

Oxford Series in Ecology and Evolution

Edited by Jennifer A. Dunne,

H. Charles J. Godfray, and Ben Sheldon

This novel text provides a concise synthesis of how the interactions between mitochondrial and nuclear genes have played a major role in shaping the ecology and evolution of eukaryotes. The foundation for this new focus on mitonuclear interactions originated from research in biochemistry and cell biology laboratories, although the broader ecological and evolutionary implications have yet to be fully explored. The imperative for mitonuclear coadaptation is proposed to be a major selective force in the evolution of sexual reproduction and two mating types in eukaryotes, in the formation of species, in the evolution of ornaments and sexual selection, in the process of adaptation, and in the evolution of senescence. The book highlights the importance of mitonuclear coadaptation to the evolution of complex life and champions mitonuclear ecology as an important subdiscipline in ecology and evolution.



Geoffrey E. Hill is professor of biology at Auburn University, Alabama, USA.

Mitonuclear Ecology is an advanced text suitable for a wide range of graduate seminar level students taking courses in ecology, evolutionary biology, behavioral ecology, and molecular genetics; it will also serve as a key reference for active researchers in these fields.

Front cover image: Micrograph of mitochondria by Nicholas Justyn and Kyle Heine.

Back cover image: Tigriopus copepod by Ryan Weaver.

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