

Ecological Developmental Biology: A Review

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The appearance of a second edition of this work testifies to the rapid changes that have occurred since the first edition was published in 2008. The wide-ranging scope of this book is revealed in its secondary title: "The Environmental Regulation of Development, Health and Evolution". The eleven chapters, four appendices and a coda of philosophical concerns raised by ecological developmental biology engender an extensive purview of the subject. It delves into the newly developing science of "eco- devo" whereby environmental agents impact upon genetic inheritance patterns of a wide range of biota. The book integrates the medical studies of diabetes, cancers, obesity and the aging process into the environmental influences on the occurrences of diseases and infirmities. Herein, the impact of teratogens, endocrine disruptions and diet upon development is explored and explained.

The diverse disciplines encompassed in this colligation of ecology and developmental biology unites living organisms into a unitary web of life related to one another in an unbroken lineage from a common environmental origin. The book analyses a key question of biology in the relationship between evolution and development. The synthesis of genetics and its applications to evolution, human variability, health and

disease, development and disruptions by the authors of this text is a congener of biology in its widest context.

The extensive up-to-date (as recent as 2015) bibliography appended to each chapter provides readers with huge background reference material for research. The thought-provoking attributions of developmental defects to environmental insults expand the field of teratology and pathological embryonic malformations, deformations and disruptions. Reading this book has been an enlightening experience that has expanded one's appreciation of how the delicate and exquisitely precise genetic signaling processes are dependent upon the continuously variable environment which is changing so rapidly in the current epoch of the newly defined anthropocene. It is a joy to read in its expression of wonder that Aristotle said was the beginning of all knowledge. This work is highly recommended not only for academic studies but for a broader perspective of biology in a manner that should have wide appeal for interdisciplinary scholarship [1].

References

1. Gilbert, Scott F, Epel D (2015) Ecological Developmental Biology, (2ndedn), Sinauer Associates Inc, USA.

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