



*Morphogenesis:*  
*An Essay on*  
*Development*

1952

John Tyler Bonner

**B**y profession, John Bonner is a developmental biologist who has spent most of his career studying cellular slime molds. By vocation, he is a superb science essayist in the tradition of Lewis Thomas and Stephen Jay Gould. An extraordinarily

innovative mind, Bonner has opened up new fields of intellectual exploration: the evolution of complexity, the relationship between evolution and development, the role of size in organisms, and beyond. Since publishing *Morphogenesis* with the Press, he has written eight more books for Princeton including *Size and Cycle* (1965), *The Evolution of Culture in Animals* (1980), and *The Evolution of Complexity by Means of Natural Selection* (1988). This oeuvre represents a major intellectual landmark.

A Bonner book is likely to range widely across biology, from animal communication to the fossil record to the molecular biology of development. Even as biologists around him broke up into sparring departments of ecology and evolution, molecular biology, and genetics, John Bonner keeps his eye on the whole field. Second, it is focused on some of the major questions in biology. Why did life become multicellular? Why are some organisms big and some small? How do processes at the molecular and cellular levels relate to larger behavioral and ecological dynamics? Third, it is written in a style that is neither popular science nor professional monograph. Bonner assumes little knowledge, he explains every concept in simple terms, and yet he builds up intellectually sophisticated arguments that move an area of inquiry to a new level.