



Sir Richard Owen – Discovery of Parathyroids

Kaushik Bhattacharya MS DNB MNAMS FAIS FACS FRCS (Glasgow)

Specialist Surgery

CAPFs Composite Hospital BSF Kadamtala

Siliguri, West Bengal, India

Address for Correspondence- Dr. Kaushik Bhattacharya, G616, Uttorayon, Matigara, Siliguri 734010

West Bengal, India, Email kbhattacharya10@yahoo.com

Owen: the most distinguished vertebrate zoologist and palaeontologist... but a most deceitful and odious man."

– Richard Broke Freeman in Charles Darwin: a Companion, 1978

In May 1834 the Zoological Society of London purchased its first Great Indian Rhinoceros (*Rhinoceros unicornis*), which died on the evening of 19th November 1849, its carcass was offered to Sir Richard Owen (1804–1892), Hunterian Professor and Conservator of the Museum in the Royal College of Surgeons of England. Owen welcomed the 'rare opportunity', and the dissection took place in the winter months of 1849 to 1850 at the Conservator's resident quarters. The animal weighed about 2 tons and by the time Owen's work was completed it was in an 'offensive state of decomposition'. His account of the dissection, published in 1862, includes the rhinoceros's last days as recorded in the Head-Keeper's minute book: it had vomited 'slimy mucus with blood' for a week before succumbing. Owen found that a fractured rib had punctured the animal's lung on the left side and concluded that this was the likely cause of death [1].

In his detailed description of the anatomy, Owen refers to 'a small compact yellow glandular body attached to the thyroid at the point where the vein emerged'—a structure we now know as the parathyroid gland. The original preparation in which Owen made the observation is still to be seen in the Hunterian Museum at the College. It measures 30×14×8 cm and consists of part of the larynx and trachea of the rhinoceros, showing the lateral lobe of the thyroid with a parathyroid attached to its upper extremity and partly embedded in its substance.

He published his work as the third article in the fourth volume of the Society's Transactions, not in 1862 as commonly believed, but ten years earlier, in March 1852. It was Professor AJE Cave, successor to Owen as Professor of Anatomy at the RCS, who noted that Owen's paper had been published in 1852 and not in 1862 as originally thought. To honor Owen's achievement, Cave in 1953 conferred on these glands the term "glands of Owen" [2].

Richard Owen was born on July 20, 1804, in Lancaster, where he was apprenticed to a local surgeon in 1820. He studied medicine at the University of Edinburgh from 1824, completing his medical studies at St. Bartholomew's Hospital, London. His interest in anatomy led to his appointment in 1827 as assistant curator of the Hunterian Collection of the College of Surgeons in London. In 1831 he went to Paris to attend the lectures of Baron Cuvier, regarded as the world's foremost authority on comparative anatomy.

Owen's 1832 "Memoir on the Pearly Nautilus" established his reputation as an anatomist and was largely responsible for his election as a fellow of the Royal Society in 1834. Owen remained at the College of Surgeons until 1856, being appointed Hunterian professor of comparative anatomy and physiology in 1836.

Owen was also a taxonomist, naming and describing a vast number of living and fossil vertebrates. As a prosector for the London zoo, he had to dissect and preserve any zoo animal that died in captivity. It also caused him some domestic difficulties, as he had to do this work at his own house, his wife Caroline recorded in her diary how, one summer day, "the presence of a portion of the defunct elephant on the premises rendered the house so foul smelling that

she got Richard Owen to smoke cigars all over the house”.

He developed a reputation for controversy, was accused of stealing other scientists’ specimens and undermining people by writing anonymous reviews of their work, while supporting them in public. Owen’s contemporary and rival Gideon Mantell described him as “overpaid, over-praised and cursed with a jealous monopolising spirit”.

Sir Richard Owen , scientific founder of the Natural History Museum, devoted opponent of materialistic transmutation and natural selection, and said to be the only man that Darwin ever hated, was almost lost to the history of science before his death, although in his time he was the most influential of British biologists. Owen gave us the name Dinosauria and dozens of others, and he established for Anglophonic biologists the classification of mammals, standardized the terminology of teeth and the names of the skull bones, and distinguished between homology and analogy. He was the first to describe the newly discovered pearly nautilus, a “living fossil,” and he made as many contributions to the anatomy and relationships of extinct vertebrates as to living ones—approximately 800 papers, books, and monographs, spread over 60 years. When Owen commissioned from artist Benjamin Waterhouse Hawkins the first dinosaur model, the top was kept open and a dining table set up inside. And in true Victorian style a grand New Year’s Eve feast was served to Owens and his colleagues inside this new dinosaur creature. Just imagine feasting inside the giant model of an animal that was previously unknown to humanity!

Owen was an astute politician, and soon came to be admired by the key figures in British natural history, which at the time was primarily an Oxbridge-based, Anglican clique. Indeed, his reputation spread to such an extent that Prince Albert eventually asked him to tutor the royal children. The prince also suggested Owen be put in charge of designing the dinosaur exhibits for the Great Exhibition of 1851. Owen was awarded the Copley medal in 1851, the Linnaean medal in 1888, and knighted in 1873, and it was primarily because of his vision and efforts that London’s Natural History Museum was established.

Charles Darwin finally commented “ I used to be ashamed of hating him so much, but now I will carefully cherish my hatred and contempt to the last days of my life”. Sir Richard Owen died at Richmond on December 18th, 1892. Tall in stature, ungainly in figure , with a massive head, lofty forehead, high

cheek bones, large mouth, long lark hair, florid complexion, and prominent expressive eyes, he possessed an affectionate nature and an engaging manner, and was a delightful conversationalist. [3]

References :

1. Kalra S, Baruah MP, Sahay R, Sawhney K. The history of parathyroid endocrinology. *Indian J Endocrinol Metab.* 2013;17 :320-2
2. Kafetzis ID, Diamantopoulos A, Christakis I, Leoutsakos B. The history of the parathyroid glands. *Hormones.* 2011;10(1):80-4.
3. Bett WR. Sir Richard Owen; 1804-92. *Ann R Coll Surg Engl.* 1954;15 :272-3.

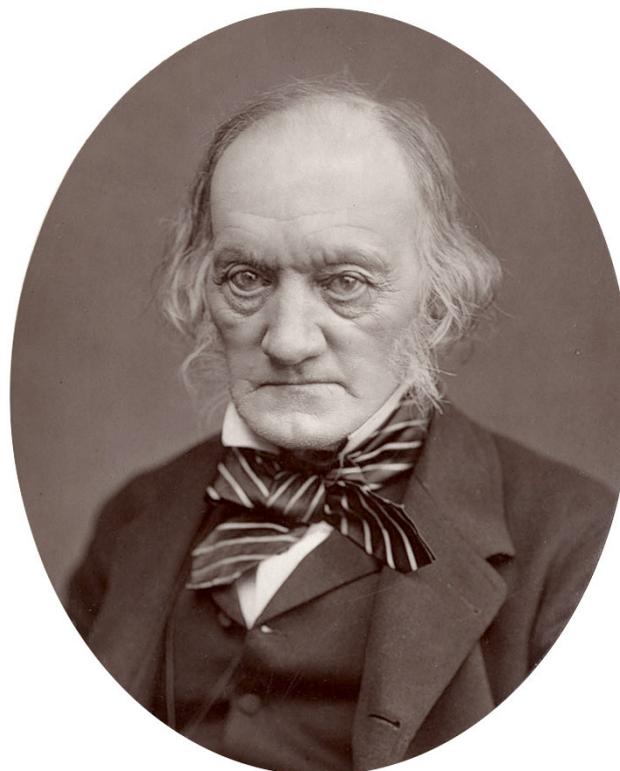


Figure 1....Sir Richard Owen (1804–1892)