

Integrative Organismal Biology synthesizes current understandings of the causes and consequences of individual variation at the physiological, behavioral and organismal levels. Emphasizing key topics such as phenotypic plasticity and flexibility, and summarizing emerging areas such as ecological immunology, oxidative stress biology, and others, *Integrative Organismal Biology* pulls together information from diverse disciplines to provide a synthetic view of the role of the individual in evolution.

Beginning with the role of the individual in evolutionary and ecological processes, the book covers theory and mechanism from both classic and modern perspectives. Chapters explore concepts such as phenotypic plasticity, genetic and epigenetic variation, physiological and phenotypic variation, homeostasis, and gene and physiological regulatory networks. A concluding section interweaves these concepts through a series of case studies of life processes such as aging, reproduction, and immune defense.

Written and edited by leaders in the field, *Integrative Organismal Biology* is an important advanced textbook for students and researchers across a variety of subdisciplines of integrative biology.

- Unique focus on how genetic and environmental variation in individuals mediates physiological and phenotypic variation
- Emphasizes hot topics including phenotypic plasticity and flexibility, physiological complexity, ecological immunology, and oxidative stress biology
- Covers eco-evolutionary theory and mechanism from both classic and modern perspectives
- Written and edited by leaders in the field

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