

Contents

| | | |
|--|---|------------|
| 1 | A Brief History of Marine Litter Research | 1 |
| | Peter G. Ryan | |
| Part I Abiotic Aspects of Marine Litter Pollution | | |
| 2 | Global Distribution, Composition and Abundance of Marine Litter | 29 |
| | François Galgani, Georg Hanke and Thomas Maes | |
| 3 | Persistence of Plastic Litter in the Oceans | 57 |
| | Anthony L. Andrady | |
| Part II Biological Implications of Marine Litter | | |
| 4 | Deleterious Effects of Litter on Marine Life | 75 |
| | Susanne Kühn, Elisa L. Bravo Rebolledo and Jan A. van Franeker | |
| 5 | The Complex Mixture, Fate and Toxicity of Chemicals Associated with Plastic Debris in the Marine Environment | 117 |
| | Chelsea M. Rochman | |
| 6 | Marine Litter as Habitat and Dispersal Vector | 141 |
| | Tim Kiessling, Lars Gutow and Martin Thiel | |

Part III Microplastics

7 Microplastics in the Marine Environment: Sources, Consequences and Solutions. 185
Richard C. Thompson

8 Methodology Used for the Detection and Identification of Microplastics—A Critical Appraisal. 201
Martin G.J. Löder and Gunnar Gerdts

9 Sources and Pathways of Microplastics to Habitats 229
Mark A. Browne

10 Microplastics in the Marine Environment: Distribution, Interactions and Effects 245
Amy Lusher

11 Modeling the Role of Microplastics in Bioaccumulation of Organic Chemicals to Marine Aquatic Organisms. A Critical Review 309
Albert A. Koelmans

12 Nanoplastics in the Aquatic Environment. Critical Review 325
Albert A. Koelmans, Ellen Besseling and Won J. Shim

Part IV Socio-economic Implications of Marine Anthropogenic Litter

13 Micro- and Nano-plastics and Human Health 343
Tamara S. Galloway

14 The Economics of Marine Litter 367
Stephanie Newman, Emma Watkins, Andrew Farmer, Patrick ten Brink and Jean-Pierre Schweitzer

15 Regulation and Management of Marine Litter 395
Chung-Ling Chen

16 The Contribution of Citizen Scientists to the Monitoring of Marine Litter. 429
Valeria Hidalgo-Ruz and Martin Thiel



<http://www.springer.com/978-3-319-16509-7>

Marine Anthropogenic Litter

Bergmann, M.; Gutow, L.; Klages, M. (Eds.)

2015, XVIII, 447 p. 68 illus., 35 illus. in color., Hardcover

ISBN: 978-3-319-16509-7