

## ABSTRACT

### Evolutionary Biology: 150 Years of Progress

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In this lecture, I describe some aspects of the extraordinary progress that has been achieved in evolutionary biology since the publication of *On the Origin of Species*, 150 years ago. Modern evolutionary biology has both affirmed all the major hypotheses in Darwin's evolutionary theory, and progressed so far that Darwin would not understand most of what we discuss today. I will point to major factors that have enabled this progress, and will consider the question of whether or not the field has undergone a history of "paradigm shifts." I conclude that the major tenets evolutionary theory that emerged from the union of Darwin's theory with genetics remain largely intact and have served as the framework of an extraordinary expansion of knowledge and understanding of evolution. In recent decades, evolutionary biology has engaged in almost unceasing, expanding synthesis, and is increasingly fulfilling its promise as the unifying theory of the biological sciences.