Contents

Contributors ix
Abbreviations and acronyms xi
Preface xiv
Acknowledgements xv

1 Recent Developments 1
   Ravi Fotedar, Gopal Krishna, Uras Tantulo, Iain McGregor and Bruce Phillips
   1.1 Introduction 1
   1.2 Disease resistance in aquaculture systems vis-à-vis breeding strategy 1
   1.3 Freshwater ornamental aquaculture – an industry view from Western Australia 5
   1.4 Use of immunostimulants as feed additives 10
   1.5 Alternative sites for aquaculture 11
   1.6 Future directions 16
   1.7 References 16

2 A Global Review of Spiny Lobster Aquaculture 22
   Bruce Phillips and Hirokazi Matsuda
   2.1 Introduction 22
   2.2 Broodstock management 28
   2.3 Larval rearing 30
   2.4 Raising wild-caught pueruli and juveniles 46
   2.5 Future developments 65
   2.6 References 68

3 Slipper Lobsters 85
   Manambrakat Vijayakumaran and Edakkepravan V. Radhakrishnan
   3.1 Introduction 85
   3.2 Biology 87
   3.3 Aquaculture potential 88
   3.4 Marketing 89
   3.5 Slipper lobster culture initiatives 90
   3.6 Hatchery production of seeds 90
   3.7 Factors influencing phyllosoma growth and survival 95
   3.8 Hatching and larval rearing in Thenus sp. 99
   3.9 Growth of juvenile slipper lobsters 101
3.10 Culture of *Thenus* sp. 103
3.11 Conclusions 109
3.12 References 110

4 Mud Crab Aquaculture 115
*Brian D. Paterson and David L. Mann*

4.1 Introduction 115
4.2 Portunid crab aquaculture 116
4.3 Biology and life cycle 119
4.4 Technology development 122
4.5 Future developments 125
4.6 References 131

5 Penaeid Prawns 136
*Ngo Van Hai, Ravi Fotedar and Nguyen Van Hao*

5.1 Introduction 136
5.2 Achievements 137
5.3 Challenges 157
5.4 Prospective/future outlook 159
5.5 References 161

6 Cobia Culture 179
*Ravi Fotedar and Huynh Minh Sang*

6.1 Introduction 179
6.2 Morphology 179
6.3 Distribution 181
6.4 Biological characteristics 181
6.5 Nutritional requirement of cobia 183
6.6 Hatchery 186
6.7 Growout 189
6.8 Disease and health management 191
6.9 Post-harvest and marketing 194
6.10 Challenges and opportunities 195
6.11 References 196

7 Barramundi Aquaculture 199
*Suresh Job*

7.1 Introduction 199
7.2 Biology 200
7.3 Hatchery production 202
7.4 Hatchery culture 207
7.5 Growout 211
7.6 Nutrition and growth 213
7.7 Health management 216
7.8 Quality 221
11.7 Marketing of tilapia 327
11.8 Conclusion 330
11.9 References 331

12 Carp Polyculture in India 334
   Dilip Kumar 334
   12.1 Introduction 334
   12.2 Freshwater aquaculture resources in India 335
   12.3 Development of aquaculture 336
   12.4 Commonly cultured species 336
   12.5 Aquaculture practices/systems 339
   12.6 Developments in culture practices 351
   12.7 Culture of pangasius (Pangasianodon hypophthalmus) 359
   12.8 Freshwater prawn farming 362
   12.9 Recent developments 366
   12.10 References 366

13 Future Directions 368
   Bruce Phillips, Ravi Fotedar, Jane Fewtrell and Simon Longbottom 368
   13.1 Introduction 368
   13.2 Developments in managing the environmental impacts of aquaculture 368
   13.3 Ecolabelling 378
   13.4 The future 381
   13.5 References 381

Index 387

 Colour plate section facing page 48