

Cryptopalaeontology: The fossils contained in ancient lapidaries and their magico-medicinal use

ELADIO LIÑÁN¹; MARIA LIÑÁN² and JOAQUIN CARRASCO³

¹*Instituto Universitario de Ciencias Ambientales (IUCA), Universidad de Zaragoza (Spain):
linan@unizar.es*

²*Contemporánea. Cruz Roja 18, León (Spain):maria@esteticacontemporanea.com*

³*Área y Museo de Paleontología. Departamento de Ciencias de la Tierra. Facultad de Ciencias. Universidad de Zaragoza (Spain): jcarras@unizar.es*

Fossils were credited with magico-medicinal properties in lapidary books written from the second century BCE onwards. The analysis of historical references to fossils in these ancient literary, medical and magical texts has been named Cryptopalaeontology, a discipline which also includes discoveries of fossils at archaeological sites and the study of oral traditions.

Four apocryphal greek lapidaries (*Lithica Orphéôs*, *Orphéôs Lithica Kérygmata*, *Socrátous Dionísou perì lithôn* and *Damigeron-Evax* : 2nd century BCE), Pliny the Elder's *Historiae Naturae*, Dioscorides' *De Materia Medica* (1st century CE), Isidore of Seville's *Etymologiarum* (7th century) and Alfonso X's *Libro de las Piedras* (13th century) all contain frequent references to fossils. In this context, these works might be considered to be the oldest treatises on fossils ever written.

The lapidaries mention the following fossils : foraminiferans (Lentil stone); coelenterates (probably Yellow stone or *Crocallis*); trilobites (Scorpion stone or *Skorpíos*, *Scorptis* and *Albarquid*; Ant stone or *Myrmecitis*; Beetle stone or *Cantharias*); crustaceans (Crab stone or *Carcinias*); crinoids (Man-hair stone or *Anthropochrinus*; Head stone or *Korsites* and *Corsoides*, and probably Cane stone or *Syringitis*); echinoids (Jews' stone or *Iudaicus*, *Iudaikós* and *Iudiega*; Solvent stone or *Thecolithos* and probably Olive stone or *Euros* and *Piedra Marina*); bivalves (Oyster stone or *Ostrita*; Shell stone or *Ostrachitis*, *Ostrakitis*, *Ostrakita*, *Ostracite*; Bullock-heart stone or *Bucardia*; probably Heart stone or *Encardia* and *Enariste*, *Piedra Tarmicaz*; Bird-heart stone or *Yenetatiz*, and Ass stone or *Onocardia*); gastropods

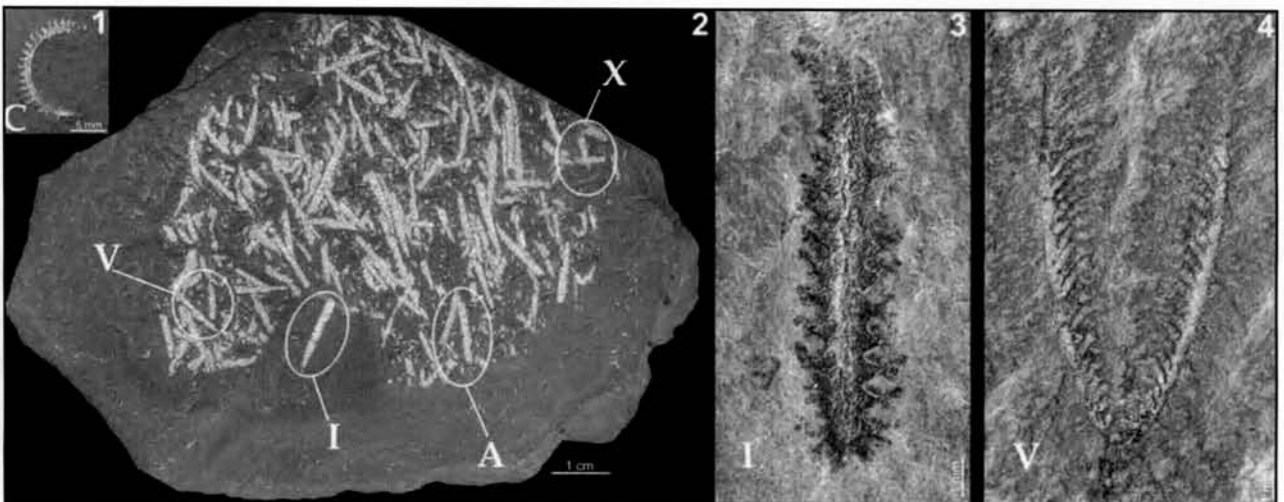


Figure:- The diverse morphology of graptolites interpreted as the “Roman Stone” in Alfonso X the Learned of Castille’s *Libro de las Piedras* (1276-1279). 1- *Spirograptus* sp., 2 - *Mono-graptus* assemblage, 3 - *Gymmnograptus* sp. and 4 - *Didymograptus* sp.

(*Caracole stone* or *Cochlides* and probably *Piedra Caracol de la Mar*); belemnites (Adad's finger stone, Finger of Ida stone, *Iadeus dactylus* and probably Lynx stone or *lapis Lyncis* and *Lyngurium*, as well as *Abietityz* or *Accufaratiz Cabroci* and *Buitreña*); ammonites (Snake stone or *Ophites* and *Kartoiz*, Ammon's Horn or *Cornu Ammonis* and probably Crane stone or *Geranites*); brachiopods (Testes stone or *Enorchis* and probably Hermes-genitalia stone *Hermu aeodoeon* and Hand stone or *Chernitis*); graptolites (Roman stone or *Piedra Romana*), fishes (Shark's teeth or *Glossopetra*, Fish stone or *Scaritis* and *Triglitis*, and probably *Chelonia*); mammals (Tooth stones or *Nipparenne*, *Arabicus*, Deer-antler stone and Bone stone); and plants (*Samotracia* stone, Oak stone or *Dryitis* and probably *Mazuiquez* and *Maihutiz*). Chemical fossils include coal (Jet or *Gagates*, *Gagas*, *Gagatiz*, *Zequeth*); asphalt (*Asphalto*, *Pisasphalto*, *Catochitis*, Bitumen); bituminous clay (*Ampelitis gê* and *Pharmakitis*); and amber (*Myrrhitis*, *Narcissites*, *Élektron*, *Electrum*, *Chryselectus*, *Succinum*, *Lyncurium*, *Langurium*, *Thium*, *Sacrium*, and probably *Aromatitis*).

The talismanic use of most of these fossils against a wide range of diseases was based upon sympathetic magic. Only a few of them (e.g. *Lapis Gagates* and *Lapis Bitumen* [pitch]) survive in recent pharmacopoeia.