

# The Voyage of the Beagle

On this day 191 years ago (on 27 December 1831) the HMS Beagle, under the command of the 26-year-old Captain Robert Fitzroy, set sail from Plymouth, England to survey the South American coastline and harbours, funded by the British Government. With its return to England on 2 Oct 1836 it concluded a very historic voyage of almost 5 years, as it laid the foundation for one of the most significant scientific revolutions in history, without anybody realizing it at the time. On board the ship was the 22-year-old Charles Robert Darwin.

## 1 The prelude

His physician father, Robert Waring Darwin, enrolled him to study Medicine at Edinburgh University in 1825. He attended some Zoology and Chemistry lectures too, while he got exposure to the freethinking intellectual environment in Edinburgh, one of the intellectual hubs of the 18th and 19th centuries. He was not interested in becoming a physician and left after 2 years without a degree when his father enrolled him at Christ's College in Cambridge for a Bachelor of Arts to become an Anglican clergyman instead. Useful biographical sources: [1] [2] [3] [4]

While working on his BA, he attended Botany and Geology lectures, and befriended Reverend John Stevens Henslow, a young professor who practiced Botany as Natural Theology like many reverend academics ruling Cambridge. Darwin also built an extensive personal beetle collection. In Jan 1831 he completed his BA and spent another 6 months at Cambridge in which:

- He was tutored by Henslow in different branches of science (or natural philosophy as it was called then)
- "He read the last of Paley's trilogy, the *Natural Theology*, with its argument for a designer God from the adaptation of living species to their environments. This was the cornerstone of Cambridge science, along with John Herschel's *Preliminary Discourse on the Study of Natural Philosophy*, which inspired Darwin further in his scientific career" [2]. Darwin was a big admirer of Paley's.

## 2 The Invitation

In the spring of 1831 as the HMS Beagle was preparing for its second voyage, its captain requested recommendations from the set of Cambridge professors for a self-funded and well-educated gentleman with an interest in science to join the voyage. "Henslow had recommended Darwin, 'not on the supposition of yr. being a finished Naturalist, but as amply qualified for collecting, observing, & noting any thing worthy to be noted in Natural History'" [2] [5]

Initially Darwin's father refused, as he regarded this as a waste of time. However, he was convinced by his brother-in-law and consequently agreed to fund Darwin's participation in this voyage. He accepted on 1 September and then set out to prepare for the journey, by

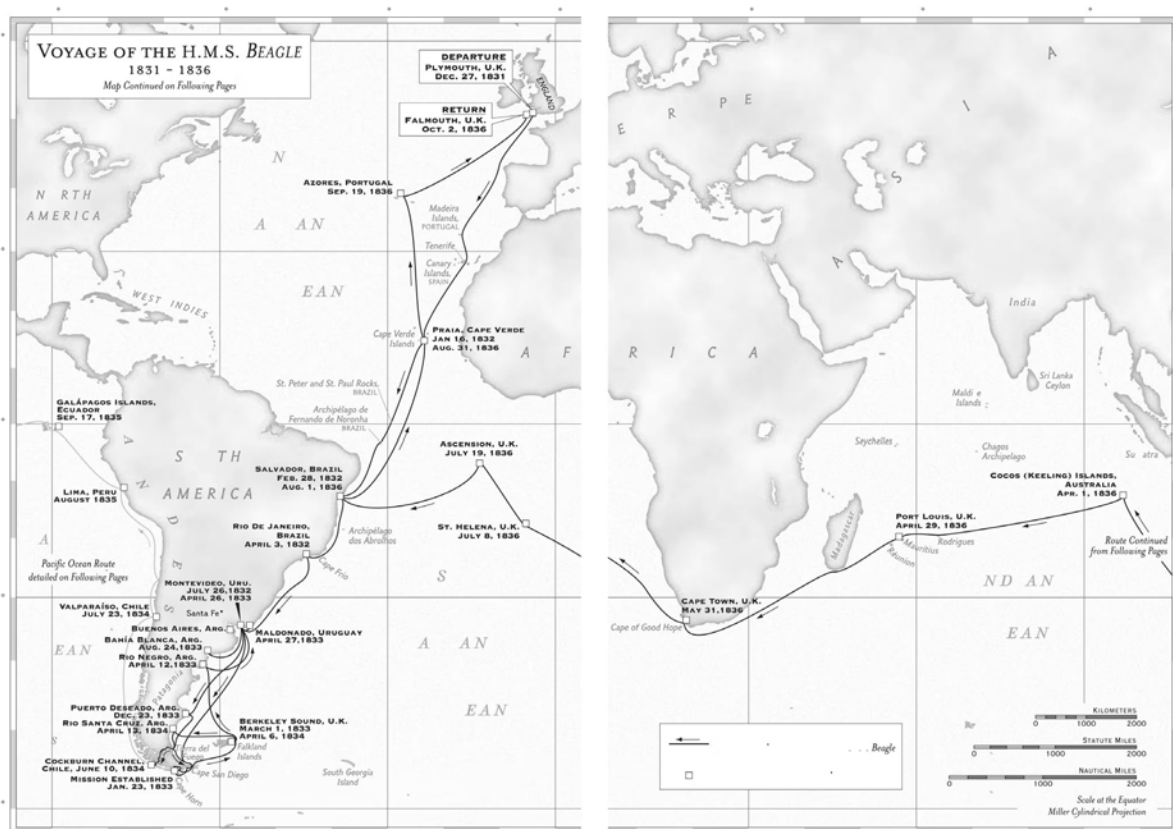
- Visiting the British Museum and Zoological institute to learn the appropriate preservations techniques and acquire the required equipment

- Buying books to take with him, like Charles Lyell's "Principles of Geology"

And so the HMS Beagle departed on 27 Dec 1831 with the young "naturalist" Charles Darwin on board, with a certain amount of irony and even serendipity:

- Darwin was recommended by a Reverend Professor at Cambridge, John Henslow, who practiced Botany as Natural Theology
- Darwin just completed his BA degree as part of his preparation to become an Anglican clergyman
- Darwin's father almost did not approve or fund his participation.

### 3 The Voyage



*Voyage of the HMS Beagle [Image credit: National Geographic Books]*

The Voyage of the Beagle was scheduled to last 2 years, but in the end took almost 5 years. Due to the fact that Darwin was a "self-funded gentleman" and his relationship with the captain, he did not have ship duties like the crew, and he freely did overland expeditions where they landed. This resulted in him spending only 18 months at sea, and gathering a large number of very useful specimens. This article will only highlight major moments of the voyage [6] [7] [8] [9]

- January 1832 (Cape Verde Islands). Early into the voyage the idea to write a book about the geology of the countries they visited, first occurred to Darwin
- February 1832 (Salvador in Brazil). Darwin experiences a Brazilian rain forest for the first time. This gave him "intense delight"
- September 1832 (Punta Alta). "I have been wonderfully lucky with fossil bones. Some of the animals must have been of great dimensions: I am almost sure that many of them are quite new." [8]

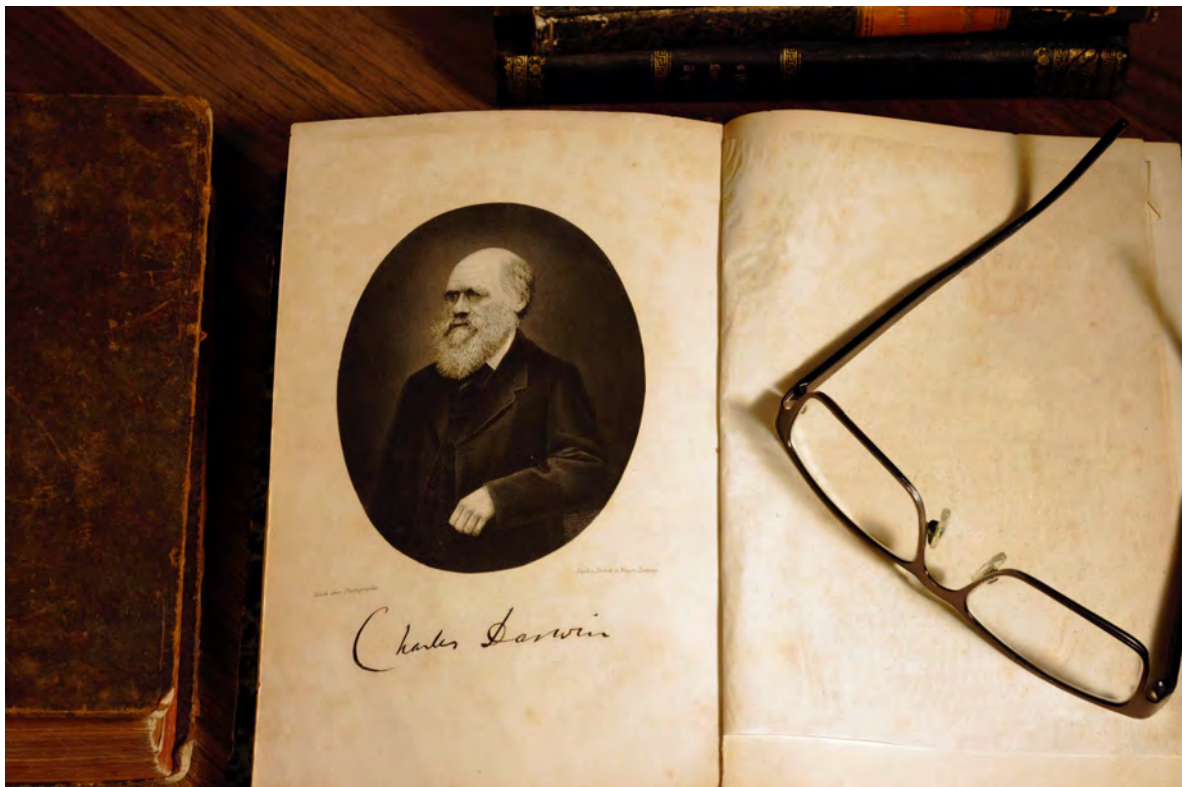
- March 1833 (Falkland Islands). He collected island fossils and birds which were quite different from mainland species
- January 1835 (Chilo). Darwin witnessed the eruption of Mount Osorno
- February 1835 (Valdivia). He experienced an earthquake and ensuing tidal wave, which caused the destruction of Concepcion
- March 1835 (Valparaiso). Darwin explored the Andes and discovered petrified trees, much like those at sea level. He was puzzled by the forces which raised such massive mountains
- September to October 1835 (Galapagos Islands, Ecuador). His visit to these islands was one of the highlights and most famous stopovers of the voyage. Darwin collected giant tortoises, birds and plants on these islands, which had clear variations from those on the mainland
- May to June 1836 (Cape of Good Hope). Darwin visited John Herschel, an English scientist who was also fascinated by the origin of new species
- Darwin kept a meticulous and comprehensive diary (770 pages with 1,750 pages of notes), collected 5,436 animal specimens, along with fossils, rocks and plant specimens, some of which he shipped back to England during the voyage. His fossil specimens included several unknown species
- Towards the end of the journey Darwin wrote in his journal "I loathe, I abhor the sea, & all ships which sail on it" and "The misery I endured from sea-sickness is far beyond what I ever guessed at" [8]
- On 2 October 1836 the HMS Beagle docked at Falmouth, England almost 3 years later than planned. Darwin never left England again and described the voyage of the Beagle as the most important event of his life.



*Galapagos Island Giant Tortoise [Image credit: dreamstime]*

## 4 The Aftermath

- After the voyage Darwin settled down in London in March 1837 as a “gentleman geologist” made possible by an annual allowance from his father
- He became the Secretary of the Geological Society in 1838
- Darwin reached some fame as a scientist with the publication of his “Journal of Researches into the Geology and Natural History of the Various Countries Visited by H.M.S Beagle” in 1839
- However, the theory of evolution was not born yet. Over the next 20 years Darwin:
  - Used all the data he collected to start systematic theorizing
  - Had the courage and the intellect to look beyond the answers dictated by his religion and broader culture, for which he unsurprisingly received strong, emotional opposition and condemnation (“heretical”, “blasphemous”, “bestial”)
  - Enlisted the assistance of several experts in the identification and classification of the specimens he collected. Some of their reports surprised him
  - Also drew on the work and ideas of several other people [10]
    - Jean Baptiste Lamarck, a botanist and zoologist who proposed that humans evolved over time from lower species
    - Charles Lyell, a famous geologist and supporter of Darwin (whom he met in person for the first time a few weeks after returning from his voyage)
    - Thomas Malthus, an economist
    - Comte de Buffon, a mathematician
    - Erasmus Darwin (his grandfather)
    - James Hutton, another geologist
    - Alfred Russell Wallace, who reached similar conclusions in parallel with Darwin
- On 24 November 1859 Charles Darwin finally published “On the Origin of Species by means of Natural Selection”. This will be the topic of another “Historic Moments” article scheduled for 24 Nov 2023.



First page of "On the Origin of Species" by Charles Darwin [Image credit: dreamstime]

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**The next Historic Moments article:**

"The Copernican Revolution" by JJ Brits (scheduled for 3 March 2023)

**SOURCES:**

- [ 1 ] [Charles Darwin: gentleman naturalist](#)
  - [ 2 ] [Darwin, Charles Robert \(1809–1882\), naturalist, geologist, and originator of the theory of natural selection](#)
  - [ 3 ] [Charles Darwin | Biography, Education, Books, Theory of Evolution, & Facts](#)
  - [ 4 ] [Charles Darwin](#)
  - [ 5 ] [A Stunning Invitation | AMNH](#)
  - [ 6 ] [Charles Darwin - The Beagle voyage](#)
  - [ 7 ] [Darwin's first—and only—trip around the world began a scientific revolution](#)
  - [ 8 ] [A Five-Year Journey | AMNH](#)
  - [ 9 ] [Second voyage of HMS Beagle](#)
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- [ 10 ] [8 Great Thinkers Who Influenced Charles Darwin](#)