

1967 *The Theory of  
Island Biogeography*

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Robert H. MacArthur  
and Edward O. Wilson

The young biologists Robert MacArthur and Ed Wilson argued that in 1967 ecology was stuck in a “natural history phase” dominated by the collection of data. In *The Theory of Island Biogeography* they set out to change that by developing a general mathematical theory that would make sense of a key ecological problem—*island biogeography*. MacArthur and Wilson built on first principles of population ecology and genetics to explain how distance and area combine to regulate the balance between immigration and extinction in island populations. Species diversity was not just a product of chance or historical events, the authors argued. It could in fact be analyzed by science.

*The Theory of Island Biogeography* transformed the science of biogeography. The equilibrium model outlined in the book has been at the center of that field since the book’s publication. More fundamentally, the book transformed ecology. MacArthur and Wilson were both enthusiastic naturalists, but MacArthur was also gifted mathematically. The authors proposed that ecologists should use mathematics to simplify the natural world and gain analytical insight. By substituting even “a first, crude theory” for a large pile of facts, MacArthur and Wilson argued that ecology could begin to develop some general principles.

MacArthur and Wilson’s compact book was also the first volume in the Monographs in Population Biology series. These inconspicuous yellow-spined titles quickly became the most important book series in ecology. Driven by the same impulses as *Theory of Island Biogeography*, the books brought theory and mathematics to bear on ecological data and led a discipline along with them.

