

DEVON & EXETER INSTITUTION

BOOKS OF WONDER

18TH AND 19TH CENTURY NATURAL HISTORY COLLECTION

The Devon and Exeter Institution was founded in 1813 on the initiative of a young zoologist, William Elford Leach. At that time interest in the natural world was intense, and the members accumulated a fine collection of important works by great 18th century biologists.



Erasmus Darwin (1731-1802). Physician, poet, inventor and biologist. A leading figure in the Industrial Revolution, a pioneer of evolutionary ideas, and Charles Darwin's grandfather.



Georges-Louis Leclercq, Comte de Buffon (1707-1788). French author of the internationally famous encyclopaedic *Histoire Naturelle, Générale et Particulière*.



Carolus Linnaeus (1707-1778). Swedish biologist, the founder of modern biological nomenclature, and describer and namer of innumerable animal and plant species.



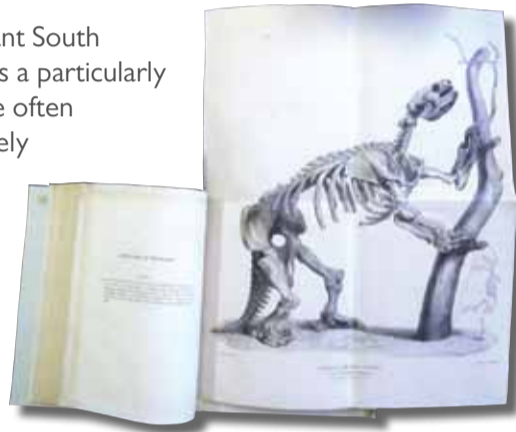
Thomas Pennant (1726-1798) Welsh naturalist and antiquarian. Author of *British Zoology*, the *History of Quadrupeds*, *Arctic Zoology* and *Indian Zoology*.

EXPLORATION

This was still an age of imperial exploration, surveying and mapping. Cook's voyages were recent memories. Many ships had a naturalist on board - often the ship's surgeon - and knowledge of exotic plants and animals was constantly increasing.

The Beagle voyage, with Charles Darwin aboard, delivered many specimens to be studied by scientists at home.

The monograph by Richard Owen of the giant South American ground sloth, *Myodon robustus*, is a particularly fine example. Monographs of this kind were often illustrated with superb lithographs - a relatively new printing technique that allowed naturalists who were also skilful artists to illustrate their own work, without the intervention of an engraver.



Charles Darwin (1809-1882). Arguably the greatest ever biologist. Author of *The Voyage of the Beagle*, *The Origin of Species*, *The Descent of Man* and many other works.

Among our most splendid are the 28 volumes of the *Illustrations of the Animals of South Africa* (1830-1850), by Andrew Smith, a Scottish military surgeon who went on to organise the medical services in the Crimean war - and was much criticised by Florence Nightingale.

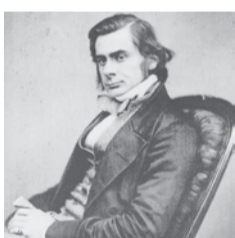


Sir Andrew Smith (1797-1872). Surgeon, ethnologist, explorer and zoologist, regarded as the father of South African zoology.

DESCRIPTION

With so many organisms becoming known, their description and classification was a major industry throughout the period. Linnaeus and the 18th century naturalists had often tackled many groups. The time had come for specialists, and the 19th century saw the publication of many monographs on individual groups of plants and animals, aided by the development of better microscopes, allowing study of fine details, and of many tiny organisms whose existence had been unknown a century before.

In Britain, the Ray Society was formed in 1844 to publish monographs of this kind, and the Institution has a long run of these, many with beautiful, hand-coloured illustrations.



Thomas Henry Huxley (1825-1895). The most forceful contemporary supporter of Darwin's evolutionary theories. His monograph of *Oceanic Hydrozoa* resulted from his voyage as a young assistant surgeon in HMS *Rattlesnake*.

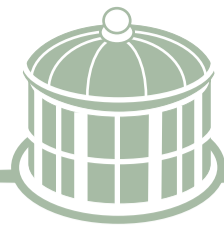


Sir John Lubbock. Banker, statesman, philanthropist, MP, zoologist and archaeologist. His *Monograph on the Collembola and Thysanura* (springtails and bristletails) is one of the Ray Society's most skilfully illustrated volumes.



A Spider Crab. Taken from James Sowerby's fine hand-coloured steel engraving in the monograph of the British Stalk-Eyed Crustacea by William Elford Leach (1791-1836), who initiated the Devon and Exeter Institution and modernised British zoology almost single-handed.





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INVESTIGATION – THE NATURALISTS

Biologists were not just dissecting, naming and classifying. Many were studying life-histories and behaviour, as had Gilbert White before them. An outstanding example was Philip Henry Gosse, whose best-selling books, vividly describing the behaviour of the animals he studied on the sea shores of Ilfracombe and Torbay, led to a major, and sadly destructive fashion for collection.



Three chromolithographs from *Actinologia Britannica*, a monograph of the British sea-anemones and corals by the biologist, illustrator and writer P.H. Gosse (1810-1888). Much of Gosse's life was spent in St Marychurch, near Torquay.



EVOLUTION

The 19th century saw one of the greatest ever revolutions in human understanding: the realisation that living organisms had not been created in seven days a few thousand years ago but had evolved from simplest beginnings over an immense period of time. The Institution's collections document this astonishing development. In the late 18th century Erasmus Darwin, Charles' grandfather, wrote - often in verse - of the spontaneous origin of all life from simple filaments. We have several of his books.

In France, Lamarck and St Hilaire had evolutionary ideas, but the great zoologist and palaeontologist Cuvier believed in a succession of catastrophic extinction events followed by new divine creations. Papers by all three appear in the Institution's run of the *Annales du Museum d'Histoire Naturelle*, and we have Cuvier's monumental sixteen volume text on the Animal Kingdom.

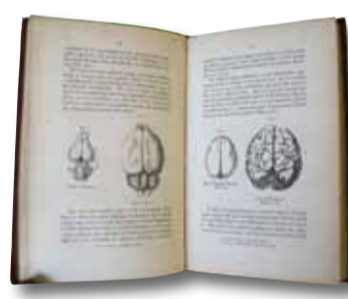


Georges Cuvier (1769-1832). The foremost zoologist and palaeontologist of his generation, and an influential opponent of pre-Darwinian evolutionary ideas.

The discovery - separately - by Charles Darwin and Alfred Russel Wallace of the mechanism of evolution, and the publication of the *Origin of Species* in 1859 and the *Descent of Man* in 1871, brought evolution into the public domain - and great controversy. Sir Richard Owen - we have many of his books - was a vigorous opponent, but to no avail; evolutionary theory is the central philosophy of all respectable modern biology.



Sir Richard Owen (1804-1892). Zoologist and palaeontologist. The first Director of the British Museum (Natural History), and a fierce opponent of Darwinian evolution.



Pages from 'On the Origin of Species by Natural Selection' and 'The Descent of Man'. At the left is Darwin's famous illustration of a branching evolutionary 'tree'.



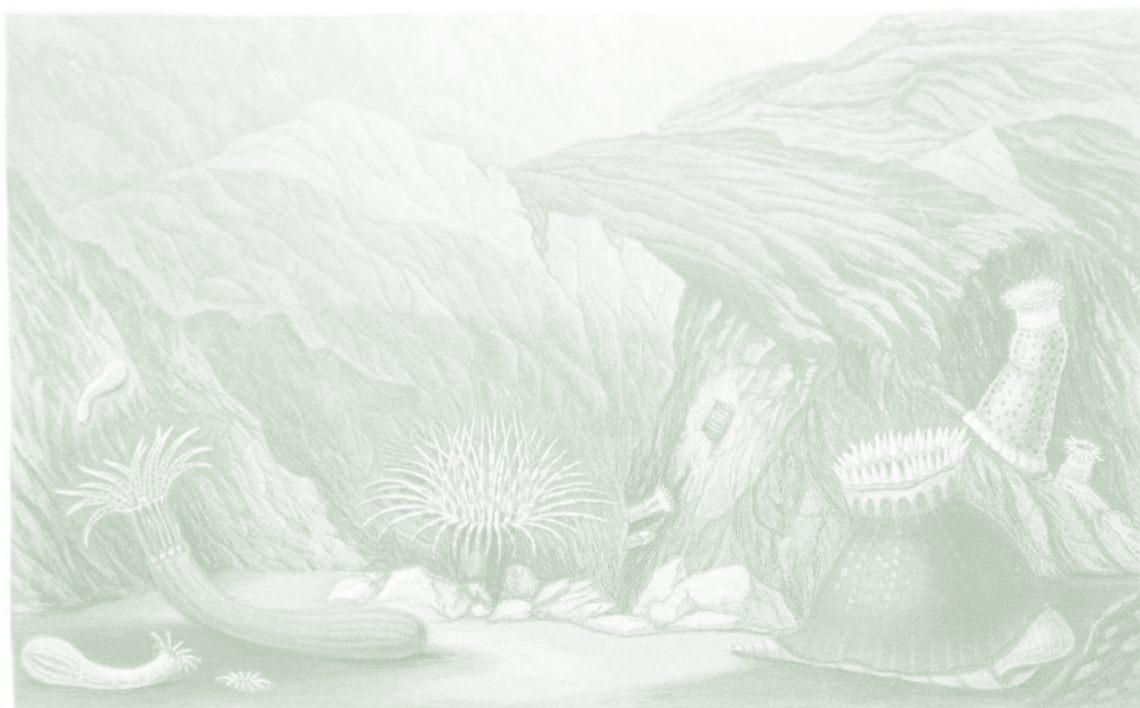
Alfred Russel Wallace (1823-1913). The great explorer, naturalist and pioneer of biogeography who, independently from Darwin, recognised natural selection as the driver of evolution.

THE 20TH AND 21ST CENTURIES

Since about 1900 the Institution has restricted its natural history acquisitions to books by notable South West biologists, or those particularly relevant to the South Western counties.



From *Actinologia Britannica*, by P.H. Gosse.



Acknowledgements:

Research: Dr Robin Wootton
Photography: Rhodri Cooper
Design: Alan Murray (Murray Design)

Additional Research: Sara Pelling
Project Manager: Emma Dunn