

'The Art of Observation of things': Agostino Scilla's (1629-1700) fossil shark-toothed dolphin (*Squalodon melitensis*) jaw from the Woodwardian Collection at the Sedgwick Museum of Earth Sciences, University of Cambridge

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In 1670 Renaissance artist Agostino Scilla published an illustrated book concerning the nature of fossils. *La vana speculazione disingannata dal senso* (Vain Speculation Undeceived by Sense), is widely accepted as being the first accurately illustrated book arguing an organic origin for fossils.

During the late 17th and early 18th century, the question whether fossils were the remains of living organisms or were 'Jokes of Nature' spontaneously generated within the ground, was a matter of debate. Scilla, previously interested in the study of ancient 'medals', mostly Roman coins, switched his interest to fossils. Through observation, experimentation and dissection, he came to the conclusion that fossils were the remains of living organisms.

Scilla illustrated his book with carefully selected specimens that supported his arguments. One of these is a piece of rock from Malta containing a fragment of jaw-bone with three teeth. He used this to counter the argument that the fossil shark teeth, or 'tongue stones' of Malta, were produced through a process of spontaneous generation. His dissection of shark jaws demonstrated that the teeth are embedded in connective tissue that would decay and release them after death, increasing their chances of dispersal. This specimen clearly showed a piece of jaw from an animal whose teeth had roots embedded in sockets within the jaw-bone. The isolated occurrence of shark teeth as fossils was therefore a matter of dispersal rather than spontaneous generation.

In 1717 English physician Dr John Woodward (1665-1728) bought Scilla's collection and the drawings he had made for his book. The collection comprises about 300 shells and bones of modern and fossil sea creatures. Dr Woodward's collection was acquired by the University of Cambridge after his death in 1728. It is rare for a collection from this period to remain intact, particularly one that can be associated with a figured publication. Specimens such as this are important for those interested in the history and philosophy of science, or the intersection between material and visual culture in the early modern period. Early illustrations such as this also have practical use in contributing to the condition history of an object.

