

# Contents

## **Part I Current Challenges of High Mountain Conservation**

- 1 The High Mountain Conservation in a Changing World . . . . . 3**  
Jordi Catalan, Josep M. Ninot and M. Mercè Aniz
- 2 Trade-offs in High Mountain Conservation . . . . . 37**  
Francisco Lloret

## **Part II Developing a Historical Perspective of the High Mountain Social-Ecological System**

- 3 Molecular Biogeography of the High Mountain Systems of Europe: An Overview . . . . . 63**  
Thomas Schmitt
- 4 The Beginning of High Mountain Occupations in the Pyrenees. Human Settlements and Mobility from 18,000 cal BC to 2000 cal BC . . . . . 75**  
Ermengol Gassiot Ballbè, Niccolò Mazzucco, Ignacio Clemente Conte, David Rodríguez Antón, Laura Obea Gómez, Manuel Quesada Carrasco and Sara Díaz Bonilla
- 5 The Role of Environmental Geohistory in High-Mountain Landscape Conservation . . . . . 107**  
Albert Pèlachs, Ramon Pérez-Obiol, Joan Manuel Soriano, Raquel Cunill, Marie-Claude Bal and Juan Carlos García-Codron
- 6 The Multiple Factors Explaining Decline in Mountain Forests: Historical Logging and Warming-Related Drought Stress is Causing Silver-Fir Dieback in the Aragón Pyrenees . . . . . 131**  
J. Julio Camarero

### **Part III Emerging Values in Mountain Conservation**

- 7 Towards a Microbial Conservation Perspective in High Mountain Lakes. . . . .** 157  
Emilio O. Casamayor
- 8 Why Should We Preserve Fishless High Mountain Lakes? . . . . .** 181  
Marc Ventura, Rocco Tiberti, Teresa Buchaca, Danilo Buñay,  
Ibor Sabás and Alexandre Miró
- 9 Are Soil Carbon Stocks in Mountain Grasslands Compromised  
by Land-Use Changes? . . . . .** 207  
Jordi Garcia-Pausas, Joan Romanyà, Francesc Montané,  
Ana I. Rios, Marc Taull, Pere Rovira and Pere Casals
- 10 The Importance of Reintroducing Large Carnivores:  
The Brown Bear in the Pyrenees . . . . .** 231  
Santiago Palazón

### **Part IV Global Change and High Mountain Conservation**

- 11 Life-History Responses to the Altitudinal Gradient . . . . .** 253  
Paola Laiolo and José Ramón Obeso
- 12 Non-equilibrium in Alpine Plant Assemblages: Shifts  
in Europe's Summit Floras. . . . .** 285  
Christian Rixen and Sonja Wipf
- 13 Changes in Climate, Snow and Water Resources  
in the Spanish Pyrenees: Observations and Projections  
in a Warming Climate . . . . .** 305  
Enrique Morán-Tejeda, Juan Ignacio López-Moreno  
and Alba Sanmiguel-Vallelado
- 14 Atmospheric Chemical Loadings in the High Mountain:  
Current Forcing and Legacy Pollution . . . . .** 325  
Lluís Camarero
- 15 Importance of Long-Term Studies to Conservation Practice:  
The Case of the Bearded Vulture in the Pyrenees . . . . .** 343  
Antoni Margalida
- 16 Monitoring Global Change in High Mountains. . . . .** 385  
Regino Zamora, Antonio J. Pérez-Luque and Francisco J. Bonet

High Mountain Conservation in a Changing World

Catalan, J.; Ninot, J.M.; Aniz, M. (Eds.)

2017, XIV, 413 p. 114 illus., 86 illus. in color., Hardcover

ISBN: 978-3-319-55981-0