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Nota di contenuto	Part I. Evolutionary Meaning of Development: How and Why Early Life Experience Generate Diversity -- Chapter 1. More than Fifty Shades of Epigenetics for the Study of Early in Life Effects in Medicine, Ecology and Evolution -- Chapter 2. For Better or Worse: Benefits and Costs of Transgenerational Plasticity and the Transhormesis Hypothesis -- Chapter 3. Adaptive Meaning of Early Life Experience in Species that Go Through Metamorphosis -- Part II. Endogenous Mechanisms Underlying the Interactions Between the Individual and Its Early-Life Environment -- Chapter 4. Early-Life Stress Drives the Molecular Mechanisms

Shaping the Adult Phenotype -- Chapter 5. Environmental Conditions in Early Life, Host Defenses and Disease in Late Life -- Chapter 6. Early Life Nutrition and the Programming of the Phenotype -- Part III. Anthropocene Opens New Horizons to Reveal the Adaptive Meaning of Developmental Plasticity -- Chapter 7. Adaptive and Maladaptive Consequences of LarvalStressors for Metamorphic and Postmetamorphic Traits and Fitness -- Chapter 8. Plastic Aliens: Developmental Plasticity and the Spread of Invasive Species -- Chapter 9. Consequences of Developmental Exposure to Pollution: Importance of Stress-Coping Mechanisms.

Sommario/riassunto

Development is a complex and highly dynamic process involving the cross talk among genes, maternal effects and environmental circumstances. Widespread evidence from plant to animal species show that variation in developmental conditions can modulate life history trajectories and influence key traits, such as growth, reproduction, and senescence. These effects are not limited to a single generation but can also be passed on future generations. This book aims to bring together studies of early life effects from the fields of evolutionary biology, global change biology, and biomedicine to synthesise and improve current knowledge of the mechanisms involved, and how variation in early life conditions translates into Darwinian fitness outcomes. Relying on examples of organisms' responses to the ongoing and future environmental challenges of the Anthropocene, this book takes a novel approach to address the adaptive meaning of early life effects. The book has a broad scientific approach, targeting eco-evolutionary biologists, behavioural biologists, eco-physiologists, eco-toxicologists, as well as epidemiologists and biomedical scientists. .