Record Nr. UNINA9910826835203321 Autore Bonner John Tyler Titolo The social amoebae: the biology of cellular slime molds / / John Tyler Bonner Pubbl/distr/stampa Princeton,: Princeton University Press, c2009 **ISBN** 1-282-96447-X 9786612964473 1-4008-3328-0 Edizione [Course Book] Descrizione fisica 1 online resource (157 p.) Disciplina 579.5/2 Soggetti Acrasiomycetes Lingua di pubblicazione Inglese **Formato** Materiale a stampa Livello bibliografico Monografia Note generali Description based upon print version of record. Includes bibliographical references (p. [129]-139) and index. Nota di bibliografia Nota di contenuto Front matter -- Contents -- Preface -- 1 Introduction -- 2 The Life Cycle -- 3 Evolution -- 4 Ecology -- 5 Behavior of Amoebae and Cell Masses -- 6 Morphogenesis -- 7 Differentiation -- 8 The Future --Bibliography -- Index Sommario/riassunto Noted biologist and author John Tyler Bonner has experimented with cellular slime molds for more than sixty years, and he has done more than anyone else to raise these peculiar collections of amoebae from a minor biological curiosity to a major model organism--one that is widely studied for clues to the development and evolution of all living things. Now, five decades after he published his first pioneering book on cellular slime molds, Bonner steps back from the proliferating and increasingly specialized knowledge about the organism to provide a broad, nontechnical picture of its whole biology, including its evolution, sociobiology, ecology, behavior, and development. The Social Amoebae draws the big lessons from decades of research, and shows how slime molds fit into and illuminate biology as a whole. Slime molds are very different from other organisms; they feed as individual amoebae before coming together to form a multicellular organism that has a remarkable ability to move and orient itself in its environment. Furthermore, these

social amoebae display a sophisticated division of labor; within each organism, some cells form the stalk and others become the spores that

will seed the next generation. In The Social Amoebae, Bonner examines all these parts together, giving a balanced, concise, and clear overview of slime mold biology, from molecules to cells to multicells, as he advances some unconventional and unexpected insights.