

Biological Evolution

Image: Image of Erasmus Darwin's bookplate. Darwin added a Latin motto to the family arms of three scallop shells, *E conchia omnia*, which translates as Everything from shells. The motto expressed Darwin's belief that all life was descended from a single ancestor.

Image from: Erasmus Darwin House, Lichfield (courtesy of Dr E D Barlow).

Photograph: David Remes (2003)

Darwin's study of botany and geology, and deep interest in minerals and fossils led him to the idea of biological evolution and the descent of all life from a single microscopic ancestor. Later he would express this idea in poetic form:

*"Organic life beneath the shoreless waves
Was born, and nursed in Ocean's pearly caves...
Thus the tall Oak, the giant of the wood,
Which bears Britannia's thunders on the flood;
The Whale, unmeasured monster of the main;
The lordly Lion, monarch of the plain;
The Eagle, soaring in the realms of air,
Whose eye, undazzled, drinks the solar glare;
Imperious man, who rules the bestial crowd,
Of language, reason, and reflection proud,
With brow erect, who scorns this earthy sod,
And styles himself the image of his God--
Arose from rudiments of form and sense,
An embryon point or microscopic ens!"*

Darwin was so excited by his theory that he added the motto *E conchis omnia* (Everything from shells) to the old family arms of three scalloped shells and reproduced it on his carriage and bookplate. Unfortunately this was not approved by the clergy of Lichfield Cathedral, and Darwin had to remove the motto from his carriage as he could not openly insult the Church. It would be his grandson, the celebrated Charles Darwin, who later would develop and formulate the theory of evolution in his 'Origin of Species'.