

Table of Contents

1 Eutrophication and the Ecosystem	1
1.1 Background.....	1
1.2 Eutrophic and Eutrophicated Waters.....	2
1.3 Trophic Cascades in Freshwaters	5
1.4 Eutrophicated Waters: Disturbed Trophic Cascades.....	13
2 Daphnid Grazing Ecology.....	21
2.1 Daphnids and Their Ecological Role.....	21
2.2 Daphnid Grazing Effectiveness – Concept and Measurement	38
2.3 Modelling Daphnid Grazing Effectiveness.....	49
3 Toxic Reduction of Daphnid Grazing Effectiveness	57
3.1 Daphnid Ecotoxicology	57
3.2 Observations from Mesocosm Studies	62
3.3 Daphnid Grazing Effectiveness in Response to Toxicant Exposure	72
4 Field Observations of Daphnid Grazing	81
4.1 Two Different Lakes in Holland.....	81
4.2 The Plankton Dynamics in Lake Geestmerambacht	82
4.3 The Plankton Dynamics in Lake Amstelmeer	89
4.4 What Can Be Learned from These Lakes?.....	91
5 New Perspectives for Eutrophication Management.....	97
5.1 A New Dimension in Lake Eutrophication Management	97
5.2 How to Address Ecotoxicology in Eutrophication Management.....	102
5.3 Epilogue	108
Acknowledgements	111
References	113