

Sir Richard Owen (1804–1892) and his work on the developing skull

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Richard Owen (Fig. 1 and cover), founder of the Natural History Museum in London, coined the term “dinosaur” and contributed to our understanding of the development and names of the bones of the skull. He published more than 600 books and articles and named countless species before his death in 1892 [2], so why are his accomplishments not taught in schools along with his contemporary, Charles Darwin?

Born in Lancaster, England, on July 20, 1804, Owen was born to a humble, working-class family [3]. From a young age, Owen was known as a trouble-maker, often being referred to as lazy and impudent by his grammar school teachers [3]. As a young adult, Owen enlisted in the Royal Navy, but soon returned to Lancaster after discovering his passion for surgery [3]. He studied medicine at the University of Edinburgh but, unhappy with the quality of his professors, he moved to the Barclay School in London [3].

Owen then joined the Hunterian Collection as an assistant in cataloging before his appointment as Assistant Curator to the Collection in 1830 [3]. While at the Collection, Owen diligently named and categorized hundreds, if not more, specimens. When Owen began giving Hunterian Lectures to the public in 1837, he gained a sizeable following that included members of royalty, as well as Charles Darwin—whom he would come to have a respectful, but contentious relationship with [3].

Owen became the Superintendent of the Natural History Collections in 1856 at the British Museum. Using his position, Owen successfully pioneered the effort to create a museum solely dedicated to Natural History [3].

When we think of evolution, our first thoughts are generally of Charles Darwin and his famous voyage on the HMS Beagle—1831 to 1836—during which he established his theory of evolution. Yet, it was Richard Owen who more accurately derived the concept of homology as we know it today. His definition of homology was “the same organ in different animals under every variety of form and function.” He speculated that an “archetype”

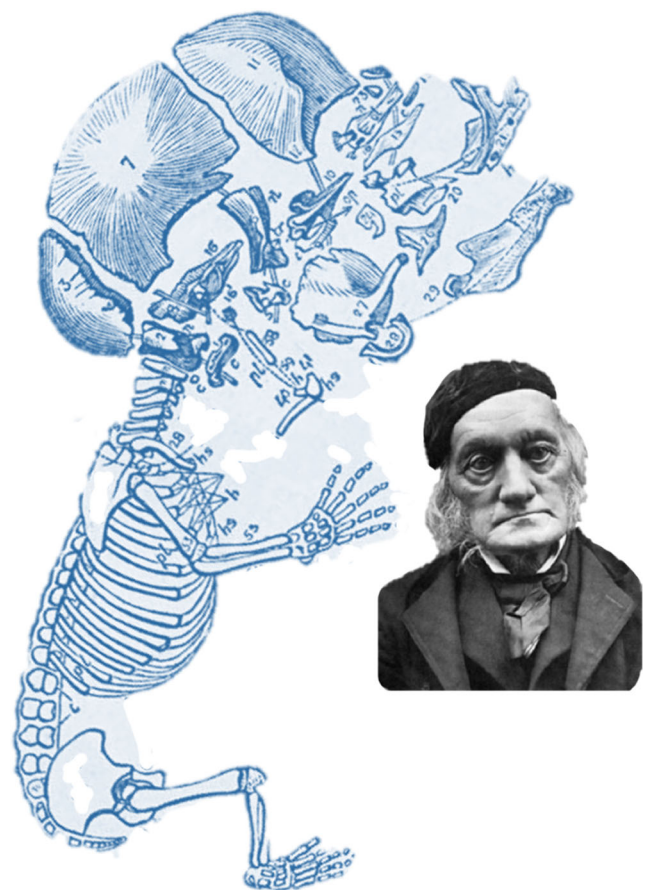


Fig. 1 and cover Illustration from the works of Owen showing the articulation of the fetal skeleton with an emphasis on the fetal skull (left) and Owen in old age (right)

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existed for all vertebrate species. Using this theory for the skull, Owen first thought that the skull arose as a collection of vertebrae that were fused together, arguing that there were four cranial bones (parietal, occipital, frontal, and nasal) [1]. He used homology to explain that the frontal and parietal bones were expansions of the neural arch [1].

While not talked about as frequently as others, Richard Owen had a profound impact on the evolution of science and our understanding of such topics as skull anatomy (Fig. 1) and its development. He accomplished an immense amount in his life, and will remain one of the world's most outstanding comparative anatomists, biologists, and paleontologists.

Compliance with ethical standards

Conflict of interest On behalf of all authors, the corresponding author states there is no conflict of interest.

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