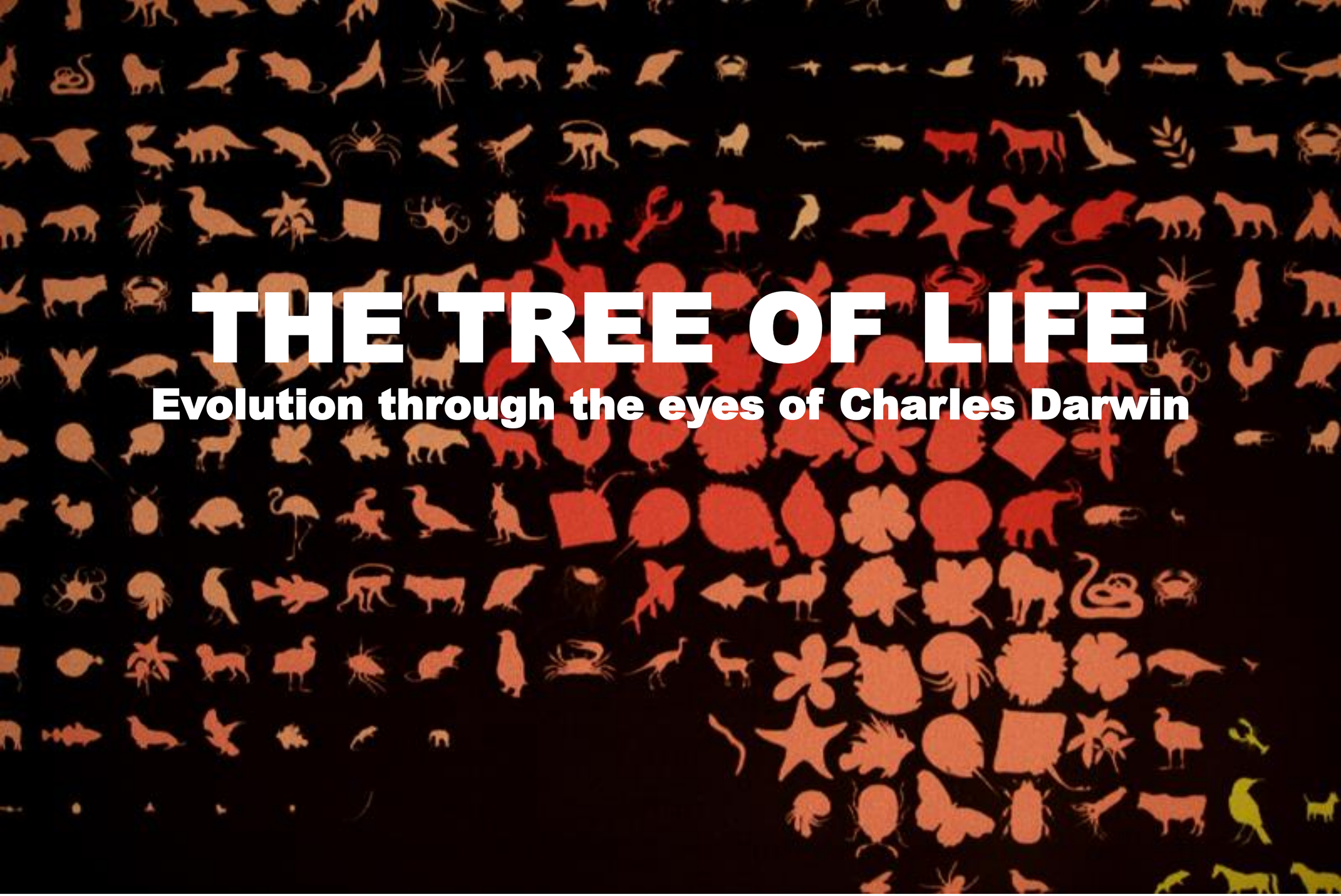

THE TREE OF LIFE

Evolution through the eyes of Charles Darwin

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CONCEPT

Happiest at home with his notebooks and his microscope, he shunned the public eye. Controversy made him ill. This **brilliant observer of nature** kept his most original and revolutionary idea under wraps for decades. Yet today, two centuries after Charles Darwin's birth, nearly everyone knows his name. **What did Darwin do,** and why does he still matter so much?

Keenly observing nature in all its forms, from fossil sloths to mockingbirds, primroses to children, Darwin saw that we all are related. **Every living thing shares an ancestry,** he concluded, and the vast diversity of life on Earth results from processes at work over millions of years and still at work today. Darwin's explanation for this great unfolding of life through time, the theory of evolution by natural selection, **transformed our understanding of the living world.**

THE EXHIBITON

1. YOUNG NATURALIST

Born in 1809 to a wealthy family in rural England, he spent hours watching birds and lying under the dining-room table, reading. He was an indifferent student, though, and school bored him but he never tired of studying the details of the natural world.

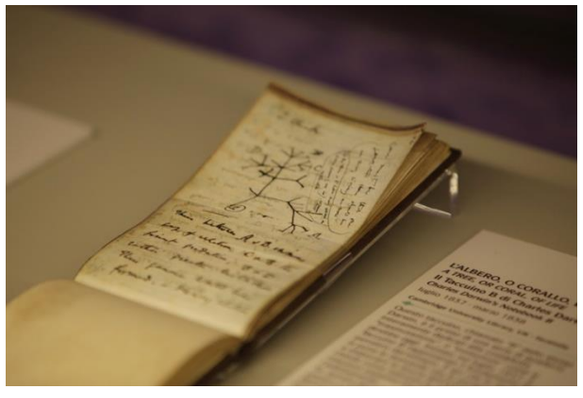
As a teenager, Darwin was thrilled by chemistry, biology, botany and geology. Yet all the while he dutifully pursued the careers his father had selected for him: doctor and then clergyman. As he studied at the University of Cambridge, though, **Darwin was singled out by an elite circle of academics** who recognized his potential. Finally, his true talent for natural history blossomed.

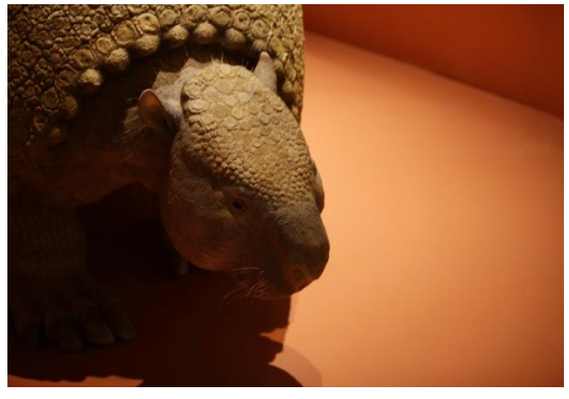
«It is quite absurd how interested I am getting about the science»

THE EXHIBITON

2. A LONG TRIP AROUND THE WORLD

In 1831, Charles Darwin received an astounding invitation: to join the HMS Beagle as ship's naturalist for a trip around the world. For most of the next five years, the Beagle surveyed the coast of South America, leaving Darwin free to explore the continent and islands, including the Galápagos. He filled dozens of notebooks with careful observations on animals, plants and geology, and collected thousands of specimens, which he crated and sent home for further study.





When he set out, 22-year-old Darwin was a young university graduate, still planning a career as a clergyman. By the time he returned, he was an established naturalist, well-known in London for the astonishing collections he'd sent ahead. The *Beagle* voyage would provide Darwin with a lifetime of experiences to ponder and the seeds of a theory he would work on for the rest of his life.

THE EXHIBITON

3. LONDON: THE «TREE OF LIFE» TAKE SHAPE

Within months of stepping off the deck of the Beagle, Darwin settled in London, the nerve center of Britain. Now on fire with the ambition to join the “real naturalists,” Darwin plunged into the work of writing up his Beagle research. Meanwhile, a huge idea was taking shape in his mind. Had those first shipboard insights been right? Could new species arise from old? If they could, how did it happen?

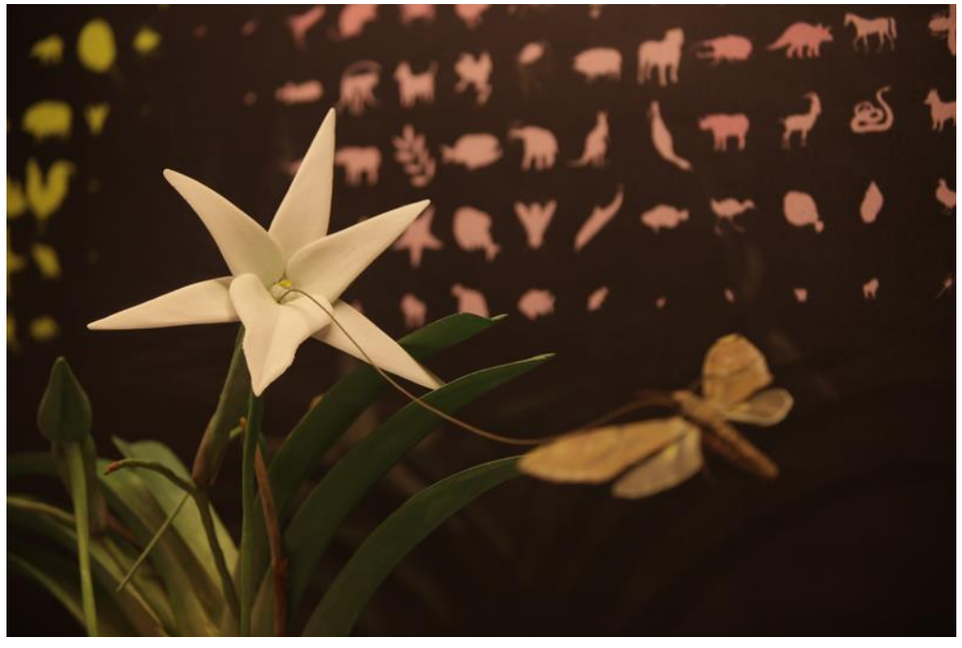
Darwin’s London years were intensely, feverishly creative. Here he would make a name for himself in science. Here he would marry and have his first two children. And here he would begin another voyage, this one inside his mind. It was in London that Darwin brilliantly put together the pieces of his theory of evolution by natural selection. And then, within just five years, he abandoned the smoky city for his beloved English countryside, still keeping his revolutionary thinking largely to himself.

THE EXHIBITON

4. THE WIDESPREAD EVIDENCE OF EVOLUTION, TODAY

A century and a half ago, Charles Darwin offered the world a single, simple scientific explanation for the diversity of life on Earth: evolution by natural selection. Since then, countless scientists, whether fighting viruses, decoding DNA or analyzing the fossil record, have found that Darwin's work is fundamental to their own.

Modern scientists can now answer questions about the natural world in ways Darwin never could. New tools and technologies, such as DNA analyses, can reveal unexpected relationships between seemingly dissimilar groups. Accurate fossil dating methods show that evolution proceeds at variable rates and is not always gradual. And sophisticated studies of wild populations provide insights into how new species are formed. Darwin would be amazed, and delighted, to see how our new knowledge has helped advance his theory.

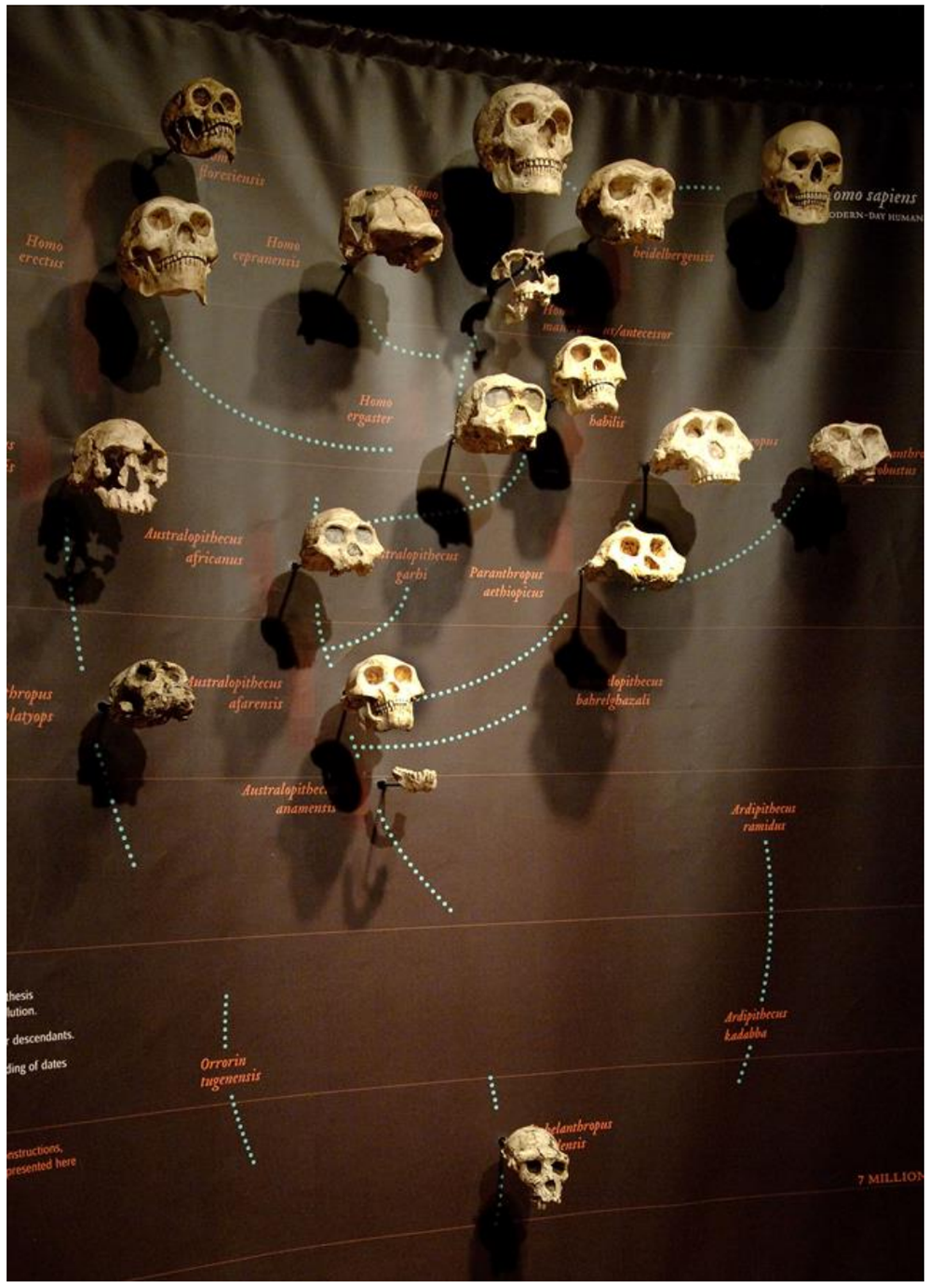


THE EXHIBITON

5. HUMAN EVOLUTION

Like all other living things, humans have evolved, a process well documented by the fossil record. In different places, at different times, groups of early hominids adapted to their habitats, and many became distinct species, including some that lived simultaneously.
Most of these species became extinct. But one, modern humans, Homo sapiens, ultimately survived and flourished.

Fossils only tell part of the story. Recent studies of DNA have revealed new details of our evolutionary history. DNA comparisons, for instance, indicate that chimpanzees are humans' closest living relatives. In fact, the two groups diverged from a common ancestor only five to seven million years ago. Likewise, analyses of human DNA suggest that all modern humans are descendants of people who lived in Africa between 100,000 and 150,000 years ago. Further studies promise to reveal even more details of our rich history.



THE EXHIBITON

6. ENDLESS FORMS MOST BEAUTIFUL AND MOST WONDERFUL

The orchid plants that fill this room, members of a vast and ancient family, enchanted Darwin late in life and intrigue us still, more than a century later. With over 20,000 species in the wild today, each astonishingly adapted to its habitat and its pollinator in shape, size, color or fragrance, orchids embody life’s richness. And it is that richness that Darwin’s work allows us to understand.

Two centuries after Darwin’s birth his insights remain fresh and vital. As a young man, he dared to ask how the natural world came to look as it does. How can we explain the amazing diversity of life all around us? And his answer, through evolution by natural selection, only increased his sense of wonder. “There is,” he said, “a grandeur in this view of life,” a life in which “endless forms most beautiful and most wonderful have been, and are being, evolved.”

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