

## Isidro Bosch, Ph.D.

---

Professor of Biology  
SUNY Geneseo  
Integrated Sciences Center # 241  
# 585- 245-5303  
E-MAIL: [Bosch@geneseo.edu](mailto:Bosch@geneseo.edu)

### I. EDUCATION

- Postdoctoral Fellow, Harbor Branch Oceanographic Institution  
Ft. Pierce, FL (1989-1991)
- Ph.D. Biology, University of California Santa Cruz, 1989
- B.A. Aquatic Biology, Univ. of California. Santa Barbara, 1981

### II. ACADEMIC EMPLOYMENT/EXPERIENCE HISTORY

- Sept. 2008 – Present: Professor, S.U.N.Y. College at Geneseo
- Sept. 1999 – 2008: Associate Professor, S.U.N.Y. College at Geneseo
- Sept. 1992 – Aug. 1999: Assistant Professor, S.U.N.Y. College at Geneseo
- Aug. 1991 – Aug. 1992: Postdoctoral Researcher, Laboratories of  
Radiobiology and Environmental Health, U.C. San Francisco
- Dec. 1988 – Jul. 1991: Postdoctoral Fellow, Dept. of Larval Ecology  
Harbor Branch Institution, Inc.
- Aug. 1989 - July 1991: Postdoctoral Fellow, Biology Department  
Univ. of California Santa Cruz

### III. COURSES TAUGHT

#### *List of Courses Taught*

- Biology First Year Experience (3 semesters)
- Biology of Vertebrates (1 semester)
- Principles of Ecology, introductory level (17 semesters)
- Biology of Invertebrates, introductory level, with lab (12 semesters)
- Aquatic Community Ecology; upper division lecture/lab course (4 semesters)
- Limnology, undergraduate/graduate level course with lab (2 semesters)
- Environmental Management (undergrad/grad, 1 semester)
- Introductory Biology Laboratory (freshman majors, 10 semesters)
- Senior Seminar (Molecular Ecology, Photobiology, Aquatic Resources; 7 semesters)
- Introduction to Research (9 semesters)

#### *Awards Related to Teaching*

- Harter Mentoring Award, SUNY Geneseo (2006)
- SUNY Chancellor's Award For Excellence in Teaching (2000)

#### IV. SCHOLARLY AND CREATIVE ACTIVITY

**Refereed Publications** (names in boldface are Geneseo undergraduates)

- Bosch, I., Makarewicz, J.C., Lewis, T.W., **Bonk E.A., Finiguerra, M., Groveman, B.** 2009. Management of agricultural practices results in declines of filamentous algae in the lake littoral. *J. Great Lakes Res.*, 35: 90-98
- Bosch, I., Makarewicz, J.C., **Bonk, E.A., Ruiz, C., and Valentino M.** 2009. Responses of Lake macrophyte beds dominated by Eurasian watermilfoil to best management Practices in agricultural sub-watersheds: Declines in biomass but not species Dominance. *J. Great Lakes Res.*, 35:99-108
- Shuskey, T., Bosch, I., **Ryczek C. and Cohen, B.** 2009. *In situ* experimental studies of Eurasian Watermilfoil (*Myriophyllum spicatum*) downstream from agricultural watersheds: Nutrient loading, foliar uptake, and growth. *J. Great Lakes Res.*, 35: 109-116
- Makarewicz, J.C., Lewis, T.W., Bosch, I., Noll, M.R., Herendeen, N., Simon, R.d., Zollweg, J., Vodacek, A. , 2009. The impact of agricultural best management practices on Downstream systems: Soil loss and nutrient chemistry and flux to Conesus Lake, New York, USA. *J. Great Lakes Res.* 35: 23-36.
- Makarewicz, J.C., P.E D’Aiuto, and I. Bosch. (2007). Elevated Nutrient Levels from Agriculturally Dominated Watersheds Stimulate Metaphyton Growth *J. Great Lakes Res.* 33: 437-448
- Li Y., A. Vodacek, N. Raqueno, R. Kremens, A.J. Garrett, I. Bosch, J.C. Makarewicz, and T. Lewis (2007). Circulation and stream plume modeling in Conesus Lake. *Env. Model. Assess.* 13:275-289
- D’Aiuto, P.E., J.C. Makarewicz and I. Bosch (2006). The impact of stream nutrient loading on macrophytes and metaphyton in Conesus Lake, USA. *Verh. Internat. Verein. Limnol.* 29: 1373-1376/
- Karentz, D., I. Bosch and D.M. Mitchell (2004). Limited Effects of Antarctic Ozone Depletion on Sea Urchin Development. *Marine Biol.*, 145:277-292
- Pearse, J. S. and I. Bosch (2002). Photoperiodic regulation of gametogenesis in the Antarctic sea star *Odontaster validus* Koehler: Evidence for a circannual rhythm modulated by light *Invertebrate Reproduction and Development* Vol 41:73-82
- Karentz, D, and I. Bosch (2001) . Influence of Ozone-Related Increases of Ultraviolet Radiation on Antarctic Marine Organisms. *Amer.Zool.*, 41:3-16
- Bosch, I, and M. Slattery (1999). Costs of extended brood protection in the Antarctic Sea star, *Neosmilaster georgianus*. *Marine Biology* 134:449-459 (Sept. 1999)

- Karentz, D., W. Dunlop and I. Bosch (1997). Spatial and Temporal Occurrence of UV-Absorbing Mycosporine-Like Amino Acids in Tissues of the Antarctic Sea Urchin *Sterechinus neumayeri* during 1991 Springtime Ozone Depletion. *Marine Biology*, #129: 343-54
- Pearse, J.S., and I. Bosch (1994). Brooding in the Antarctic: Ostergren had it nearly right. In "Echinoderms through Time". b. David, A. Guille, J-P. Feral and M. Roux, eds., pp 111-120. A. A. Balkema, Rotterdam.
- Shilling, Fraser, M. and I. Bosch (1994). Prefeeding embryos of Antarctic and Temperate echinoderms use DOM for growth and metabolic needs. *Marine Ecology Progress Series*, 109: 173-181.
- Slattery, M and I. Bosch (1993). Mating behavior of the brooding antarctic sea star *Neosmilaster georgianus*. *Invert. Reprod. and Devel.*, 24: 97-102.
- Bosch, I. (1992). Symbiosis between bacteria and oceanic clonal sea star larvae in the western North Atlantic Ocean. *Mar. Biol.*, 114, 495-502.
- Pearse, J.S., J.B. McClintock and I. Bosch. (1991). Reproduction of antarctic marine benthic invertebrates: timing, tempos and modes. *Amer. Zool.* 31: 65-80.
- Bosch, I. and J.S. Pearse (1990). Developmental types of shallow water asteroids in McMurdo Sound, Antarctica. *Mar. Biol.* 104: 41-46.
- Bosch, I. (1989). Contrasting modes of reproduction in two closely related antarctic sea stars of the genus *Porania*, with a description of unusual feeding and non-feeding larval types. *Biol. Bull.*, 177:77-82.
- Bosch, I., R. B. Rivkin and S. A. Alexander (1989). Asexual reproduction by oceanic planktotrophic echinoderm larvae. *Nature*, 337:169-170.
- McClintock, J.B., J.S. Pearse and **I. Bosch** (1988). Population structure and energetics of the shallow-water antarctic sea star *Odontaster validus* in contrasting habitats. *Mar. Biol.*, 99: 235-246.
- Bosch, I., K.A. Beauchamp, M.E. Steele and J.S. Pearse (1987). Development, metamorphosis, and seasonal abundance of embryos and larvae of the antarctic sea urchin *Sterechinus neumayeri*. *Biol. Bull.* 173:126-135.
- Olson, R.R., I. Bosch and J.S. Pearse (1987). Larval starvation hypothesis tested for the antarctic asteroid *Odontaster validus*. *Limnol. Oceanogr.* 32: 686-690.
- Pearse, J.S. and I. Bosch (1986). Are the feeding larvae of the commonest Antarctic asteroid really demersal? *Bull. Mar. Sci.* Vol. 39, 2:477-484.
- Rivkin, R.R., I. Bosch, J.S. Pearse and E.J. Lessard (1986). Bacterivory: a novel feeding mode for asteroid larvae. *Science*, 233:1311-1314.

**Technical Reports** (since 2000 only)

(Names in boldface indicate Geneseo undergraduate student co-authors)

- Bosch, I., **H. Dodge, A. Dumas** and **M. Stryker**. 2009. Continued Monitoring of Macrophyte Biomass and Filamentous Algal Cover in Conesus Lake. Report to the Livingston County Planning Department, 23 pp.
- Bosch, I. **L. Campana** and **P. Radlowski**. 2008. Macrophyte Biomass and Filamentous Algal Cover South of McPhersons Point After Diversion of the North Gully Tributary. Report to the Livingston County Planning Department, 21 pp.
- Ecologic, LLC and I. Bosch (2007). Conesus Lake SolarBee Pilot Test: 2007 Monitoring Results. Report to the Livingston County Planning Department, 47 pp.
- Bosch, I., **B. Groveman, E. Bonk** and **E. St. James** (2006). Population Status of the Milfoil Weevil and its Possible Impact on Eurasian Watermilfoil in Conesus Lake One Year After Weevil Augmentation. Report to the Conesus Lake Association 18 pp
- Bosch, I., E. Beary, **S. Lombardi** and M. Arnold (2005). Baseline Studies of Macroinvertebrate Communities Living in Deep-Water Sediments of Conesus Lake, N.Y. (July 2005). Report to the Livingston County Planning Department. 40 pp
- Makarewicz J.C. , and I. Bosch (2004). Conesus Lake Limnology:2004. 1. Stream Chemistry and Zooplankton 2. Metaphyton Cover in Selected Watermilfoil Beds 3. Abundance of Zebra Mussel Veliger Larvae. Submitted to the Livingston County Planning Department. 55 pp
- Bosch, I., J.C. Makarewicz, **E. Mis, D. Johnson**, and **M. Wagner** (2002). Distribution and Biomass of Macrophytes in Six Large Beds Adjacent to Streams with High Nutrient Loading (Conesus Lake, Summer 2001). Report to the Livingston County Planning Department. 25 pp.
- Bosch, I., J.C. Makarewicz, **J.P. Emblidge, D.A. Johnson** and **M.D. Valentino**. 2001. Population Studies of Eurasian Watermilfoil (*Myriophyllum spicatum*) and Zebra Mussels (*Dreissena polymorpha*) in Conesus Lake, N.Y. (Summer 2000). Report to the Livingston County Planning Department. 37 pp.
- Makarewicz, J.C., I. Bosch and T. W. Lewis (2001). Soil and nutrient loss from selected Watersheds of Conesus Lake. Report to the Livingston County Planning Department. 25 pp.
- Makarewicz, J.C., I. Bosch and T. W. Lewis (2001). Water Chemistry of the North and South Basins of Conesus Lake. Report to the Livingston County Planning Department. 27 pp.
- Bosch, I., J. C. Makarewicz, **J. Duncan, P. Thorn** and **M. Martin** (2000). Distribution and standing crops of Submersed macrophytes in Conesus Lake, N.Y. Report to the Livingston County Planning Department. 52 pp.

***Conference Presentations and Seminars (Since 2004)***

- Oral Presentation, North American Echinoderm Conference July 2008
- Conference Presentations, International Association of Great Lakes Research (oral presentation and poster 2007; oral presentation 2005) (juried abstracts)
- Antarctic Symposium Presentation, Univ. of California, Santa Cruz, 2006 (invited)
- Seminar, Hobart and William Smith, Department of Biology 2004 (invited)

***External Grants Funded***

(Project Director or Co-PD on all grants listed)

- U.S. Department of Agriculture (2005- '08). Demonstration Study of Nutrient Management Effects on Lake Water Quality (\$ 213,000)
- U.S. Department of Agriculture (2002- '05) Demonstration Study of Nutrient Management Effects on Lake Water Quality (\$ 146, 000 )
- National Geographic Society (2003). Studies of UV effects on sea urchin larvae in the Mediterranean (\$19, 600)
- Grants, Livingston Co. (1999-2007), Conesus Lake Research (~\$60,000)
- Grant, National Science Foundation, Office of Polar Programs, 1996-99 (Effects of UV-B on Antarctic Invertebrate Larvae) (\$146,000)

***Honors and Awards Related to Scholarly and Creative Activity***

- Presidents Award for Research and Creativity, SUNY Geneseo (2009)
- Research and Scholarship Award, SUNY Research Foundation (2006)
- Spencer J. Roemer Professorship (1999-2002)

**V. SERVICE*****Department and College Service (since last promotion only)***

- Biology Budget and Facilities Committee, (since 2004)
- Biology Internship Coordinator (since 2000)
- Biology Personnel Committee, (Chair 2001 2009; Subcommittee Chair 4 times)
- Biology Executive Committee (2002-05; Chair '05)
- Biology Curriculum Committee (1994-2001)
- Biology Undergraduate Committee (1998-2001)
- Search Committees (Bio faculty 2007 as chair; Technical Support Professional for CIT, Women's Basketball Coach)
- Program Review Committee (Environmental Science SUNY Brockport 2005)
- Geneseo Professional Leave Review Committee (2004-07)
- Geneseo College Senate (3<sup>rd</sup> term 2005-2007); Faculty Affairs Committee
- Geneseo Teaching and Learning Center Advisory Board (2001-2004)
- Geneseo Faculty Awards, Teaching Excellence Selection Committee (2000, 2003-04)
- Geneseo Sports Hall of Fame Committee (since Sep. 2000)
- Geneseo General Education Committee (1999-2002)

***Community Service Related to Profession (since 2000)***

- President, Board of Directors, Cornell Cooperative Extension of Livingston County (member since Dec. 2005)
- Board of Directors, College Science, Technology, Engineering Program, Monroe Community College (Since 2008)
- Invited Speaker, Livingston County Chamber of Commerce SUNY Day (2004)
- Invited Speaker, Antarctic Exploration, for Geneseo Torch Club (2004)
- Invited Speaker and Instructor, Frontiers in Science: Polar Regions Monroe County BOCES Program (2001-present, two programs/yr)
- Invited Speaker on Antarctica for Livonia Elementary Schools (annually since 1997)
- Invited Speaker on Antarctica & Conesus Lake for the Conesus Lake Association Annual Meeting (since 2007), Geneseo Kiwanis, Geneseo Rotary, Geneseo College Council, Livingston County Planning Department, Livonia Rotary, Perry Kiwanis

***Service to the Discipline (Since 1999)***

- Guest Editor, *Journal of Great Lakes Research* (2008-2009)
- Session Co-Organizer (2005, 2007), Watershed Research, 48<sup>th</sup> & 50<sup>th</sup> Conference, International Assoc. of Great Lakes Research, Univ. of Windsor; Penn State Univ.
- Session Co-Organizer, Antarctic Marine Biology, U.C. Santa Cruz (2006)
- NSF Panel Reviewer Centers for Ocean Science Education Excellence (2005)
- Lybbie Hyman memorial Scholarship Committee, Society for Integrative and Comparative Biology (1999-2007; Chair 2004-2007),
- Science Consultant, Block and Byrd's *Earth and Sky*, NPR Radio Series (1997-2003)
- Scientific S.C.U.B.A. Diving Control Board Member, National Science Foundation, Office of Polar Programs (1994-2003)
- Organizing Committee, North American Echinoderm Conference (2001)
- Peer review for marine science journals (e.g. *Invertebrate Biology*, *Marine Biology*, *Biological Bulletin*, *Journal of Marine Biology and Ecology*, *Evolution and Development*)