

The central role of mathematical modeling in modern evolutionary theory has raised a concern as to why and how abstract formulae can say anything about empirical phenomena of evolution. This Element introduces existing philosophical approaches to this problem and proposes a new account according to which evolutionary models are based on causal, and not just mathematical, assumptions. The novel account features causal models both as the Humean "uniform nature" underlying evolutionary induction and as the organizing framework that integrates mathematical and empirical assumptions into a cohesive network of beliefs that functions together to achieve epistemic goals of evolutionary biology.

About the Series

This Cambridge Elements series provides concise and structured introductions to all of the central topics in the philosophy of biology. Contributors to the series are cutting-edge researchers who offer balanced, comprehensive coverage of multiple perspectives, while also developing new ideas and arguments from a unique viewpoint.

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