

EPIGENETIC MECHANISMS of the CAMBRIAN EXPLOSION

Uniquely draws on an epigenetic theory of evolution to explain the period's rapid metazoan diversification

The Cambrian explosion is the unprecedented, rapid diversification of animals that began 542 million years ago. In an evolutionary "instant" of approximately 10 million years, which represents only 0.3% of the time of existence of life on Earth, all of the 30 extant body plans and major animal groups appeared.

During the last half-century, a number of hypotheses have been put forward to explain the Cambrian explosion, but these theories lack supporting evidence or do not explain all of the changes that occurred during the Cambrian explosion. In *Epigenetic Mechanisms of the Cambrian Explosion*, the author draws on his epigenetic theory of evolution to explain the causal basis of the Cambrian explosion. He presents both empirical evidence and theoretical argumentation in support of this epigenetic theory.

Epigenetic Mechanisms of the Cambrian Explosion provides readers with basic knowledge of an epigenetic explanation of this biological puzzle and helps address the remaining questions of the Cambrian explosion for evolutionary biologists, epigeneticists, and other scientific researchers.

Key Features

- Explains the Cambrian explosion from an entirely epigenetic view
- Takes a causal rather than descriptive approach to the phenomenon
- Allows for a broad readership, including those with only a basic biological knowledge, while maintaining scientific rigor

About the Author

Dr. Nelson R. Cabej is the author of *Epigenetic Principles of Evolution* (Elsevier, 2011) and *Building the Most Complex Structure on Earth* (Elsevier, 2013), in which he examines the role of epigenetic mechanisms in organismal evolution. He has published more than 40 scientific articles and 10 books in English and his native language of Albanian on evolutionary biology, epigenetics, and developmental biology. Dr. Cabej earned his PhD in biology at the University of Tirana, Albania, and currently serves as Researcher in the Department of Biology at the University.



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