

Natural History Museum Vienna and Evolution: Exactly 150 years ago, on 24 February 1871, Charles Darwin published his work The Descent of Man.

To mark this anniversary the Natural History Museum Vienna aims to draw attention to the close links which exist between its first Superintendent, Ferdinand von Hochstetter (1829-1884), and the revolutionary theory of Charles Darwin (1809-1882). In this context, the museum wishes to raise the profile of the various evolutionary and co-evolutionary processes when redesigning its exhibition halls in the future. The goal is to enable visitors to the museum to better understand and experience the mechanisms of evolution, focusing on (genetic) variability as a prerequisite for diversity and evolution as well as on the selection factors that affect today's distribution of species and will continue to do so in the future. Such factors include not only the climate and tectonics but also, for example, competitive and cooperative behavior as well as the co-evolution of humans alongside diseases and parasites.

On 24 February 2021, Charles Darwin's famous work "The Descent of Man, and Selection in Relation to Sex" celebrates its 150th anniversary. Like "On the Origin of Species" (1859), Darwin's work struck a chord with people at the time and triggered a wide public debate. The immediate reaction was much less hostile than Darwin had initially feared – something he attributed to the increasingly liberal attitudes in England. However, when civil war broke out in Paris after the Franco-Prussian War of 1870/71 and a (socialist!) commune was formed, the British establishment – for whom the idea of biological evolution had always been closely intertwined with social and political revolution – became alarmed.

The first edition (2,500 copies) sold out in just three days and had to be reprinted. The English magazine The Edinburgh Review said: "No scientific book has attracted more attention than Mr Darwin's new work "The Descent of Man" since the publication of "On The Origin of Species". In the drawing-room it rivals the latest novel, and in the study it worries scientists, ethicists, and theologians alike. Everywhere it causes a storm of anger, astonishment, and admiration." In the same year (1871) a German translation of the book was produced by the Leipzig-based zoologist Victor Carus (1823-1903).

Charles Darwin's Descent of Man & the Natural History Museum Vienna

Darwin's theory was strongly opposed in religious circles. For scientists it was difficult to publicly support Darwin, not least in the strictly Catholic Austrian Empire. It is therefore all the more astonishing that the geologist and explorer Ferdinand von Hochstetter (1829-1884), a Darwin supporter from the very start, succeeded in gaining the trust of the Austrian imperial family. In 1872 he was selected to tutor Crown Prince Rudolf in natural sciences. Four years later, in 1876, he was appointed Superintendent of the new Natural History Museum, which was still under construction at the time.

Hochstetter had already publicly advocated Darwinism in 1861 – a position which had not been welcomed in all circles. Liberals were delighted at Hochstetter's appointment to tutor the Crown Prince. A newspaper article from 1872 stated: "*In higher social classes, however, there is a decided prejudice against natural science. It is claimed that it turns the human spirit away from the commandments of faith*" continuing: "*And we are sincerely pleased that Professor Hochstetter has been appointed to introduce the Crown Prince to the study of natural sciences. Hochstetter is not merely a man of eminent reputation, nor is he merely excellent in one field of the world-wide science: what is particularly peculiar to him and what especially qualifies him for the task entrusted to him is his broad, his great vision, which quickly picks out the general from the specific.*"

It is this holistic view of nature and its laws which seems to have been an important consideration in the decision four years later to put Hochstetter in charge of the new Natural History Museum. He proposed a radical reorganization of the collections. By incorporating the anthropological, prehistoric and, at the time, ethnographic collections, Hochstetter created the **first museum in Europe organized on evolutionary principles**. At the time such a revolutionary approach was not even possible in London or Berlin, two other cities where new museums of natural history were being built.

Five years before the museum opened, Hochstetter wrote:

"The Vienna Court Museum of Natural History will therefore be the only one of the large natural history museums in Europe to unite under one roof the collections of all natural history disciplines, including man and his prehistory. ... As is well known, the great new natural history museum in Kensington, London, contains only mineralogical, geological, paleontological, botanical, and zoological collections; it has no prehistoric and ethnographic collections. In Berlin, where a new natural history museum is planned, the ethnographic and prehistoric collections are to be housed in a separate building, which is now nearing completion."

The English magazine Nature also wrote as early as 1877: *"When it is completed, the Museum at Vienna will present a more perfect and complete history of the knowledge of the earth and its inhabitants than has yet been presented"*.

The incorporation of humans into the collections reflected Hochstetter's aim to make Darwin's theory of evolution the museum's guiding principle. This approach also manifested itself in the museum's design and decoration.

Three works are of central importance here:

1. The ceiling painting The Cycle of Life: This painting by Hans Canon (1885) in the stairwell of the museum focuses on humankind. Its circular design embodies the cycle of becoming and passing – the struggle for existence.
2. The Darwin Frieze: In the Upper Dome Hall there is a frieze by the Austrian sculptor Johannes Benk showing animal and human figures. Its main theme is the relationship between man and beast, the hunter and the hunted, domestic and farm animals. One of the scenes draws directly on Darwin's work "The Descent of Man". It shows a grinning monkey holding a mirror up to a boy, who is covering his eyes in shame as he recognizes his resemblance to the monkey. Behind the boy stands another monkey holding an open book engraved with the words "Darwin, Descent of Man". Here, humor is used to soften what is a stark message. Nevertheless, the statement is unmistakable and a key element in understanding the Museum of Evolution.
3. Darwin on the façade: The exterior of the Natural History Museum was completed in 1881. The façade is adorned with the heads of famous scientists. Charles Darwin (1809-1882) is the only one to be immortalized here during his lifetime. His portrait is the last one on the Ringstrasse road (above the window on the second floor).

Charles Darwin's dark side

It is often rightly pointed out that Charles Darwin was a staunch opponent of slavery; that he was horrified to find that some of his colleagues and friends were advocates of the practice; that he generally abhorred violence against indigenous populations as he had experienced it when travelling the world. However, this should not obscure the fact that Darwin – despite his timeless scientific greatness and importance – was a man of his time. A member of the privileged English upper class, his insights into evolution, natural selection, and the "struggle for existence" – which, not coincidentally, showed similarities to the economic liberalism popular in Britain – reinforced in him views that today must be clearly criticized as racist and

sexist. Darwin was convinced that there were intellectual and moral differences between the "races of men". Unsurprisingly it was the Europeans (and, of course, the English in particular) who represented the pinnacle of human evolution thus far. He spoke quite naturally of "the savages" when referring to indigenous populations. In his otherwise relatively neutral comparisons of human populations he makes clear a priori that such peoples cannot be considered to have intellectual, moral, and social capacities. In a similarly biologicistic manner (*avant la lettre*) he also attempted to establish a hierarchy of the sexes in which men were naturally superior to women in intellect and creativity, and in which the strengths supposedly more pronounced in women – such as selflessness, gentleness, and intuition – were either due to their maternal instincts or due to the fact that, when it came to these characteristics, women were closer to the evolutionarily more primitive state of "lower races" than men.

More information on this topic:

Jovanovic-Kruspel, S. (2018): The Vienna Museum of Natural History and the Reception of Darwin(ism) from an Art Historical Perspective. In: Matis, H.; Reiter, W. L. (eds.): Darwin in Central Europe. The scientific, ideological and popular reception in the 19th and early 20th centuries; Vienna, 2018, pp. 425-448.

Jovanovic-Kruspel, S. (text) & Schumacher, A. (images) (2014): The Natural History Museum Vienna. Construction, Conception & Architecture. Vienna

Press material is available to download using the following link:

<https://www.nhm-wien.ac.at/presse/pressemitteilungen2021/darwin>

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