(yellow)+black – red(brown). These colours correspond in some way to the triad of colours from the basic orphic teaching (Fol, 2004, 182), the Great Goddess-Mother being in the center. The lack of description of blue coloured stones seems an enigma (such have been well known in the ancient world).

From the ancient literature it is well known that Orpheus enchants the nature and animals with his music. In the “Metamorphoses” of Ovid among the object of nature are mentioned also the stones (Ovid, 1981, 219-220).

There is great number of publications on the mythical Orpheus and his life, as well as of the Thracian orphic traditions (compare Mead, 1896; Guthrie, 1935; Fol, 1986; 1995; 2004; Bogdanov, 1991; Harrison, 1991; Fol, A., V. Fol, 2005; Fol, V. 2008 and the cited there literature). The so-called Orphic hymns are also related to the late Antiquity literature – dated also from the IV century (c. Orpheus, 1989; Fol, 1995).

In the earliest mineralogical treatise of antiquity, the work of Theophrastus “On Stones”, there is no mythological or magical interpretations of the described “stones” and “earths”, which have been listed mainly with their properties and practical applications (Caley, Richards, 1956; Theophrastus, 2005; Kostov, 2008). In his work are described the following “stones”, which are mentioned also in the Orphic poem (1/3 in number): *crystal*, *adamant*, *jasper*, *electron* (amber), *coral*, *agate*, *emerald*, *sard*, *hematite* (*bloodstone*) and *prase*. In the encyclopedia of Pliny the Elder “Natural History” magical properties of some “stones” are being cited, in order to display their curative powers, but in most of the cases without comment.

The *Lithica* of Pseudo-Orpheus in the beginning of the XXI century represents a distant echo of ancient times with data on precious and magic stones in their therapeutic interpretation – one direction of representation of science which will prevail in

the next centuries of the Medieval period in European and Asian lapidaries and natural history treatises both.

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