

Biology of Subterranean Fishes

Editors

Eleonora Trajano

Departamento de Zoologia
Instituto de Biociências da USP
São Paulo – SP
Brazil

Maria Elina Bichuette

Departamento de Ecologia e Biologia Evolutiva
Universidade Federal de São Carlos
São Carlos – SP
Brazil

B.G. Kapoor

Formerly Professor of Zoology
Jodhpur University
India



CRC Press
Taylor & Francis Group
an **informa** business
www.crcpress.com

6000 Broken Sound Parkway, NW
Suite 300, Boca Raton, FL 33487
270 Madison Avenue
New York, NY 10016
2 Park Square, Milton Park
Abingdon, Oxon OX 14 4RN, UK



Science Publishers
Enfield, New Hampshire

Contents

<i>Preface</i>	<i>v</i>
<i>Foreword – Tom Poulson and Speleobiology—A Reflection</i>	
<i>David C. Culver</i>	<i>vii</i>
1. Cavefish: Retrospective and Prospective	1
<i>Thomas L. Poulson</i>	
2. Biodiversity and Distribution of the Subterranean Fishes of the World	41
<i>Graham S. Proudlove</i>	
3. Conservation of Subterranean Fishes	65
<i>Maria Elina Bichuette and Eleonora Trajano</i>	
4. Behavioral Patterns in Subterranean Fishes	81
<i>Jakob Parzefall and Eleonora Trajano</i>	
5. The Evolutionary Genetics of Cave Fishes: Convergence, Adaptation and Pleiotropy	115
<i>Richard Borowsky</i>	
6. Development as an Evolutionary Process in <i>Astyanax</i> Cavefish	141
<i>William R. Jeffery and Allen G. Strickler</i>	
7. Subterranean Fishes of North America: Amblyopsidae	169
<i>Matthew L. Niemiller and Thomas L. Poulson</i>	
8. Subterranean Fishes of Mexico (<i>Poecilia mexicana</i>, <i>Poeciliidae</i>)	281
<i>Martin Plath and Michael Tobler</i>	
9. Subterranean Fishes of Brazil	331
<i>Eleonora Trajano and Maria Elina Bichuette</i>	
10. Subterranean Fishes of Africa	357
<i>Roberto Berti and Giuseppe Messina</i>	

11. Subterranean Fishes of China	397
<i>Chen Zi-Ming, Luo Jing, Xiao Heng and Yang Jun-Xing</i>	
12. Subterranean Fishes of India	415
<i>Atanu Kumar Pati and Arti Parganiha</i>	
Subject Index	441
Index of Scientific Names	451
Author Index	455
About the Editors	457
Color Plate Section	459