

Cambridge University Press

978-1-108-47707-9 — The Species–Area Relationship

Edited by Thomas J. Matthews, Kostas A. Triantis, Robert J. Whittaker

Table of Contents

[More Information](#)

Contents

<i>List of Contributors</i>	<i>page</i> x
<i>Foreword</i>	xiv
<i>Mark V. Lomolino</i>	
<i>Preface</i>	xix
 Part I Introduction and History	
1 The Species–Area Relationship: Both General and Protean?	1
<i>Thomas J. Matthews, Kostas A. Triantis and Robert J. Whittaker</i>	3
2 The History of the Species–Area Relationship	20
<i>Even Tjørve, Thomas J. Matthews and Robert J. Whittaker</i>	
 Part II Diversity–Area Relationships: The Different Types and Underlying Factors	
3 Explaining Variation in Island Species–Area Relationship (ISAR) Model Parameters between Different Archipelago Types: Expanding a Global Model of ISARs	51
<i>Thomas J. Matthews, François Rigal, Konstantinos Proios, Kostas A. Triantis and Robert J. Whittaker</i>	
4 Determinants of the Shape of Species–Area Curves	78
<i>Even Tjørve, Kathleen M. C. Tjørve, Eva Šízlingová and Arnošt L. Šízling</i>	
5 Functional and Phylogenetic Diversity–Area Relationships	107
<i>Florent Mazel and Wilfried Thuiller</i>	

Cambridge University Press

978-1-108-47707-9 — The Species–Area Relationship

Edited by Thomas J. Matthews, Kostas A. Triantis, Robert J. Whittaker

Table of Contents

[More Information](#)

viii · Contents

6 Species–Area Relationships in Alien Species: Pattern and Process	133
<i>Tim M. Blackburn, Phillip Cassey and Petr Pyšek</i>	
Part III Theoretical Advances in Species–Area Relationship Research	155
7 Mathematical Expressions for the Species–Area Relationship and the Assumptions behind the Models	157
<i>Even Tjørve and Kathleen M. C. Tjørve</i>	
8 Biodiversity Scaling on a Continuous Plane: Geometric Underpinnings of the Nested Species–Area Relationship	185
<i>Arnošt L. Šízling and David Storch</i>	
9 Species Accumulation Curves and Extreme Value Theory	211
<i>Luis Borda-de-Águia, Saeid Alirezazadeh, Manuela Neves, Stephen P. Hubbell, Paulo A. V. Borges, Pedro Cardoso, Francisco Dionísio and Henrique M. Pereira</i>	
10 The Species–Area Relationship: Idiosyncratic or Produced by ‘Laws Acting around Us’?	227
<i>John Harte</i>	
11 The Species–Area Relationships of Ecological Neutral Theory	259
<i>James Rosindell and Ryan A. Chisholm</i>	
12 On the Interface of Food Webs and Spatial Ecology: The Trophic Dimension of Species–Area Relationships	289
<i>Robert D. Holt, Dominique Gravel, Adrian Stier and James Rosindell</i>	

Cambridge University Press

978-1-108-47707-9 — The Species–Area Relationship

Edited by Thomas J. Matthews, Kostas A. Triantis, Robert J. Whittaker

Table of Contents

[More Information](#)

Contents · ix

Part IV The Species–Area Relationship in Applied Ecology	319
13 The Identification of Biodiversity Hotspots Using the Species–Area Relationship <i>Simone Fattorini</i>	321
14 Using the Species–Area Relationship to Predict Extinctions Resulting from Habitat Loss <i>Simone Fattorini, Werner Ulrich and Thomas J. Matthews</i>	345
15 Using Network Analysis to Explore the Role of Dispersal in Producing and Maintaining Island Species–Area Relationships <i>Joseph A. Veech and Giovanni Strona</i>	368
16 Does Geometry Dominate Extinction due to Habitat Loss? <i>Athanasios S. Kallimanis and John M. Halley</i>	399
17 Using Relict Species–Area Relationships to Estimate the Conservation Value of Reservoir Islands to Improve Environmental Impact Assessments of Dams <i>Isabel L. Jones, Anderson Saldanha Bueno, Maira Benchimol, Ana Filipa Palmeirim, Danielle Storck-Tonon and Carlos A. Peres</i>	417
18 An Investigation of Species–Area Relationships in Marine Systems at Large Spatial Scales <i>Karl Inne Ugland and Alexandra Kraberg</i>	438
Part V Future Directions in Species–Area Relationship Research	457
19 The Island Species–Area Relationship: Rosenzweig’s Dinosaur Is Still Alive <i>Kostas A. Triantis</i>	459
Index	476