

Contents

<i>List of Figures</i>	page xv
<i>List of Maps and Table</i>	xviii
<i>Preface and Acknowledgements</i>	xix
<i>List of Abbreviations</i>	xxvi
Introduction. Considering Fisheries: Medieval Europe and Its Legacies	
1.1 Fish Tales	1
I.1.1 Observations and Inferences: The Long Demise of the Atlantic Sturgeon	2
I.1.2 Communities, Culture, and Sustained Fishing on Lake Constance	6
I.1.3 From Fish to Commodity	14
I.1.4 Telling Tales in Time and Space	19
1.2 Doing Environmental History	21
I.2.1 Interactions: Nature and Human Culture, People and Places	21
I.2.2 Interrogating What Remains	25
1.3 Then and Now and Then	29
1 “Natural” Aquatic Ecosystems around Late Holocene Europe	31
1.1 Watersheds and Seas	31
1.2 Which Fishes Lived Where?	38
1.2.1 In Freshwater Europe	38
1.2.2 Marine Zoogeography	41
1.3 Ecosystems, Habitats, and Communities	42
1.4 Food Webs and Other Relationships	45
1.5 Rome and After	52
2 Protein, Penance, and Prestige: Medieval Demand for Fish	55
2.1 Dietary Protein	55
2.1.1 Fish on Medieval Menus	56
2.1.2 We Are What We Ate, and So Are Our Remains	62
2.2 Prerogatives of Culture	68
2.2.1 Religious Taboos on Meat	68
2.2.2 Medieval Concepts of Health and Diet	72
2.3 Social Display	77
	xi

xii	Contents	
	2.3.1 Fish to Mark High Status and Honour	78
	2.3.2 Scales of Value	82
2.4	A Stratified Structure of Demand	85
	2.4.1 Costly Food at Any Level	86
	2.4.2 Fishing for Subsistence, Sale, or Play?	88
3	Take and Eat: Subsistence Fishing in and beyond the Early Middle Ages	89
3.1	Local Supply	90
3.2	Direct Subsistence Fishing	95
	3.2.1 Fishing “for Their Own Table”	96
	3.2.2 Mutual Regulation and Local Ecological Knowledge	98
	3.2.3 Defending Fisheries Commons	101
3.3	Indirect Subsistence Fishing	104
	3.3.1 Obligated Peasant Workers	104
	3.3.2 The Lord’s Expert Servants	105
3.4	Compatible Technologies	111
	3.4.1 Small Gears for Household Use	112
	3.4.2 Crew-Served Equipment and Installations	121
	3.4.3 Saving the Catch for Future Use	128
4	Master Artisans and Local Markets	133
4.1	Artisan Fisheries and Their Formation	135
	4.1.1 “To Make Their Living by Fishing”	135
	4.1.2 Transitions: From Servants to Sellers	142
4.2	Household Enterprises in Local Communities	144
	4.2.1 Social Positions: Residence and Status	145
	4.2.2 Small-Scale Technologies	146
	4.2.3 A Gender Division of Labour	149
	4.2.4 Collective Organization	150
4.3	Urban Fish Markets	154
	4.3.1 Freshly Caught from Nearby Waters	155
	4.3.2 Fishmongers	158
	4.3.3 For the Sake of Safe Abundance	169
4.4	Market Price	173
	4.4.1 Price Formation	173
	4.4.2 Buying Fish	179
5	Aquatic Systems under Stress, c. 1000–1350	183
5.1	Environmental Consequences of Demographic and Economic Growth	184
	5.1.1 Habitat Destruction	184
	5.1.2 Perceptions of Overfishing and the Evidence of Depletion	193
5.2	Beneficiaries?	198
	5.2.1 Eel	198
	5.2.2 Herring Fisheries on the Rise	201
	5.2.3 Exotic Carp Invade the West	206
5.3	Regional Manifestations of Changing Fisheries	212
5.4	Natural Dynamics	217
	5.4.1 Climatic and Hydrographic Fluctuations at Multiple Scales	217
	5.4.2 Traces of Impacts, Resilience, and Adaptation	225

Contents	xiii
<b>6 Cultural Responses to Scarcities of Fish</b>	<b>231</b>
6.1 Allocating Fish and Fisheries Resources	231
6.1.1 Trends of Rising Fish Prices	232
6.1.2 Privatization of Fishing Rights	237
6.2 Public Regulation of Fisheries	249
6.2.1 Authority	249
6.2.2 Measures	252
6.2.3 To What End?	262
<b>7 Going beyond Natural Local Ecosystems, I: Carp Aquaculture As Ecological Revolution</b>	<b>268</b>
7.1 Eating from outside Natural Local Ecosystems	268
7.2 From Wildlife Management to Aquaculture	275
7.2.1 A Benchmark: Advanced Traditional European Fish Farming	277
7.2.2 Emerging Technologies: Engineering, Practices, Fish	284
7.2.3 Diffusion of Innovations	292
7.3 Aquaculture As Ecological Revolution	295
7.3.1 Demand: Live Fresh Fish for Inland Elites	295
7.3.2 Exercise of Elite Power	298
7.3.3 Adaptive Economic Structures	302
7.3.4 Colonized Ecosystems	308
<b>8 Going beyond Natural Local Ecosystems, II: Over the Horizon toward Abundance and ‘Tragedy’</b>	<b>316</b>
8.1 Innovation on Marine Fisheries Frontiers	318
8.1.1 Networks for Silver	319
8.1.1.1 Early Export Centres	319
8.1.1.2 The Interplay of Technologies and Regional Success	323
8.1.1.3 An Evolving Consumer Base	329
8.1.2 The Stockfishsaga and other Tales of Codfishes	332
8.1.2.1 Norse Fisheries and Trades	334
8.1.2.2 Who Ate Which Medieval Codfishes?	340
8.1.3 Diverse Opportunities for Innovative Competitors	343
8.1.3.1 In Eastern Atlantic Waters	343
8.1.3.2 From Local Abundance to Distant Tables	347
8.1.3.3 On the Southern Frontier	349
8.2 Markets and Ecosystems, Expectations and Experiences	355
8.2.1 Distinctive Market Features	356
8.2.1.1 Preserved Fish	356
8.2.1.2 At Unprecedented Scale	357
8.2.1.3 To Be Eaten Far Away	361
8.2.1.4 Fluctuating Prices	364
8.2.2 New Structures in the Fisheries	377
8.3 Unanticipated Concomitants, Unintended Consequences	383
8.3.1 Risky Business	384
8.3.2 Herring, People, Climate, and Weather, c. 1350–1540	387
8.4 Infinite Fish?	400

xiv	Contents	
9	Last Casts: Two Perspectives on Past Environmental Relations	403
9.1	Fishing in the Medieval Encounter with European Nature	403
9.1.1	Story Lines	404
9.1.2	Undercurrents	406
9.2	In a Longer Haul: Medieval Legacies in a Present Global Fisheries Crisis	411
	<i>Appendix: A Glossary of European Fishes Named in the Book</i>	415
	<i>References</i>	420
	<i>Index</i>	542

Additional resources can be found online at [www.cambridge.org/TheCatch](http://www.cambridge.org/TheCatch)