## Contents

	List of Contributors provide the provided and the provide the provided and	age x xiv
	Mark V. Lomolino	
	Preface	xix
Part I	Introduction and History	1
1	The Species–Area Relationship: Both General and Protean? Thomas J. Matthews, Kostas A. Triantis and Robert J. Whittaker	3
2	The History of the Species–Area Relationship Even Tjørve, Thomas J. Matthews and Robert J. Whittaker	20
Part II	Diversity–Area Relationships: The Different Types and Underlying Factors	49
3	Explaining Variation in Island Species–Area Relationship (ISAR) Model Parameters between Different Archipelago Types:	
	Expanding a Global Model of ISARs	51
	Thomas J. Matthews, François Rigal, Konstantinos Proios, Kostas A. Triantis and Robert J. Whittaker	
4	Determinants of the Shape of Species–Area Curves Even Tjørve, Kathleen M. C. Tjørve, Eva Šizlingová and Arnošt L. Šizling	78
5	Functional and Phylogenetic Diversity–Area Relationships Florent Mazel and Wilfried Thuiller	107

Contents	
Species–Area Relationships in Alien Species: Pattern and Process Tim M. Blackburn, Phillip Cassey and Petr Pyšek	13
Theoretical Advances in Species–Area Relationship Research	15
Mathematical Expressions for the Species-Area Relationship and the Assumptions behind the Models Even Tjørve and Kathleen M. C. Tjørve	15
Biodiversity Scaling on a Continuous Plane: Geometric Underpinnings of the Nested Species-Area Relationship Arnošt L. Šizling and David Storch	18
Species Accumulation Curves and Extreme Value Theory Luís Borda-de-Água, Saeid Alirezazadeh, Manuela Neves, Stephen P. Hubbell, Paulo A. V. Borges, Pedro Cardoso, Francisco Dionísio and Henrique M. Pereira	21
The Species-Area Relationship: Idiosyncratic or Produced by 'Laws Acting around Us'? John Harte	22
The Species–Area Relationships of Ecological Neutral Theory James Rosindell and Ryan A. Chisholm	25
On the Interface of Food Webs and Spatial Ecology: The Trophic Dimension of Species-Area Relationships Robert D. Holt, Dominique Gravel, Adrian Stier and James Rosindell	28
	<ul> <li>Species–Area Relationships in Alien Species: Pattern and Process Tim M. Blackburn, Phillip Cassey and Petr Pyšek</li> <li>Theoretical Advances in Species–Area Relationship Research</li> <li>Mathematical Expressions for the Species–Area Relationship and the Assumptions behind the Models</li> <li>Even Tjørve and Kathleen M. C. Tjørve</li> <li>Biodiversity Scaling on a Continuous Plane: Geometric Underpinnings of the Nested Species–Area Relationship</li> <li>Arnošt L. Šizling and David Storch</li> <li>Species Accumulation Curves and Extreme Value Theory</li> <li>Luís Borda-de-Água, Saeid Alirezazadeh, Manuela Neves, Stephen P. Hubbell, Paulo A. V. Borges, Pedro Cardoso, Francisco Dionísio and Henrique M. Pereira</li> <li>The Species–Area Relationship: Idiosyncratic or Produced by 'Laws Acting around Us'? John Harte</li> <li>The Species–Area Relationships of Ecological Neutral Theory</li> <li>James Rosindell and Ryan A. Chisholm</li> <li>On the Interface of Food Webs and Spatial Ecology: The Trophic Dimension of Species–Area Relationships</li> <li>Robert D. Holt, Dominique Gravel, Adrian Stier and</li> </ul>

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