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Editorial

On 27th December, 1831, after much delay, a ship lifted anchor from Barn Pool, near Davenport, England. Soon to become one of the most famous ships in history, it was headed on a two year expedition to conduct a hydrographic survey of the southern coasts of South America. Just before it set out, the captain of the ship, a 24-year old aristocrat, gave his companion, a 22-year old naturalist, a copy of a recently published book. Little could he have imagined the profound impact that this simple action would have on his companion's life or on our understanding of the natural world.

The ship was the HMS Beagle. It was commanded by Captain Robert FitzRoy, who was already making a name for himself as an able leader and a meticulous surveyor. The young naturalist was Charles Darwin. Nearly rejected by FitzRoy because the shape of his nose seemed to indicate a lack of determination, Darwin seemed well-suited for this role in every other way. As the grandson of Erasmus Darwin, a well-known philosopher, he fit FitzRoy's criteria of being a 'gentleman'. Six feet tall, with a tendency to stoop, and an abiding interest in natural history, Darwin nurtured a keen desire to visit the tropics once, before he became a parson. The book that FitzRoy had handed him was called the 'Principles of Geology' and marked an important transition in the career of its first-time author, the Scottish aristocrat Charles Lyell. Lyell had turned to geology after his attempt to become a barrister was scuttled by his deteriorating eyesight. In his book, Lyell used an evidence-based approach to argue that all great geological changes, historical as well as current, were the outcome of a gradual process of accumulation of minute changes over long time spans. Although Darwin had initially found classes in geology dull, he had developed a strong interest in the subject on a field-trip with Adam Sedgewick, one of the founders of modern geology. Reading Lyell's book, and later seeing rock formations at the Cape Verde islands through 'Lyell's eyes', left a lasting impression on Darwin's long-standing reflections on the origins of species.

Needless to say, this issue of *iwonder* is centered on evolution, a concept that today is almost synonymous with Charles Darwin. However, in a strange but fitting way, the word evolution, derived from the Latin '*evolvere*', was originally used to refer to the 'unrolling of a book'. And it was, in fact, Charles Lyell who first used this term with its modern meaning – twenty-seven years before Darwin used it once in the final paragraph of his '*On the Origin of Species*'. Thus, it is Lyell's notion that 'the present is the key to the past', a key first principle in almost every field of science, which is the underlying thread linking the articles in this issue – from the evolution of stars and the Earth to that of living organisms, humans, or even the phenomenon of ocean acidification. Join us in this exploration, and don't forget to share your thoughts with us at iwonder.editor@azimpremjifoundation.org.

Chitra Ravi

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