

are superb. The editors and contributors are to be commended for the tight organization of the chapters.

The high level of integration among chapters and presentation style works well to expose readers to the enormity of research on SSD. The articles display a wide range of analytical methods. Hence, the volume represents a veritable toolbox for students—molecular techniques, phylogenetic comparative methods, and well-designed field and laboratory experiments are all generously represented. Veteran scholars will find new ideas and approaches in this book because it covers such a wide array of systems (pygophores to horns to calyces), taxa (birds to beetles), and levels of biological organization (alleles to all eukaryotes). Readers will appreciate the introductory remarks on the biology of the study organisms in each chapter; these portions were indispensable for connecting with a wide audience. Also helpful are the “Suggested Reading” sections after each chapter that direct readers to the influential literature cited. The only thing missing from this volume is a thoughtful conclusion or summary chapter at the end. Beyond this minor point, I found this to be an excellent assemblage of contributions that will act as a guiding force in future studies of SSD.

LANCE D MCBRAYER, *Biology, Georgia Southern University, Statesboro, Georgia*

EVOLUTIONARY COGNITIVE NEUROSCIENCE. *Cognitive Neuroscience*.

*Edited by Steven M Platek, Julian Paul Keenan, and Todd K Shackelford. Cambridge (Massachusetts): MIT Press. \$65.00. xix + 616 p; ill.; index. ISBN: 0-262-16241-5. 2007.*

Sixteen years ago, Barkow et al. published *The Adapted Mind: Evolutionary Psychology and the Generation of Culture* (Oxford: Oxford University Press), which was a collection of chapters that laid the theoretical foundation for much of the current cognitive research informed by evolutionary considerations. Since then, the techniques and theories from cognitive psychology and neuroscience have been integrated much more thoroughly than before. This cognitive neuroscience approach now dominates brain research, yet like its cognitive psychology ancestor, most cognitive neuroscience is not concerned with evolutionary questions nor guided by evolutionary considerations. *Evolutionary Cognitive Neuroscience* is an edited work that documents cognitive neuroscience research that does take an evolutionary approach. Although this volume does not address theoretical issues with the depth of *The Adapted Mind*, it provides a valuable introduction to the issues, a snapshot of current research, and an encouraging view of the future of this field.

This book contains 21 chapters grouped into six sections: Introduction and Overview (three chapters); Neuroanatomy: Ontogeny and Phylogeny (four chapters); Reproduction and Kin Selection (four chapters); Spatial Cognition and Language (three chapters); Self-Awareness and Social Cognition (five chapters); and Theoretical, Ethical, and Future Implications for Evolutionary Cognitive Neuroscience (two chapters). The introductory chapter provides a nice overview of the concepts, advantages, and issues that an evolutionary perspective provides for cognitive neuroscientists. Each of the empirical sections included valuable chapters, and several stood out. The chapter on sex differences in spatial abilities by Puts et al. offers an example of a topic with well-developed theories at multiple levels of explanation. Santos et al.’s chapter provides a review of human and nonhuman primate mind-reading theory and research with a focus on the recent demonstration that chimps and macaques use gaze information in competitive, but not cooperative, situations. They discuss the implications of this revealing finding and then demonstrate the value of a solid evolutionary and cognitive understanding by making empirical predictions about the neural basis of these abilities.

The volume would have benefited from discussion of how neurocognitive mechanisms evolve, as this is obviously a central question for this enterprise. In addition, greater coverage of recent structural and functional imaging done with nonhuman primates and how these results compare with human imaging findings would have been enlightening. Nevertheless, readers from a variety of disciplines will find the majority of these chapters quite interesting and a good demonstration of the promise of evolutionary cognitive neuroscience.

BRAD DUCHAINE, *Institute of Cognitive Neuroscience, University College London, London, United Kingdom*

EVOLUTION OF MICROBIAL PATHOGENS.

*Edited by H Steven Seifert and Victor J DiRita. Washington (DC): ASM Press. \$119.95. xiii + 355 p; ill.; index. ISBN: 1-55581-300-3. 2006.*

This volume provides exemplary insight into the driving forces that shape microbial pathogen evolution. Much information has been wrought by analyzing bacterial genomes, and has been stimulated by the discovery of myriad novel pathogens over the past several decades (such as that *Helicobacter pylori* infections cause ulcers and gastrointestinal carcinoma/lymphoma). In just 17 chapters (including overviews by lead investigators), the book encompasses both general principles and specific examples. Each chapter concludes with a helpful summary of salient points.