

CONTENTS

Part I: Symposium in Honor of Professor Richard Highton

1. Points of View on Defining and Naming Species of
Plethodontid Salamanders: A Symposium in Honor of
Professor Richard Highton 3
Robert G. Jaeger
2. Species, Descriptive Efficiency, and Progress in Systematics 7
Darrel Frost
3. Geographic Protein Variation and Speciation in Salamanders of the
Plethodon jordani and *Plethodon glutinosus* Complexes in the
Southern Appalachian Mountains with the Description of
Four New Species 31
Richard Highton and Robert B. Peabody
4. Detecting Species Borders Using Diverse Data Sets: Examples from
Plethodontid Salamanders in California 95
David B. Wake and Elizabeth L. Jockusch
5. The Systematics of *Desmognathus imitator* 121
Stephen G. Tilley
6. Species Boundaries and Species Diversity in the Central Texas
Hemidactyliine Plethodontid Salamanders, Genus *Eurycea* 149
Paul T. Chippindale
7. Systematics at the Turn of a Century 167
Stevan J. Arnold

Part II: Evolutionary and Comparative Biology of Plethodontids

8. Ethological Isolation and Variation in Allozymes and Dorsolateral
Pattern between Parapatric Forms in the *Desmognathus*
ochrophaeus Complex 181
Louise S. Mead and Stephen G. Tilley

9. Phylogenetic Relationships within the Lowland Tropical Salamanders of the <i>Bolitoglossa mexicana</i> Complex (Amphibia: Plethodontidae)	199
Mario García-París, Gabriela Parra-Olea, and David B. Wake	
10. Detecting Cryptic Species Using Allozyme Data	215
Richard Highton	
11. Sexual Size Dimorphism in the Plethodontidae	243
Richard C. Bruce	
12. Skull Development in Two Plethodontid Salamanders (Genus <i>Desmognathus</i>) with Different Life Histories	261
Sharyn B. Marks	
13. Egg Recognition Cues and Maternal Behavior in <i>Desmognathus ocoee</i>	277
Brian S. Masters and Don C. Forester	
14. Southeastern U.S. Coastal Plain Habitats of the Plethodontidae: The Importance of Relief, Ravines, and Seepage	287
D. Bruce Means	
15. Life History Evolution and Adaptive Radiation of Hemidactyliine Salamanders	303
Travis J. Ryan and Richard C. Bruce	
16. Population Cytogenetics of the Plethodontid Salamander <i>Eurycea wilderae</i>	327
Stanley K. Sessions and Jodi L. Wiktorowski	
17. Sperm Storage in Female Plethodontids with Especial Reference to the Desmognathinae	345
David M. Sever	
18. The Courtship of Plethodontid Salamanders: Form, Function, and Phylogeny	371
Paul Verrell and Michelle Mabry	
 Part III: Behavioral Ecology of Small <i>Plethodon</i>	
19. Divergence of Trophic Morphology and Resource Use among Populations of <i>Plethodon cinereus</i> and <i>P. hoffmani</i> in Pennsylvania: A Possible Case of Character Displacement	383
Dean C. Adams	
20. Environmental Variation and Territorial Behavior in a Terrestrial Salamander	395
John C. Maerz and Dale M. Madison	

21. Contributions to the Life History of the Redback Salamander, <i>Plethodon cinereus</i> : Preliminary Evidence for Kin Recognition	407
Don C. Forester and Courtney L. Anders	
22. Alternative Life Styles in a Terrestrial Salamander: Do Females Preferentially Associate with Each Other?	417
Megan G. Peterson, Jennifer R. Gillette, Raelyn Franks, and Robert G. Jaeger	
23. Pheromonal Attractions to Particular Males by Female Redback Salamanders (<i>Plethodon cinereus</i>)	431
Jennifer R. Gillette, Sara E. Kolb, Joshua A. Smith, and Robert G. Jaeger	
24. A Model of Alternative Mating Strategies in the Redback Salamander, <i>Plethodon cinereus</i>	441
Robert G. Jaeger, Megan G. Peterson, and Jennifer R. Gillette	
25. Cutaneous Microbial Flora and Antibiosis in <i>Plethodon ventralis</i> : Inferences for Parental Care in the Plethodontidae	451
Richard M. Austin, Jr.	
26. Monitoring <i>Plethodon cinereus</i> Populations: Field Tests of Experimental Coverboard Designs	463
Margaret A. Carfioli, Harry M. Tiebout III, Susan A. Pagano, Kristina M. Heister, and Fredric C. Lutzer	
Index	477