

DIALOG III:

Dissertations Initiative for the Advancement of Limnology and Oceanography

**Abstracts of Ph.D. dissertations completed between
April 1, 1997 and March 31, 1999 and submitted to the
Dissertations Initiative for the Advancement of
Limnology and Oceanography (DIALOG III) Program**

DIALOG III Program Support:

The DIALOG Program is supported through
NSF grant #DES9628543 and ONR grant #N00014-98-0590
with contributions from the U.S.

National Aeronautics and Space Administration

Ocean Biology and Biogeochemistry Program

National Oceanic and Atmospheric Administration

Coastal Ocean and National Sea Grant College Programs

National Science Foundation

Antarctic Biology and Medicine, Arctic Natural Sciences, Biological Oceanography,

Ecology, Ecosystem Studies, and International Programs

Office of Naval Research

Biological and Chemical Oceanography Program

In addition to the agencies above, the DIALOG III symposium is partially funded by the
European Commission

Acknowledgements

The Dissertations Initiative for the Advancement of Limnology and Oceanography (DIALOG) Program was developed in response to the success of the Dissertations Symposium in Chemical Oceanography (DISCO) Program, originally conceived by Edward D. Goldberg.

Using the DISCO Symposium as a model, DIALOG was developed to foster interdisciplinary thinking and collaborative interactions among scientists whose work is important to the advancement of biologically oriented aquatic science.

The DIALOG Program is co-sponsored by the American Society of Limnology and Oceanography.

Program Information

DIALOG Program information is available at
www.aslo.org/dialog.html

This site includes information on future programs, interactive forms for registering Ph.D. dissertations and application instructions for DIALOG symposia. In addition, the site includes a complete citation and 1-page abstract of dissertations registered through the DIALOG Program.

Dissertation citations and program announcements also appear in the
ASLO Bulletin

For further information or to be placed on the mailing list for future programs, contact

Dr. C. Susan Weiler

DIALOG Program

Whitman College, Walla Walla, WA 99362

Tel: 509-527-5948 Fax: 509-527-5961

Weiler@whitman.edu

TABLE OF CONTENTS

INTRODUCTION i

DISSERTATION INDEX..... v

Includes complete dissertation citation

DISSERTATION ABSTRACTS 1

For dissertations completed between April 1, 1997 and
March 31, 1999 and submitted to the DIALOG III program

DIALOG III PROGRAM PARTICIPANTS 167

Includes:

Name and primary field of dissertation research (limnology = lim; oceanography = oce)

Address, telephone, fax, and e-mail (if available)

Key words describing area(s) of expertise

INTRODUCTION

The DIALOG Program was founded in order to reduce the historical, institutional and philosophical barriers that limit the exchange of information across the aquatic sciences, and to foster interdisciplinary thinking and collaboration. The program targets recent Ph.D. recipients whose work is applicable to biologically oriented limnology or oceanography. Through this program, relevant Ph.D. dissertation abstracts are collected and made available through this document and the ASLO web site (www.aslo.org/dialog.html); a symposium is held to facilitate understanding and collaborations across institutions and disciplines; and information is collected to characterize and track these new aquatic science professionals.

The first DIALOG program was held in 1994, targeting individuals who completed their last Ph.D. requirement between June 1, 1992 and August 31, 1994. The DIALOG II program targeted individuals completing their Ph.D. requirements between September 1, 1994 and March 31, 1997. The DIALOG III program targets individuals completing Ph.D. requirements between April 1, 1997 and March 31, 1999. The DIALOG IV program will target individuals completing Ph.D. requirements between March 31, 1999 and December 31, 2000.

A total of 166 dissertation abstracts were received for the DIALOG III Program, with 92 individuals applying for the DIALOG III symposium. This represents an increase in submissions compared with the DIALOG II Program (98 abstracts submitted with 87 applying for the symposium), even though the eligibility period for DIALOG III was shorter (24 months for DIALOG III, compared with 34 months for DIALOG II).

These numbers indicate that many individuals are taking advantage of the opportunity to "register" their dissertations, even if they are not interested in the symposium. Dissertation abstracts are immediately posted on the ASLO web page (www.aslo.org/dialog.html), and each issue of the *ASLO Bulletin* includes dissertation citations and e-mail addresses of those submitting abstracts since the previous Bulletin deadline.

The 166 program participants were citizens of the following countries: Argentina (3); Australia (1); Austria (1); Belgium (1); Brazil (5); Canada (8); Chile (1); China (4); Denmark (1); Egypt (1); Finland (1); France (3); Germany (12); Greece (1); India (2); Indonesia (1); Israel (2); Italy (2); Japan (7); Kenya (1); Korea (1); The Netherlands (4); New Zealand (5); Norway (1); Poland (2); Russia (3); Sweden (9); Switzerland (1); Turkey (1); United Kingdom (3); and United States (78).

Of the 166 DIALOG III participants, 92 completed their Ph.D. at U.S. institutions (Table I), including 16 citizens of other countries (2 Brazilians, 2 Canadians, 2 Chinese, 1 Dutch, 3 Germans, 1 Israeli, 1 Korean, 2 Russians, 1 Swedish and 1 Swiss). Two U.S. citizens completed their degrees outside the U.S. (one in Sweden and one in Denmark).

The 78 U.S. citizens had the following characteristics:

- 39 female, 39 male;
- 25 limnologists, 53 oceanographers;
- 7 underrepresented minorities (5 hispanic, 1 African American, 1 native)

- American/Alaskan);
- 64 were on postdoctoral or other temporary positions; 10 had permanent positions (2 of 10 were permanent, “soft money” positions); 3 were unemployed; and 1 made no response;
- 51 held positions within academia; 15 within government; 1 within industry; and 11 “other”.

The 88 citizens of other countries had the following characteristics:

- 30 female, 58 male;
- 39 limnologists, 49 oceanographers;
- 64 were on postdoctoral or other temporary positions; 20 had permanent positions (four of 19 were permanent, “soft money” positions); 4 were unemployed;
- 59 held positions within academia; 14 within government; 2 within industry; and 13 “other”.

DIALOG IV PROGRAM

DIALOG is an ongoing program. The DIALOG IV Program will include individuals who complete their last Ph.D. requirement between April 1, 1999 and December 31, 2000 and whose work is relevant to biologically oriented limnology or oceanography. The DIALOG IV symposium will be held in October, 2001. Individuals may register their dissertation and find symposium application instructions on the American Society of Limnology (ASLO) web page:

www.aslo.org/dialog.html

TABLE I. Institutions granting Ph.D. degrees to the 166 DIALOG III program participants. Numbers refer to the number of program participants who indicated limnology (lim) or oceanography (oce) as their primary field of interest.

Lim	Oce	U.S. Institutions	Lim	Oce	Institutions Outside the U.S. (continued)
1	0	Clemson University	1	0	Aachen University of Technology (Germany)
0	3	College of William and Mary	1	0	Agricultural Univ. of Wageningen (Netherlands)
1	0	Dartmouth College	1	0	Ain Shams University (Egypt)
0	1	Florida State University	0	1	Bar Ilan University (Israel)
0	1	Georgia Institute of Technology	0	4	Dalhousie University (Canada)
0	2	Louisiana State University	2	0	Dresden University of Technology (Germany)
1	0	Michigan Technological University	1	0	Free University of Amsterdam (The Netherlands)
1	0	Northwestern University	0	2	Hokkaido University (Japan)
2	0	Ohio State University	0	1	koyoto University (Japan)
0	1	Oklahoma State University	0	1	Linkoping university (Sweden)
0	1	Old Dominion University	1	0	M.V. Lomonosov Moscow State University (Russia)
0	1	Oregon State University	0	1	Memorial University of Newfoundland (Canada)
0	1	Rutgers University	1	0	Polish Academy of Sciences (Poland)
0	2	Stanford University	1	0	Punjabi University at Patiala (India)
0	3	State University of New York at Stony Brook	1	0	Queen's University (Canada)
0	5	Texas A & M University	0	1	Southampton University (United Kingdom)
1	0	University of Alabama	0	1	St. Petersburg University (Russia)
1	0	University of Arkansas	0	2	Stockholm University (Sweden)
2	2	University of California at Davis	0	1	Tohoku University (Japan)
0	1	University of California at Irvine	0	1	Tokyo University of Agriculture and Tech. (Japan)
0	1	University of California at San Diego	1	0	Trent University (Canada)
1	3	University of California at Santa Barbara	1	0	Umea University (Sweden)
0	1	University of California at Santa Cruz	0	1	United Graduated School of Ehme (Japan)
0	1	University of Chicago	1	0	Univ. Natl. del Sur, Bahia Blanca (Argentina)
2	0	University of Colorado	0	1	Universidade Federal do Parana (Brazil)
0	1	University of Delaware	1	0	Universitaires Notre-Dame de la Paix (Belgium)
0	1	University of Florida	0	1	Universite de la Mediterranee at Marseille (France)
1	0	University of Georgia	0	1	University of Bordeaux (France)
1	1	University of Hawaii	0	1	University of Aarhus (Denmark)
0	1	University of Houston	1	0	University of Amsterdam (The Netherlands)
0	2	University of Maine	0	1	University of Athens (Greece)
0	8	University of Maryland	0	2	University of Auckland (New Zealand)
0	1	University of Miami	0	3	University of Bremen (Germany)
1	0	University of Michigan	1	3	University of British Columbia (Canada)
1	0	University of Minnesota	0	1	University of Buenos Aires (Argentina)
1	0	University of Mississippi	1	0	University of Chile (Chile)
1	0	University of Nebraska	0	1	University of Essex (United Kingdom)
1	0	University of Nevada at Reno	0	1	University of Helsinki (Finland)
1	0	University of New Mexico	1	0	University of Hull (United Kingdom)
0	1	University of North Carolina at Chapel Hill	1	0	University of Karela (India)
2	0	University of Notre Dame	0	1	University of Kiel (Germany)
0	1	University of Puerto Rico at Mayaguez	1	0	University of London (United Kingdom)
0	6	University of Rhode Island	1	0	University of Lund (Sweden)
1	0	University of South Carolina	2	0	University of New South Wales (Australia)
0	2	University of Southern California	0	1	University of Perpignan-EPHE (France)
1	1	University of Texas at Austin	0	1	University of Plymouth (United Kingdom)
1	0	University of Virginia	0	1	University of Rostock (Germany)
0	4	University of Washington	0	1	University of Tokyo (Japan)
3	0	University of Wisconsin at Madison	1	0	University of Utrecht (The Netherlands)
1	0	University of Wisconsin at milwaukee	1	0	University of Vienna (Austria)
0	2	Woods Hole Oceanographic Institution/MIT	0	1	University of Waikato (New Zealand)
30	62	Total, U.S. Institutions	0	1	University of Wales (United Kingdom)
			1	0	University of Warsaw (Poland)
			1	0	University Paris Va de Marne ParisXII (France)
			1	0	University Pierre et Marie Curie (France)
			5	0	Uppsala University (Sweden)
			1	0	Vienna University (Austria)
			34	40	Total, Institutions Outside the U.S.

PH.D. DISSERTATION INDEX

- | Page | Dissertation Citation |
|------|--|
| 1 | An, Soonmo. 1999. Nitrogen cycling and denitrification in Galveston. Texas A&M University (USA), 235 pp |
| 2 | Arnott, Shelley E. 1998. Species turnover and richness of aquatic communities in north temperate lakes. University of Wisconsin at Madison (USA), 176 pp. |
| 3 | Baca, Robert M. 1998. The use of size distributions in ecological experiments. University of Mississippi (USA), 168 pp. |
| 4 | Baker, Michelle A. 1998. Organic carbon retention and metabolism in near-stream groundwater. University of New Mexico (USA), 139 pp. |
| 5 | Bath, Kulbir S. 1997. Limnological studies on the Harike wetland ecosystem. Punjabi University (India), 259 pp. |
| 6 | Beaulieu, Stace E. 1998. The ecology of glass sponge communities in the abyssal NE Pacific. University of California at San Diego (USA), 206 pp. |
| 7 | Bertolo, Andrea. 1998. Experimental studies on the role of fish on the functioning of lake pelagic systems. University Pierre et Marie Curie (France), 243 pp. |
| 8 | Berwald, Juli M. 1998. The relationship between the average cosine of the underwater light field and the inherent optical properties of the ocean. University of Southern California (USA), 186 pp. |
| 9 | Bizina, Yelena V. 1998. Top-down versus bottom-up regulation of plankton communities in freshwater oligotrophic ecosystems. M.V. Lomonosov Moscow State University (Russia), 138 pp |
| 10 | Blumenshine, Steven C. 1997. Responses of benthic macroinvertebrates to whole lake manipulations of fish and nutrient loading rates. University of Notre Dame (USA), 193 pp. |
| 11 | Bochdansky, Alexander B. 1997. Feeding physiology of the cold water appendicularian <i>Oikopleura vanhoeffeni</i> (Tunicata). Memorial University of Newfoundland (Canada), 205 pp. |
| 12 | Booth, Melissa G. 1997. Solar ultraviolet radiation and the role of RecA in marine bacteria.. Oklahoma State University (USA), 106 pp. |
| 13 | Boyer, Elizabeth W. 1998. Landscape scale controls on dissolved organic carbon flux in a mountainous catchment. University of Virginia (USA), 147 pp. |

- 14 **Bracher, Astrid U.** 1999. Photoacclimation of phytoplankton in different biogeochemical provinces of the Southern Ocean and its significance for estimating primary production. University of Bremen (Germany), 240 pp.
- 15 **Bremigan, Mary T.** 1997. Zooplankton dynamics and gizzard shad recruitment in Ohio reservoirs: Exploring the generality of food web theory. Ohio State Univeristy (USA), 184 pp.
- 16 **Buckel, Jeffrey A.** 1997. Impact of bluefish (*Pomatomus saltatrix*) predation on estuarine and continental shelf fishes. State University of New York at Stony Brook (USA), 199 pp.
- 17 **Campo de Ferreras, Alicia M.** 1999. The Quequen Grande River Hydrography. Universidad Nacional del Sur, Bahia Blanca (Argentina), 141 pp.
- 18 **Carrubba, Lisamarie.** 1998. Land use and water quality: Linking field-sampling, GIS and modeling. University of Georgia (USA), 193 pp.
- 19 **Charette, Matthew A.** 1998. Thorium-234 as a tracer of the oceanic export of particulate organic carbon. University of Rhode Island (USA), 267 pp.
- 20 **Charinjayyathu, Anil Kumar.** 1998. A Study on the application of data from Indian Remote Sensing Satelite for Pollution Monitoring Efforts with Special Reference to Retting of Coconut Husk in Anchuthengu – Kadinamkulam Estuarine System in Kerala. University of Kerala (India), 137 pp.
- 21 **Chen, Zhen.** 1997. The bioavailability of heavy metals in sediments. University of Maine (USA), 103 pp.
- 22 **Chevaldonne, Pierre.** 1996. Ecology of deep-sea hydrothermal vent chimneys. Universite de la Mediterranee, Marseille (France), 257 pp.
- 23 **Connolly, Sean R.** A latitudinal gradient in the structure of rocky intertidal communities: Benthic-oceanic coupling in the Northeast Pacific Ocean. Stanford University (USA), 191 pp.
- 24 **Contreras, Manuel A.** 1998. Carbon flow in a Clarillo stream ecosystem: Autotrophy v/s heterotrophy. University of Chile (Chile), 147 pp.
- 25 **Craig, Nancy I.** 1998. Sediment bioengineering and resource availability in a dense assemblage of the deep head down deposit-feeding polychaete *Clymenella torquata*. State University of New York at Stony Brook (USA), 220 pp.
- 26 **Cranford, Peter J.** 1998. Temporal perspectives on food acquisition by suspension-feeding bivalves: *Placopecten magellanicus* and *Mytilus edulis*. Dalhousie University (Canada), 258 pp.
- 27 **Cruz-Kaegi Marta E.** 1998. Latitudinal variations in biomass and metabolism of benthic infaunal communities. Texas A&M University (USA), 118 pp.

- 28 **Culver, Mary E.** 1996. Applications of chlorophyll a fluorescence to bio-optical models of phytoplankton biomass and productivity.
University of Washington (USA), 158 pp.
- 29 **Culver-Rymsza, Karen E.** 1998. The effect of nitrogen source on photoinhibition in marine phytoplankton.
University of Rhode Island (USA), 191pp.
- 30 **Czerwieniec, Ewa.** 1998. Denitrification and oxygen consumption in bottom sediment of selected reservoirs.
Polish Academy of Sciences (Poland), 131 pp.
- 31 **Dana, Gayle L.** 1997. Radiative and hydrological fluxes in the McMurdo Dry Valleys, Antarctica.
University of Nevada, Reno (USA), 213 pp.
- 32 **Danielsson, Asa K.** 1998. Spatial modeling in sediments.
Linkoping university (Sweden), 90 pp.
- 33 **Davidsson, Torbjorn E.** 1997. Nitrogen transformations in wetlands: Effects of water flow patterns.
University of Lund (Sweden), 114 pp.
- 34 **De La Rocha, Christina L.** 1997. Measurement of silicon isotope ratio variations in dissolved silicon and in biogenic silica: Demonstration of isotopic fractionation by marine diatoms and utility as a tracer of silicic acid utilization.
University of California at Santa Barbara (USA), 104 pp.
- 35 **De Lange, Hendrika J.** 1999. Effects of ultraviolet-B radiation on phytoplankton-zooplankton interactions.
Agricultural University at Wageningen (Netherlands), 187 pp.
- 36 **Dellapenna, Timothy M.** 1999. Fine-scale strata formation in biologically and physically dominated estuarine systems within the lower Chesapeake Bay and York River subestuary.
College of William and Mary (USA), 372 pp.
- 37 **DeLorenzo, Marie E.** 1997. Agricultural pesticide runoff in tidal creeks: Effects on microbial food web communities.
Clemson University (USA), 162 pp.
- 38 **Dixon, Joanna L.** 1998. Trace metal-particle water interactions in the western North Sea.
University of Plymouth (UK), 297 pp.
- 39 **Dobretsov, Sergey V.** 1998. Habitat choice in benthic invertebrate larvae - the dominant foulers in the White Sea.
St. Petersburg State University (Russia), 142 pp.
- 40 **Drake, Lisa A.** 1997. Distribution of free marine viruses of lower Chesapeake Bay and their effects on life-history parameters of the estuarine copepod *Acartia tonsa* Dana.
Old Dominion University (USA), 120 pp.
- 41 **Dunne, John P.** 1999. Measured and modeled particle export in equatorial and coastal upwelling regions.
University of Washington (USA), 167 pp.

- 42 **Duplisea, Daniel E.** 1998. Structuring of benthic communities, with a focus on size spectra. Stockholm University (Sweden), 140 pp.
- 43 **Ertman, Stephen C.** 1998. The dispersal and settlement of passively drifting, nonbuoyant larvae in the shallow coastal ocean. Florida State University (USA), 221 pp.
- 44 **Finelli, Christopher M.** 1997. The influence of behavior and physics on ecological processes. University of South Carolina (USA), 217 pp.
- 45 **Fischer, Janet M.** 1997. Zooplankton community responses to acidification: The role of rapid evolution and compensatory dynamics. University of Wisconsin (USA), 114 pp.
- 46 **Fradkin, Steven C.** 1997. Asexual diapause in the rotifer *Synchaeta pectinata*: Fitness costs and trade-offs associated with phenotypic variation in a natural population. Dartmouth College (USA), 132 pp.
- 47 **Friday, Nancy A.** 1997. Evaluating photographic capture-recapture estimates of abundance of north Atlantic humpback whales. University of Rhode Island (USA), 173 pp.
- 48 **Garrison, Lance P.** 1997. The influence of physical transport and nutritional stress on the zoeae of estuarine crabs. College of William and Mary (USA), 246 pp.
- 49 **Garvey, James E.** 1997. Strong interactors and community structure: Testing predictions for reservoir food webs. Ohio State University (USA), 235 pp.
- 50 **Goffredi, Shana K.** 1998. Physiological adaptations of the vent tubeworm *Riftia pachyptila*; including carbon dioxide and hydrogen sulfide uptake, unprecedented pH regulation, and a reverse chloride shift. University of California at Santa Barbara (USA), 211 pp.
- 51 **Goser, Brigitte E.** 1997. Density dependent life history in *Daphnia* - a change in life history strategy. Aachen University of Technology (Germany) 210 pp.
- 52 **Gosselain, Veronique.** 1998. Phytoplankton of the Meuse and the Moselle rivers and the impact of grazing by zooplankton. Universitaires Notre-Dame de la Paix (Belgium), 459 pp.
- 53 **Graziano, Lisa M.** 1995. Physiological responses of phytoplankton to nutrient limitation. University of Delaware (USA), 175 pp.
- 54 **Green, William R.** 1998. Relations between reservoir flushing rate and water quality. University of Arkansas, (USA) 227 pp.
- 55 **Groenkjaer, Peter.** 1997. The recruitment process in Baltic cod (*Gadus morhua* L.): Larval survival in a stratified environment. University of Aarhus (Denmark), 112 pp.

- 56 **Grottoli, Andrea G.** 1997. Interpretation of stable carbon isotopes in reef coral skeletons and applications for paleoclimate Reconstruction.
University of Houston (USA), 225 pp.
- 57 **Gundersen, Kjell.** 1998. Factors controlling bacterial abundance, biomass and growth at the Bermuda Atlantic Time-Series Study site.
Southampton University (UK), 183 pp.
- 58 **Handley, Sean J.** 1997. Spionid polychaete worm infestations of the Pacific oysters *Crassostrea gigas* in New Zealand.
University of Auckland (New Zealand), 151 pp.
- 59 **Hatch, Lorin K.** 1997. The generation, transport, and fate of phosphorus in the Lake Tahoe ecosystem.
University of California at Davis (USA), 212 pp.
- 60 **Heidelberg, Karla B.** 1999. The effects of water flow and zooplankton prey behavior on scleractinian coral heterotrophy.
University of Maryland (USA), 207 pp.
- 61 **Heiskanen Anna-Stiina.** 1998. Factors governing sedimentation and nutrient cycles in the pelagic ecosystem of the northern Baltic Sea.
University of Helsinki (Finland), 80 pp.
- 62 **Helmuth, Brian S.** 1997. The physical ecology of sessile marine invertebrates: Flows, fluxes and morphology.
University of Washington (USA), 191pp.
- 63 **Holz, John C.** 1998. Experimental and applied analyses of the role of phosphorus in structuring freshwater phytoplankton communities.
University of Nebraska (USA), 101 pp.
- 64 **Hovanec, Timothy A.** 1998. Characterization of the nitrifying bacteria in aquaria and Mono Lake, California, using molecular methods.
University of California at Santa Barbara (USA), 203 pp.
- 65 **Hunt, Heather L.** 1997. Structure and dynamics of intertidal mussel (*Mytilus trossulus*, *M. edulis*) assemblages.
Dalhousie University (Canada), 296 pp.
- 66 **Iluz, David.** 1998. The light field, phytoplankton pigmentation and productivity in the Gulf of Eilat, Red Sea.
Bar-Ilan University (Israel), 170 pp.
- 67 **Johnson-Pyrtle, Ashanti.** 1999. Distribution of ¹³⁷Cs in the Lena River Estuary-Laptev Sea System as evidenced by marine, estuarine and lacustrine sediments.
Texas A&M University (USA), 206 pp.
- 68 **Jonsson, Anders.** 1997. Whole lake metabolism of allochthonous organic material and the limiting nutrient concept in Lake Ortrasket, a large humic lake in northern Sweden.
Umea University (Sweden), 95 pp.

- 69 **Kaldy, James E.** 1997. Production dynamics, reproductive ecology and demography of *Thalassia testudinum* (turtle grass) from the Lower Laguna Madre, Texas. University of Texas at Austin (USA), 143 pp.
- 70 **Kamjunke, Norbert.** 1998. Bacterial production and primary production under varying trophic conditions and their importance as food source for daphnids in a biomanipulated reservoir. Dresden University of Technology (Germany), 96 pp.
- 71 **Karp-Boss, Lee.** 1998. Phytoplankton-flow interactions in relation to cell size and morphology. University of Washington (USA), 147 pp.
- 72 **Kastler Jessica A.** 1999. Interactions of minerals and organic materials along the salinity gradient in Barataria Basin Louisiana. Louisiana State University (USA), 144 pp.
- 73 **Kinnunen, Ronald E.** 1997. The effect of Lake Superior surface water temperature on lake herring (*Coregonus artedii*) length and year-class strength. Michigan Technological University (USA), 99pp.
- 74 **Kirby, Michael X.** 1999. Stable isotope sclerochronology and paleoecology of Cenozoic oysters (*Crassostrea*). University of California at Davis (USA), 120 pp.
- 75 **Kobari, Toru.** 1999. Life cycles and interannual variabilities of three *Neocalanus* copepods in the subarctic Pacific. Hokkaido University (Japan), 192 pp.
- 76 **Kobayashi, Taiyo.** 1999. Study of the formation of North Pacific Intermediate Water. Kyoto University (Japan), 150 pp.
- 77 **Kobayashi, Tsuyoshi.** 1998. The ecology of freshwater zooplankton in the Hawkesbury-Nepean River, with special reference to community structure and grazing. University of New South Wales (Australia), 142 pp.
- 78 **Kocum, Esra.** 1998. Phytoplanktonic primary production along a eutrophic, turbid estuarine gradient (Colne Estuary, UK). University of Essex (UK), 199 pp.
- 79 **Kormas, Konstantinos A.** 1998. Description and dynamics of ecological components of the Maliskos Gulf (Greece) ecosystem. University of Athens (Greece), 146 pp.
- 80 **Kristijanto, Augustinus I.** 1997. The ecology of the Javanese mountain stream: Awu-Gung System. University of Vienna (Austria), 210 pp.
- 81 **Larned, Scott T.** 1997. Nutrient-limited growth and sources of nutrients for coral reef macroalgae. University of Hawaii (USA), 200 pp.
- 82 **Larson, Tony R.** 1998. Storage lipid metabolism during nitrogen assimilation in a marine diatom. University of British Columbia (Canada), 196 pp.

- 83 **Leonard, Carrie L.** 1998. El Nino, iron, and the central equatorial Pacific ecosystem: A modeling study. University of Maryland (USA), 141 pp.
- 84 **Li, Aishao.** 1998. The feeding physiology and ecology of the mixotrophic dinoflagellate *Gyrodinium galatheanum*. University of Maryland at College Park (USA), 272 pp.
- 85 **Lindstrom, Eva S.** 1999. Temporal and spatial variation in the community composition of lake bacterioplankton. Uppsala University (Sweden), 37 pp.
- 86 **Litchman, Elena G.** 1997. Competition and coexistence of phytoplankton under fluctuating light. University of Minnesota, (USA) 115 pp.
- 87 **Liu, Hongbin.** 1997. Estimating the growth rates of *Prochlorococcus* and *Synechococcus* in the sea from diel cell cycle analysis. University of Hawaii at Manoa (USA), 248 pp.
- 88 **Lobbes, Joerg M.** 1998. Biogeochemical Tracer in the Arctic Ocean. University of Bremen (Germany), 200 pp.
- 89 **Logerwell, Elizabeth A.** 1997. Trophic interactions in pelagic systems: Distributional and behavioral patterns of seabirds and their prey. University of California at Irvine (USA), 159 pp.
- 90 **Lomas, Michael W.** 1999. Nitrate metabolism and the cellular energy balance: Contrasting patterns of nitrate uptake, reduction, and release in marine diatoms and flagellates. University of Maryland at College Park (USA), 253 pp.
- 91 **Lucas, Lisa V.** 1997. A numerical investigation of coupled hydrodynamics and phytoplankton dynamics in shallow estuaries. Stanford University (USA), 314 pp.
- 92 **Magni, Paolo.** 1998. A multidisciplinary study on the dynamics of biophilic elements (C, N, P, Si) in a tidal estuary of the Seto Inland Sea, Japan. United Graduated School of Ehime (Japan), 258 pp.
- 93 **Martin Traykovski, Linda V.** 1998. Acoustic classification of zooplankton. Massachusetts Institute of Technology/Woods Hole Oceanographic Institution (USA), 185 pp.
- 94 **Martino, Darryl P.** 1998. Geomicrobiology and molecular biology of S- and Fe-oxidizing bacteria in subsurface sediments associated with the Yegua formation. Texas A&M University (USA), 80 pp.
- 95 **Milligan, Allen J.** 1998. The influence of iron availability on nitrogen assimilation in the marine diatom *Thalassiosira weissflogii*. University of British Columbia (Canada), 128 pp.
- 96 **Mitchell, Suzanne (Sue) E.** 1997. Clonal diversity and coexistence in *Daphnia magna* populations. University of Hull (UK), 248 pp.

- 97 **Morgan, Lance E.** 1997. Spatial variability in growth, mortality and recruitment in the northern California red sea urchin fishery.
University of California at Davis (USA), 128 pp.
- 98 **Muelbert, Monica M.C.** 1998. The influence of size at weaning on the transition to nutritional independence in the harbour seal: Is bigger better?
Dalhousie University (Canada), 198 pp.
- 99 **Mueller-Solger, Anke B.** 1998. Linking the classical and the microbial components of aquatic food webs: The role of protozoa in lakes.
University of California at Davis (USA), 150 pp.
- 100 **Mulholland, Margaret R.** 1998. Nitrogen utilization, metabolism and the regulation of nitrogen fixation in *Trichodesmium* spp.
University of Maryland (USA), 276 pp.
- 101 **Murray, Alison E.** 1998. Bacterioplankton ecology: Dynamics and variability in marine bacterial and archaeal assemblages, a molecular approach.
University of California at Santa Barbara (USA), 267 pp.
- 102 **Murrell, Michael C.** 1998. Microbial processes and food web dynamics in a turbid estuary: Northern San Francisco Bay, California, USA.
University of California at Santa Cruz (USA), 169 pp.
- 103 **Navarro, Ana J.** 1998. Optical properties of photosynthetic pigments and abundance of the cyanobacterium *Trichodesmium* in the eastern caribbean basin.
University of Puerto Rico at Mayaguez (USA), 125 pp.
- 104 **Neumann, Klaus.** 1999. Carbon dynamics in lakes and streams of Taylor Valley, Antarctica.
University of Alabama (USA), 170 pp.
- 105 **Niebuhr, David H.** 1999. Environmental stress in hard coral: Evaluating lipid as an indicator of sub-lethal stress on short time scales.
College of William and Mary (USA), 151 pp.
- 106 **Niquil, Nathalie.** 1998. The planktonic food web of a lagoon of Takapoto (French Polynesia) atoll: Structure and stability.
University of Perpignan-EPHE (France), 235 pp.
- 107 **Noble, Rachel T.** 1998. Fates of viruses in the marine environment.
University of Southern California (USA), 238 pp.
- 108 **Nodder, Scott D.** 1997. Particulate fluxes in the Subtropical Convergence region and other marine environments of New Zealand.
University of Waikato (New Zealand), 196 pp.
- 109 **Noon, Philippa E.** 1997. Recent environmental change at Signy Island, maritime Antarctic: Quantitative lake-sediment studies as a basis for reconstructing catchment ice-cover.
University of London (UK), 460 pp.

- 110 **Olson, Julie B.** 1997. Community composition of nitrogen fixing heterotrophic bacteria in microbial mat systems.
University of North Carolina at Chapel Hill (USA), 155 pp.
- 111 **Orcutt, Karen M.** 1999. Environmental factors regulating N_2 fixation by *Trichodesmium* spp. in the Sargasso Sea.
University of Wales (UK), 159 pp.
- 112 **Ortiz-Zayas, Jorge R.** 1998. The metabolism of the Rio Mameyes, Puerto Rico: Carbon fluxes in a tropical rain forest river.
University of Colorado at Boulder (USA), 344 pp.
- 113 **Ouimet, Chantal.** 1998. Test of alternative domains of attraction in the dynamics of a fishless oligotrophic lake.
University of British Columbia (Canada), 193 pp.
- 114 **Petersen, John E.** 1998. Scale and energy input in the dynamics of experimental estuarine ecosystems.
University of Maryland (USA), 363 pp.
- 115 **Pilditch, Conrad A.** 1997. Effects of hydrodynamics on sea scallop (*Placopecten magellanicus*) production.
Dalhousie University (Canada), 170 pp.
- 116 **Pos, Willer H.** 1997. On the processes and mechanisms affecting carbon monoxide (CO) and carbonyl sulfide (OCS) photoproduction in natural waters.
Georgia Institute of Technology (USA), 246 pp.
- 117 **Reavie, Euan D.** 1997. Diatom ecology and paleolimnology of the St. Lawrence River.
Queen's University (Canada), 207 pp.
- 118 **Reckermann, Marcus.** 1996. Ultraphytoplankton and protozoan communities and their trophic interactions in different marine pelagic ecosystems (Arabian Sea and Baltic Sea).
University of Rostock (Germany), 139 pp.
- 119 **Rengefors, Karin E.** 1997. The role of resting cysts in the survival and succession of freshwater dinoflagellates.
Uppsala University (Sweden), 135 pp.
- 120 **Rick, Silke** 1999. The spring bloom in the German Bight: Effects of high inorganic N:P ratios on the phytoplankton development.
University of Kiel (Germany), 142 pp.
- 121 **Riemer, Daniel D.** 1998. Marine and terrestrial sources of reactive volatile organic compounds and their impact on the tropospheric ozone chemistry of the Earth.
University of Miami (USA), 187 pp.
- 122 **Riou, Stephane A.** 1999. Benthic bacterial N-cycle in Arcachon Bay (SW France) with special emphasis on loss processes (nitrification-denitrification).
University of Bordeaux (France), 125 pp.

- 123 **Robertson, Deborah L.** 1997. Characterization of glutamine synthetase from the marine diatom, *Skeletonema costatum*.
University of Chicago, 164 pp.
- 124 **Roelke, Daniel L.** 1997. Managing phytoplankton community composition: Can we do it?
Texas A&M University (USA), 298 pp.
- 125 **Rolff, Carl R.** 1998. Stable isotope studies of contaminant and material transport in Baltic pelagic food-webs.
Stockholm University (Sweden), 22 pp.
- 126 **Ryan, John P.** 1998. Enhanced chlorophyll along the continental shelfbreak and shelf-slope front of the Mid-Atlantic Bight and Georges Bank during the spring transition.
University of Rhode Island (USA), 155 pp.
- 127 **Sancho, Gorka.** 1998. Behavioral ecology of coral reef fishes at spawning aggregations sites.
Woods Hole Oceanographic Institute/Massachusetts Institute of Technology (USA), 254 pp.
- 128 **Sanderson, Beth L.** 1998. Factors Regulating Water Clarity In Northern Wisconsin Lakes.
University of Wisconsin-Madison (USA), 170 pp.
- 129 **Sauer, Peter E.** 1997. Records of climate and late quaternary paleoclimate from stable isotopes in lakes and lake sediments, eastern Canadian Arctic.
University of Colorado at Boulder (USA), 224 pp.
- 130 **Schloss, Irene R.** 1997. Temporal and spatial scales of variability in coastal antarctic phytoplankton.
University of Buenos Aires (Argentina), 209 pp.
- 131 **Schwenk, Klaus.** 1997. Evolutionary genetics of *Daphnia* species complexes - Hybridism in syntopy.
University of Utrecht (Netherlands), 141 pp.
- 132 **Seidl, Martin.** 1997. The fate of organic matter in the river Seine after a combined sewer overflow.
ENPC - University Paris Val de Marne Paris XII (France), 181 pp.
- 133 **Shivoga, William A.** 1999. Spatio-temporal variations in physicochemical factors and stream fauna abundance and composition in the zones of transition between Baharini Springbrook, Njoro River, and Lake Nakuru, Kenya.
Vienna University (Austria), 102 pp.
- 134 **Slusarczyk, Mirosław.** 1999. Diapause as a predator avoidance adaptation in *Daphnia magna* Straus.
University of Warsaw (Poland), 93 pp.
- 135 **Souza, Jose R.** 1998. Macrofaunal secondary production in a southern Brazilian beach.
Universidade Federal do Parana (Brazil), 129 pp.
- 136 **Steinke, Michael.** 1997. Dimethylsulfoniopropionate (DMSP) metabolism in marine algae: Production of dimethylsulfide (DMS) via DMSP cleaving enzymes (DMSP lyases).
University of Bremen (Germany), 127 pp.

- 137 **Suchman, Cynthia L.** 1998. Factors affecting the vulnerability of *Acartia* spp. copepods to predation by scyphomedusae.
University of Rhode Island (USA), 240 pp.
- 138 **Suzuki, Marcelino T.** 1997. The effect of protistan bacterivory on bacterioplankton community structure.
Oregon State University (USA), 222 pp.
- 139 **Swarzenski, Peter W.** 1997. Non-conservative behavior of select naturally-occurring radionuclides and metals in coastal waters.
Louisiana State University (USA), 257 pp.
- 140 **Taillefert, Martial P.** 1997. The distribution of trace elements cobalt and lead at the oxic-anoxic transition of a stratified lake: Analytical speciation and modeling.
Northwestern University (USA), 336 pp.
- 141 **Tanaka, Tsuneo.** 1998. Dynamics of the heterotrophic nanoflagellate-bacteria associations in a coastal marine environment.
Tohoku University (Japan), 100 pp.
- 142 **Taylor, Michael D.** 1998. The influence of environmental factors on reproduction and recruitment of *Macomona liliiana* (Class: Bivalvia) in Manukau Harbour, New Zealand.
University of Auckland (New Zealand), 307 pp.
- 143 **TeWinkel, Leslie M.** 1998. The vertical migration of adult bloater (*Coregonus hoyi*): Characteristics, limits, and causes.
University of Michigan (USA), 101 pp.
- 144 **Thiel, Martin.** 1997. Extended parental care in estuarine amphipods.
University of Maine (USA), 188 pp.
- 145 **Thierfelder, Tomas K. E.** 1998. An inductive approach to the modeling of lake water quality in dimictic, glacial/boreal lakes.
Uppsala University (Sweden), 47 pp.
- 146 **Touliabah, Hussein E.** 1996. Ecological studies on the Nile River phytoplankton in relation to physico-chemical characteristics at the area between Esna and Delta Barrage.
Ain Shams University (Egypt), 203 pp.
- 147 **Twardowski, Michael S.** 1998. The finescale distribution, origin, and photobleaching of the spectral absorption of dissolved organic matter in coastal waters.
University of Rhode Island (USA) 289 pp.
- 148 **Urban-Rich, Juanita L.** 1997. Latitudinal variations in the contribution by copepod fecal pellets to organic carbon and amino acid flux.
University of Maryland at College Park (USA), 188 pp.
- 149 **Usui, Toshihiro.** 1998. Metabolism and benthic flux of N₂O in marine sediments.
Tokyo University of Agriculture and Technology (Japan), 158 pp.

- 150 **Vadeboncoeur, Yvonne.** 1998. Whole-lake fertilization effects on the abundance, distribution, and production of benthic and pelagic algae in north temperate lakes. University of Notre Dame (USA), 110 pp.
- 151 **Van den Berg, Marcel S.** 1999. Charophyte colonization in shallow lakes. Free University of Amsterdam (Netherlands), 138 pp.
- 152 **Van Gool, Fredericus (Erik) T.** 1998. Diel vertical migration of *Daphnia*: An inquiry into mechanisms of phototactic behaviour. University of Amsterdam (Netherlands), 117 pp.
- 153 **Varela, Diana E.** 1997. Nitrogenous nutrition of phytoplankton from the northeastern subarctic Pacific Ocean. University of British Columbia (Canada), 198 pp.
- 154 **Vrede, Katarina.** 1997. Bacterioplankton production and biomass in two lakes of different trophic status. Uppsala University (Sweden), 33 pp.
- 155 **Vrede, Tobias.** 1998. The role of crustacean zooplankton in pelagic nutrient cycling. Uppsala University (Sweden), 36 pp.
- 156 **Wagner, Annkatrin.** 1998. Bottom-up control of the grazing impact by *Daphnia galeata* on phytoplankton in the biomanipulated Bautzen reservoir. Dresden University of Technology, 236 pp.
- 157 **Wang, Wen-Xiong.** 1996. Accumulation and retention of trace elements in the mussel, *Mytilus edulis*. State University of New York at Stony Brook (USA), 324 pp.
- 158 **Waples, James T.** 1998. Air-water gas exchange and the carbon cycle of Green Bay, Lake Michigan. University of Wisconsin at Milwaukee (USA), 429 pp.
- 159 **Waters, Michael T.** 1998. Effects of vegetation on the hydrodynamics of freshwater wetlands. University of New South Wales (Australia), 324 pp.
- 160 **Weissberger, Eric J.** 1998. The effects of predation on recruitment of the surfclam *Spisula solidissima*. Rutgers University (USA), 148 pp.
- 161 **Wommack, K. Eric.** 1998. Aspects of the ecological role of bacteriophages. University of Maryland (USA), 265 pp.
- 162 **Woodfine, David G.** 1988. Water chemistry and phytoplankton metal contaminated and acidified lakes in the Sudbury Region, Canada. Trent University (Canada) 284 pp.
- 163 **Yamaguchi, Atsushi.** 1999. Life cycle characteristics of some small planktonic calanoid copepods neighboring seas of Japan. Hokkaido University (Japan), 139 pp.
- 164 **Yamasaki, Akiko.** 1999. Submicrometer particles in northwest Pacific coastal environments: Physicochemical character, distribution and biological origins. University of Tokyo, Tokyo (Japan), 147 pp.

- 165 **Yassuda, Eduardo A.** 1996. Integrated modeling of the Tampa Bay estuarine system. University of Florida (USA), 395 pp.
- 166 **Ziegler, Susan E.** 1998. Carbon and nitrogen cycling in the southern Laguna Madre. University of Texas at Austin (USA), 184 pp.

DIALOG III:

Dissertations Initiative for the Advancement of Limnology and Oceanography

**Abstracts of Ph.D. dissertations completed between
April 1, 1997 and March 31, 1999 and submitted to the
Dissertations Initiative for the Advancement of
Limnology and Oceanography (DIALOG III) Program**

Co-sponsored by the
American Society of Limnology and Oceanography