

Contents

0.1. Research topics	1
0.2. Underlying issues	1
0.3. Research objectives	2
0.4. Discussions	3
I. Coral stones	5
1. The physical and historical contexts	7
1.1. The geography of coral reefs	7
1.1.1. Updating	7
1.1.2. Typologies	11
1.1.3. From reefs to platforms	13
1.2. The path of knowledge	21
1.2.1. Travellers' journals	21
1.2.2. How Sofala faded away between the rivers and the ocean .	34
1.2.3. The coast and coral stone buildings	42
1.2.4. From Zanzibar to Inhambane	43
1.2.5. Coral stones for constructions	56
2. The coral limestone heritage	61
2.1. The cultural and the natural heritage	61
2.2. Contexts and heritage conservation	70
2.3. Rules for the preservation of the cultural and natural heritage on the tropical coasts	76
2.4. The natural and human environments and their equilibrium	80
2.5. Stones, lime, sand and <i>murrapa</i>	94
3. Knowledge, conservation and restoration	107
3.1. Ibo, a first case study	107
3.1.1. <i>Plano de urbanização da vila do Ibo</i>	107
3.1.2. Reef, backreef and the island	116

3.2. Inhambane, the second case study	121
3.2.1. The degradation of the church walls of Nossa Senhora da Conceição in Inhambane	121
3.2.2. Well-known physical and chemical behaviours	125
3.2.3. Capillarity	131
3.2.4. From dampness to instability	133
3.2.5. After the restoration of church of Nossa Senhora da Con- ceição, a new disruptive cycle begins	138
3.2.6. The hypothesis of an ancient disruption: was it caused by salts?	142
3.3. Ilha de Moçambique, a third study case	144
3.3.1. Different hardness in coral rocks	144
3.3.2. The Fortaleza de São Sebastião	155
3.3.3. Restoration of the walls of an old <i>casa-feitoria</i> in Ilha de Moçambique	170
II. Miscellaneous cases	181
4. Miscellaneous cases	185
4.1. The Red Castle in Tripoli and the site of Sabratha	185
4.2. The Arab Coasts	196
4.3. Conservation of 16th century bastions. The surface protection.	212
4.3.1. Experiences in the city of Padua.	213
4.3.2. Weed control and minimal intervention works in a big size ruin.	221
4.4. The restoration of the Defterdar mosque in Pejë/Peć	224
4.5. A method of consolidation	236
III. Appendix	249
A. Different sources	253
A.1. João Dos Santos	253
A.2. Gaspar Correa	255
A.3. Charles Darwin	261
A.4. William Fitz William Owen	264
A.5. Andrew Petersen	265

B. Different experiences	267
B.1. Plano de Urbanização da Vila do Ibo	267
B.2. Restoration of the Defterdar mosque in Pejë/Peć (Kosovo)	272
B.3. Preliminary report for six restoration works in Ilha de Moçambique (2002) - Rewriting (2009)	282
C. Abbreviations	295
Acknowledgments	311