

Principles of Microbial Diversity

JAMES W. BROWN

Every speck of dust, drop of water, and grain of soil and each part of every plant and animal contains its own world of microbes.

Designed as a key text for upper-level undergraduates majoring in microbiology, genetics, or biology, *Principles of Microbial Diversity* provides a solid curriculum for students to explore the enormous range of biological diversity in the microbial world. Within these richly illustrated pages, author and professor James W. Brown provides a practical guide to microbial diversity from a phylogenetic perspective in which students learn to construct and interpret evolutionary trees from DNA sequences. He then offers a survey of the "tree of life" that establishes the necessary basic knowledge about the microbial world. Finally, the author draws the student's attention to the universe of microbial diversity with focused studies of the contributions that specific organisms make to the ecosystem.

Principles of Microbial Diversity fills an empty niche in microbiology textbooks by providing an engaging, cutting-edge view of the "microbial zoo" that exists around us, covering bacteria, archaea, eukaryotes, and viruses.

Praise for *Principles of Microbial Diversity*

We desperately needed a book that climbs the big tree, branch by branch, written both for undergraduates and as a reference. Principles of Microbial Diversity is that book!

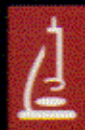
JO HANDELSMAN, Howard Hughes Medical Institute Professor,
Frederick Phineas Rose Professor, Department of Molecular,
Cellular and Developmental Biology, Yale University

What an absolutely fabulous book! Jim Brown captures the excitement and transformative impact that microbial diversity has brought to the field of microbiology in a text appropriate for students. Principles of Microbial Diversity belongs on every microbiologist's bookshelf.

HAZEL A. BARTON, Associate Professor of Biology,
Associate Professor of Geosciences, University of Akron



James W. Brown's lasting interest in microbiology was sparked by a single lecture on microbial diversity in an undergraduate microbiology class at Ball State University and by the announcement in that class of the discovery of an entirely new kind of living thing, the "archaebacteria." He went on to earn his MS in Microbiology at Miami University and his PhD in the Molecular, Cellular, and Developmental Biology program at The Ohio State University. Dr. Brown developed and continues to teach senior-level undergraduate lecture and laboratory courses in microbial diversity at North Carolina State University, which were the genesis of this textbook. For his excellence as an educator, Dr. Brown received the NCSU Alumni Association Distinguished Undergraduate Professor Award in 2014.



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