

## FROM PLINY TO WALCH - 1700 PIONEERING YEARS OF AMMONOID RESEARCH

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Ammonite conchs attracted humans long before they became objects of scientific interest. For instance they were appreciated in Late Palaeolithic cultures, when decorative specimens were drilled through the umbilicus and used as beads. The first written documentation of interest in ammonites was probably by the Roman naturalist C. Plinius Secundus (23-79 A.D.), who in the 37th and last volume of his "Historia naturalis" stated briefly: "The Hammonis cornu is among the holiest gems of Ethiopia, it is golden in colour and shows the shape of a rams horn; one assures that it causes fortune-telling dreams."

Fossils were quite correctly interpreted by the Arabian-Persian physician and philosopher ibn Sina (lat. Avicenna; 980-1037), who, in a section on stones in his Kitâb al-Shifâ' (The book of the remedy), said that: "... If what is said concerning the petrification of animals and plants is true, the cause of this [phenomenon] is a powerful mineralising and petrifying virtue which arises in certain stony spots ...".

Around the year 1255, the Dominican monk Albertus Magnus wrote his "De mineralibus", quoting ibn Sina, but at the same time decorating his descriptions of properties of stones by numerous fantastic stories. Albert described the "Draconites" (the "snakestone"), a term borrowed from Pliny, which most probably referred to an ammonite: "I myself have seen in Swabia in Germany a stone [...] and it had a pale-coloured [stripe] around it, and a very beautiful picture of a serpent on it." It is interesting that ammonites up to the late 17th century were quite often regarded as petrified snakes.

It took then more than 300 years, until Conrad Gesner (1565) for the first time figured ammonites, e.g. an amaltheid specimen. Despite the fact that his contemporary Pierre Belon had already (1551) published an often copied figure of a *Nautilus* shell together with its septa and siphuncle, the cephalopod origin of ammonites remained undiscovered for a long period. Even towards the end of the 17th century, the ammonite nature was still under discussion. Robert Hooke compared ammonites with Recent *Nautilus* and reached the conclusion that ammonites are not only of organic origin but also widely resemble *Nautilus* (posthumously published in 1705).

With the delayed broad acceptance of Steno's concept (1669) of the distinction of organic fossils and minerals, from the beginning of the 18th century ammonites were interpreted as fossil sea shells, of which the living animals had not yet been discovered. A landmark in ammonite research is the comprehensive classification scheme given by Johann Jacob Scheuchzer (1716), a physician of Zurich better known to the scientific public for his interpretation of a large fossil salamander as "Homo diluvii testis" ("the victim of the universal deluge"), and for his monumental "Physica sacra".

The following 50 years were characterised by innumerable reports of ammonites from many different regions, and cope with questions regarding preservation and distribution of these fossils. The most opulent of these books is J.E.I. Walch's "Naturgeschichte der Versteinerungen", the "18th century Treatise of Invertebrate Palaeontology", published in five volumes between 1768 and 1773.

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