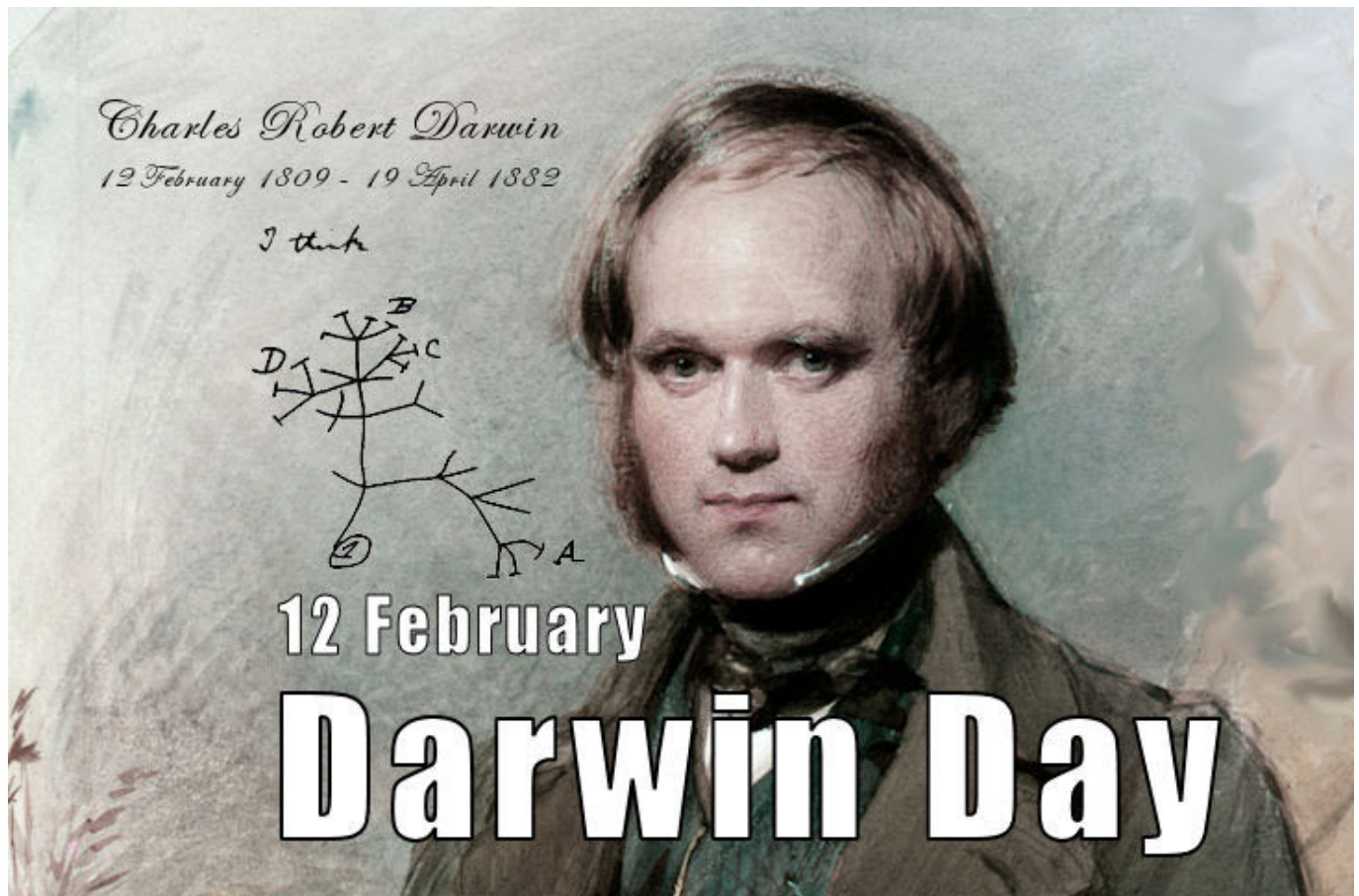


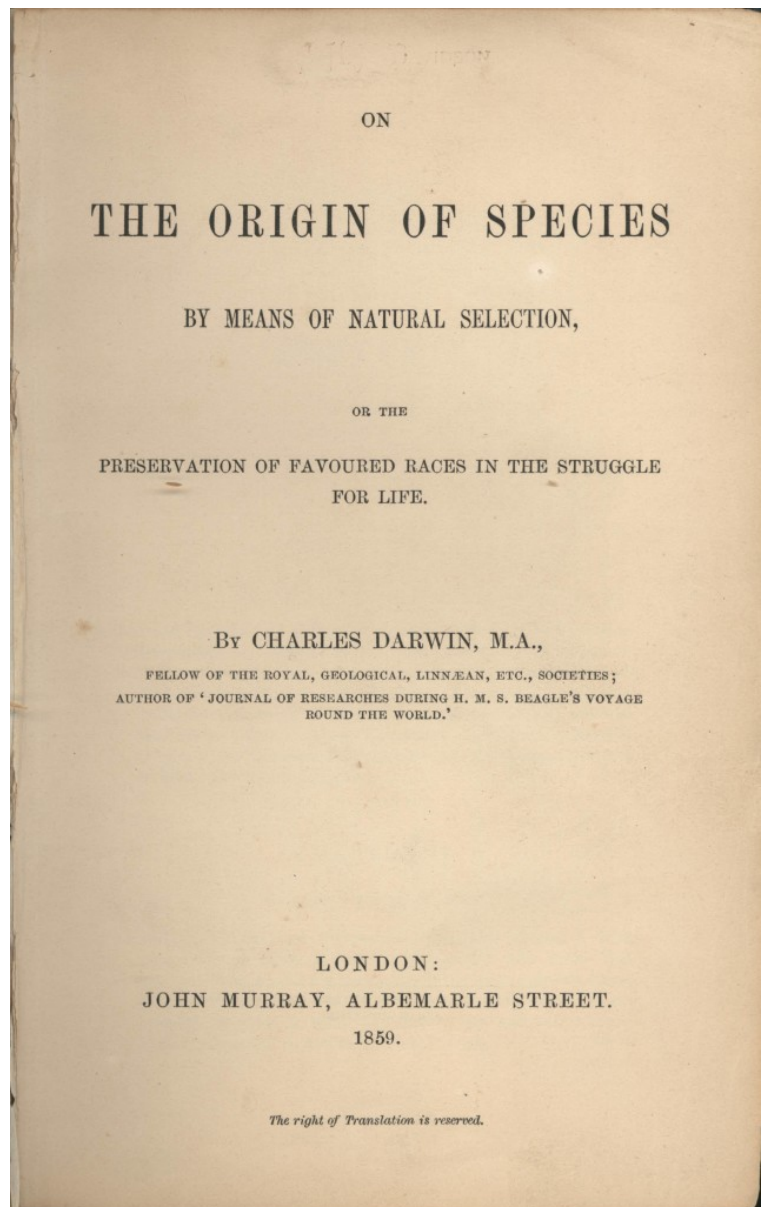
“the single best idea anyone has ever had”



Charles Darwin, the Father of Modern Biology, was born on this date in 1809. If here were still alive, he would be 207 years old today.

It was he, along with a younger naturalist named Alfred Russel Wallace, who gave us the theory of natural selection that explains how biological evolution produces all the wonderful and terrible forms of life on our planet.

In his massive 1859 book, *On the Origin of Species by Means of Natural Selection, or the Preservation of Favoured Races in the Struggle for Life*, often shortened to *On the Origin of Species*, he first accumulated overwhelming amounts of evidence for the evolution of life.



Then he postulated that all living organisms had descended from “a few forms or ... one” original ancestors and proposed natural selection as the mechanism.

Darwin got a lot of things wrong, of course. Genes hadn't even been discovered yet. Mendel was doing his work in another part of the world about the same time, but Darwin evidently knew nothing of it. Regardless, Mendel's work was not commonly accepted for another half-century.

The amazing thing is how much he got

right!

He was not the first to realize species descend from other species. His own grandfather, Erasmus Darwin, among others, had already speculated about that. But Charles compiled such overwhelming evidence it became difficult for educated people to doubt it any longer.

Only then did he explain, for the first time, how it could have happened through a process he called “natural selection.”

Natural selection is, at heart, a very simple process. Darwin’s friend, Thomas Henry Huxley, exclaimed, “How extremely stupid not to have thought of that!” But nobody had.

That’s the way obvious things are. They are only obvious after somebody thinks of them.

In 1973, evolutionary biologist Theodosius Dobzhansky penned that “nothing in biology makes sense except in the light of evolution,” because it has brought to light the relations of what first seemed disjointed facts in natural history into a coherent explanatory body of knowledge that describes and predicts many observable facts about life on this planet.

“the single best idea anyone has ever had”

Still later, philosopher Daniel Dennett gave Darwin the prize for best idea ever:

Let me lay my cards on the table. If I were to give an award for the single best idea anyone has ever had, I’d give it to Darwin, ahead of Newton and Einstein and everyone else. In a single stroke, the idea of evolution by natural selection unifies the realm of life, meaning, and purpose with the realm of space and time, cause and effect, mechanism and physical law.

Dan Dennett, in *Darwin's Dangerous Idea*

Scientists today almost universally accept evolution as the best explanation of the diversity of life on earth.

The great man summarized his theory wonderfully:

It is interesting to contemplate an entangled bank, clothed with many plants of many kinds, with birds singing on the bushes, with various insects flitting about, and with worms crawling through the damp earth, and to reflect that these elaborately constructed forms, so different from each other, and dependent on each other in so complex a manner, have all been produced by laws acting around us.

. . .

There is grandeur in this view of life, with its several powers, having been originally breathed into a few forms or into one; and that, whilst this planet has gone cycling on according to the fixed law of gravity, from so simple a beginning endless forms most beautiful and most wonderful have been, and are being, evolved.

Charles Darwin
Origin of Species
First Edition
1859