

Cambridge University Press & Assessment

978-1-108-48799-3 — Evolution of Learning and Memory Mechanisms

Edited by Mark A. Krause , Karen L. Hollis , Mauricio R. Papini

Table of Contents

[More Information](#)

CONTENTS

<i>List of Figures</i>	<i>page ix</i>
<i>List of Tables</i>	<i>xiii</i>
<i>List of Contributors</i>	<i>xv</i>
<i>Preface</i>	<i>xix</i>

INTRODUCTION: PERSPECTIVES ON THE EVOLUTION OF LEARNING AND MEMORY MECHANISMS	1
<i>Mark A. Krause, Karen L. Hollis, and Mauricio R. Papini</i>	

PART I EVOLUTION OF LEARNING PROCESSES

1 LEARNING AND MEMORY IN THE NEMATODE <i>CAENORHABDITIS ELEGANS</i>	15
<i>Alex J. Yu and Catharine H. Rankin</i>	
2 ADAPTIVE EVOLUTION OF LEARNING AND MEMORY IN A MODEL LINEAGE	33
<i>William G. Wright</i>	
3 LEARNING IN INSECTS: PERSPECTIVES AND POSSIBILITIES	52
<i>Alexis Lillian Kriete and Karen L. Hollis</i>	
4 EXPERIMENTAL EVOLUTION AND MECHANISMS FOR PREPARED LEARNING	71
<i>Aimee S. Dunlap and Andreia F. Dexheimer</i>	
5 EVOLUTIONARY PROCESSES SHAPING LEARNING ABILITY IN INSECTS	89
<i>Maartje Loeffing</i>	

6	BRAIN AND SPATIAL COGNITION IN AMPHIBIANS: STEM ADAPTATIONS IN THE EVOLUTION OF TETRAPOD COGNITION <i>Rubén N. Muzio and Verner P. Bingman</i>	105
7	PAVLOVIAN CONDITIONING, SURVIVAL, AND REPRODUCTIVE SUCCESS <i>Mark A. Krause and Michael Domjan</i>	125
8	COMPENSATORY RESPONSES TO WILDLIFE CONTROL: THEORETICAL CONSIDERATIONS AND EMPIRICAL FINDINGS FROM THE INVASIVE COMMON MYNA <i>Andrea S. Griffin and Marie C. Diquelou</i>	143
9	RELATIONAL MEMORY FUNCTIONS OF THE HIPPOCAMPAL PALLIUM IN TELEOST FISH <i>Antonia Gómez, Francisco M. Ocaña, Tamara del Águila, Fernando Rodríguez, and Cosme Salas</i>	159
10	MECHANISMS UNDERLYING ABSOLUTE AND RELATIVE REWARD VALUE IN VERTEBRATES <i>Mauricio R. Papini</i>	176
11	THE OPTIMALITY OF “SUBOPTIMAL” CHOICE: A PSYCHO-EVOLUTIONARY PERSPECTIVE <i>Patrick Anselme</i>	193
12	A BEHAVIOR SYSTEMS FRAMEWORK: WHAT IT IS AND HOW TO USE IT <i>Kathleen M. Silva and Francisco J. Silva</i>	210
13	DISSOCIABLE LEARNING PROCESSES: A COMPARATIVE PERSPECTIVE <i>Barbara A. Church, Brooke N. Jackson, and J. David Smith</i>	227
14	SOCIAL LEARNING STRATEGIES <i>Rachel L. Kendal</i>	247
15	HOW LEARNING AFFECTS EVOLUTION <i>Kevin Laland, Thomas Oudman, and Wataru Toyokawa</i>	265
PART II EVOLUTION OF MEMORY PROCESSES		
16	THE EVOLUTION OF MEMORY AS AN IMMEDIATE PERCEPTUAL IDENTIFICATION MECHANISM <i>Michael S. Fanselow</i>	285

Contents

* vii

17	EPISODIC MEMORY IN ANIMALS <i>Jonathon D. Crystal</i>	302
18	EVOLUTIONARY ORIGINS OF COMPLEX COGNITION <i>Alexandra K. Schnell and Nicola S. Clayton</i>	317
19	EVOLUTION OF MEMORY SYSTEMS IN ANIMALS <i>Johan Lind, Stefano Ghirlanda, and Magnus Enquist</i>	339
20	WHAT LABORATORY AND FIELD APPROACHES BRING TO BEAR FOR UNDERSTANDING THE EVOLUTION OF URSID COGNITION <i>Jennifer Vonk</i>	359
21	DISTINGUISHING MECHANISMS OF BEHAVIORAL INHIBITION AND SELF-CONTROL <i>Michael J. Beran and Audrey E. Parrish</i>	375
22	METACOGNITIVE MONITORING AND CONTROL IN MONKEYS <i>Robert R. Hampton</i>	392
23	ADAPTIVE MEMORY: FITNESS-RELEVANT TUNINGS IN HUMAN MEMORY <i>James S. Nairne and Michelle E. Coverdale</i>	406
24	REMEMBERING CHEATERS: THE INFLUENCE OF SOCIAL RELEVANCE ON SOURCE MEMORY <i>Meike Kroneisen</i>	424
25	DEVELOPMENT OF MEMORY CIRCUITS UNDER EPIGENETIC REGULATION <i>Ji-Song Guan</i>	438
26	CONSTRAINTS ON LEARNING AND MEMORY: A RESOLUTION <i>Aaron P. Blaisdell and Benjamin M. Seitz</i>	454
	<i>Index</i>	473