

## CURRICULUM VITAE

**Name:** John Charles Priscu

**Birthdate:** September 20, 1952

**Citizenship:** U.S.A.

### **EDUCATION:**

Ph.D., Ecology (Microbial), Univ. of California, Davis, 1982  
M.S., Biology (Limnology), Univ. of Nevada, Las Vegas, 1978  
B.S., Biology (minor music), Univ. of Nevada, Las Vegas, 1975

### **PROFESSIONAL EXPERIENCE:**

Professor of Ecology, 2000-present. Department of Land Resources and Environmental Sciences, Montana State University.

Professor of Ecology. 1994-2000. Department of Biological Sciences, Montana State University.

Associate Professor of Ecology. 1988-1994. Department of Biological Sciences, Montana State University.

Assistant Professor of Ecology. 1984-1988. Department of Biological Sciences, Montana State University.

Executive Committee, WAIS Divide Ice Coring Project. 2008-present.

Executive Committee/Chief Scientist, Whillans Ice Stream Subglacial Access Research Drilling (WISSARD) project. 2009-present.

Co-Director. 2007-present. Subzero Research Facility, Montana State University.

Co-Director. 2011-present. Center for Astrobiology. Montana State University.

Search Committee for the Editor-in-Chief of the AGU publication JGR-Biogeosciences. 2008-2009.

Polar Research Board-National Academy of Science. 2009-2012.

Co-Chair. National Academy of Sciences NRC Committee. "Frontiers in Understanding Climate Change and Polar Ecosystems".

Committee on the Origin and Evolution of Life -National Academy of Science. 2008-2011.

Editorial Board. Astrobiology. 2006-present.

Chair, SCAR-SALE (Subglacial Antarctic Lake Environments) International Scientific Planning Group. 2000-2009.

Co-chair of the scientific international organizing committee for the SCAR Open Science Conference, August 2010, Buenos Aires, Argentina, August 2010.

Organizing Committee, Subglacial Antarctic Lake Exploration (SALE) Advanced Science and Technology Workshop, April 24-28, 2006. LGGE, Grenoble France

Instructor “Limnology in High Alpine Lakes” University of Innsbruck, Austria. July 2000.

Project Leader (Principal Investigator), Antarctic Research Teams. 1984-present.

Organizing Committee, NSF funded FASTDRILL workshop. October 2002.

Organizing Committee, American Society of Limnology and Oceanography winter meeting, Salt Lake City. February 2003.

Participant and discussion leader, National Science Foundation Workshop “Emerging Research Questions for Limnology: The Study of Inland Waters. December 2002.

National Science Foundation Office Advisory Committee for the Office of Polar Programs. 2000-2002.

National Science Foundation Advisory Committee for Environmental Research and Education 2000-2002.

United States Biology representative to the Scientific Committee of Antarctic Research (SCAR). 2000-2006.

Convener for the international Group of Specialists to plan the exploration of Lake Vostok and other subglacial lakes. 2000-2006.

National Academy of Sciences NRC Committee “Frontiers in Polar Research”. 2002-2003.

National Academy of Sciences NRC Committee “Forward Contamination of Mars” 2004-2006.

United States Ice Core Working Group member. 2002-2008.

Advisory Committee for the United States Ice Core Drilling Services. 2002-2008.

Participant and rapporteur. American Society of Limnology and Oceanography/NSF funded workshop on Emerging Issues in Limnology. Boulder, CO. December 2002.

Review Committee, Public Radio Documentary Series “The DNA Files”. 2000-2001.

Sponsor for the NASA Planetary Biology Internship Program. 2000-present.

Sponsor for NASA GSRP and Space Grant Consortium students. 1997-present.

Sponsor for NASA Montana Space Grant Consortium students. 1996-present.

Team member, Lake Baikal, USSR expedition, July-August, 1990. Funded by the National Geographic Society.

Team member, International expedition to study the physics, chemistry and biology of southern Patagonian lakes, March 1992. Funded by German Government.

Editorial Board, American Geophysical Union, Antarctic Research Series. 1993-2002.

Editorial Board, Limnology and Oceanography. 1988-1991.

NSF Review Panel, Division of Polar Biology and Medicine 1990, 1993.

NSF Review Panel, Life in Extreme Environments (LExEn) Program 1999.

Chairperson, McMurdo (Antarctica) Area Scientific Users Committee 1995-present.

Organizing Committee and Working Group Chairman, Environmental Management Workshop on the McMurdo Dry Valleys (Antarctica). 14-17 March 1995, Sante Fe, New Mexico. Funded by NSF.

Chairperson, Winter Research in Antarctica Workshop. 7-9 September 1999. NSF headquarters, Arlington Virginia. Funded by NSF.

Biological Cruise Leader. Cruise II-87, USCG Icebreaker "Polar Sea", February 1987. This cruise examined the influence of nutrients on phytoplankton C and N metabolism off the Ross Ice Shelf, Antarctica. Funded by NSF Division of Polar Programs.

Adjunct Research Professor. University of Southern California Biological Oceanography Program in conjunction with NASA, 1986-1987. Research topic: Influence of environmental variables on nitrogen enzymology in Antarctic sea-ice microalgae. Funded by NSF Division of Polar Programs.

Adjunct Research Professor. University of Southern California Biological Oceanography Program, 1985-1986. Research topic: Physiology of Antarctic Sea-Ice Microalgae: Changes in Photosynthetic Metabolism During the Course of a Spring Bloom. Funded by NSF Division of Polar Programs.

Adjunct Research Professor. Department of Biological Sciences, University of Nevada, Las Vegas. 1984.

Research Scientist. New Zealand Antarctic Research Program. 1984-1985. Research topic: Carbon and Nitrogen metabolism of Antarctic stream and lake ecosystems. Funded by an NSF International Programs grant and a grant from the New Zealand Government.

Staff Research Scientist. 1982-1984. Division of Marine and Freshwater Science, Taupo Research Laboratory, Division of Scientific and Industrial Research, New Zealand.

Research Scientist. Cruise 1144 of RV Tangaroa, New Zealand government research vessel. 1983. Objectives: To define the importance of upwelled nitrate to phytoplankton productivity in the eastern Tasman Sea.

Leader-Primary Productivity Section: Workshop on biological production off the west coast of New Zealand. Wellington, New Zealand. Oct. 1983.

Director, Chem-Pro Consultants, Inc. 1979-Present. Environmental research in aquatic systems.

Research Assistant-Field Director, Castle Lake Research Group, Univ. of California, Davis. 1979-1981. Maintenance and operation of the Castle Lake field station and supervision of routine limnological data collection and analysis.

Instructor. 1980. Limnology laboratory, Univ. of California, Davis.

Instructor. 1978. "Ecology of a Desert Pond:." Adult education course organized through the Continuing Education Department of the Univ. of Nevada, Las Vegas.

Research Associate. 1976-1978. Supervisor of field collection and analysis of routine limnological data from Lakes Mead and Mohave (Colorado River), in conjunction with the U.S. Bureau of Reclamation and the Univ. of Nevada, Las Vegas.

Research Assistant. 1976-1978. The quantification of chlorophyll in water bodies utilizing remote laser sensing. The research was in conjunction with the U.S. Environmental Protection Agency and the Univ. of Nevada, Las Vegas.

Research Assistant. 1975-1977. The effects of sewage effluent from Las Vegas Wash on water quality in Lake Mead, in conjunction with Clark County Sanitation District No. 1, Waste Treatment Physical Development Section and the Univ. of Nevada, Las Vegas.

Research Assistant. 1975. Biological control of the encephalitis mosquito Culex tarsalis. The research was in conjunction with the Clark County, Nevada Vector Control Program and the Univ. of Nevada, Las Vegas.

Teaching Assistant. 1975. General Zoology and Human Ecology. Univ. of Nevada, Las Vegas.

Research Assistant. 1974. Evaluation of the proposed Alton Coal-Slurry Pipeline on the fauna of the Moapa River, Utah-Nevada, in conjunction with Engineering Management, Inc. and the Univ. of Nevada, Las Vegas.

### **MEMBERSHIP IN PROFESSIONAL SOCIETIES:**

The American Society of Limnology and Oceanography  
American Association for the Advancement of Science  
American Society for Microbiology  
American Geophysical Union

### **MAJOR AREA OF RESEARCH:**

Aquatic Ecosystem Ecology  
Biogeochemistry of icy environments  
Microbial Ecology/Physiology/Geomicrobiology  
Life in Extreme Environments  
Climate Change  
Astrobiology

### **SELECTED INVITED LECTURES:**

2014. "The McMurdo Dry Valleys Long-Term Ecological Research Project: Twenty One Years of Research Addressing Ecosystem Processes in a Changing Climate". 20<sup>th</sup> International symposium of Polar Sciences: Our Collective Journey to Connect the Past and Future from the Antarctic. 27-29 May 2014. Songdo, Incheon, Republic of Korea.

2014. "Microbial Habitability of Icy Worlds". Physics Colloquia, Astrobiology seminar. 20 May 2014. University of Washington.

2014. "Geomicrobiology of subglacial Lake Whillans, Antarctica". Chinese-Deutsch. Symposium über "Ice-covered Aquatic Systems in the Changing Climate". Aaiyuan University of Technology, Taiyuan, China. 13-18 April 2014.

2014. "The First Glimpse of Life Beneath the Antarctic Ice Sheet". Provost Lecture. Montana State University. 1 April 2014.

2014. "The Potential for Life on Titan and Europa". Physics Colloquium. Montana State University. 4 April 2014.

2013. "Why study Earth's polar regions?" Beijing, China. July 2013.

2013. "The hidden world beneath our polar ice sheets". TedX, Bozeman. March 2013.

2012. "Is there a Deep Icy Biosphere?" Center for Dark Energy Biosphere Investigations annual science meeting. Marina, CA. November 2012.

- 2012.” Life on Other Icy Worlds”. Clark Forum on Contemporary Issues. Dickinson College, Carlisle, PA. October 2012.
2011. “Restless Earth: Life on the Edge”. Dasan Conference, S. Korea. November 2011.
2011. “Beyond Polar Bears and Penguins: What Lies Beneath Our Planets Ice Sheets?” Hydrology Colloquium, University of Nevada, Reno. 11 February 2011.
2010. “What Lies Beneath Our Planets Ice Sheet?” Distinguished Lecturer in the Department of Microbiology at Miami University. 10 February 2010.
2009. “Earth’s polar regions as models for the microbiology of other frozen worlds”. Plenary lecture. American Society of Microbiology. Philadelphia 18-22 May 2009.
2008. “The lost world beneath the Antarctic Ice Sheet”. POP-Tech 2008. Camden, Main. 24 October 2008.
2008. “What does polar science tell us about the evolution of life?” Green Lecture. IBM. 10 October 2008, Palo Alto, California.
2008. “Subglacial Lakes and Rivers: Diversity in the cold”. Third International Conference on Polar and Alpine Microbiology. 11-15 May, Banff, Canada.
2008. “Beyond Polar Bears and Penguins: What Can We Learn from Polar Science?” University of Nevada, Las Vegas-2008 BIOS Lecture. 11 April 2008.
2007. Earth’s Deep Cold Biosphere” Philip Hauge Abelson Advancing Science Seminar (Emerging Polar Frontiers) sponsored by the American Association for the Advancement of Science (AAAS). October 2007, Washington, DC.
2007. How Are Our Poles Changing?” Manion Lecture. Carroll College, Helena, Montana. 11 April 2007.
2007. “Climate and Ecosystem Response in Earth’s South Polar Regions”. University of Alberta, Canada and the Ecosystem Research Institute, Alberta. April 2007.
2007. “What Can We Learn from Our Polar Regions”. Madrid, Spain. Funded by Fundacion la Caixa; CosmoCaixa (National Museum of Spain). April 2007.
- 2006.
2006. “Icy Earth as a Model for Extraterrestrial Ecology”. University of California, Davis. October. 2006.
2006. “Subglacial Lake Exploration: From a Curiosity to Focus for Scientific Research. SCAR XXIX Open Science Conference, Hobart, Tasmania, 12-14 July 2006.
2006. “Life on Mars and Europa”. Astrobiology Science Conference. Washington, D.C. March 2006.
2006. “Subglacial Microbial Systems”. International Society of Microbial Ecology. Vienna, Austria. August 2006.
2006. Japanese National Institute of Polar Research, Toyko, Japan. Three lectures presented on life in and under permanent ice sheets. February 2006.

2005. "Life in the Wrong Places: Microorganisms in Icy Environments" Meeting of the international society of subsurface microbiology. Jackson Hole, Wyoming. August 2005.

2005. "Earth's Icy Biosphere" C.B. van Niel Memorial Lecture, Stanford University, Hopkins Marine Station. 20 May 2005.

2004. "A High School Education Plan About Living Ice" Murdock Trust Lecture; Partners in Science National Conference for High School Teachers, San Diego, CA. 16-17 January 2004.

2004. "Live in a Deep Freeze" University of Southern California. 10 February 2004.

2004. "Are Earth's Ice Caps Alive?". Canadian Society of Microbiology, national meeting. Edmonton, Canada. 20-23 June 2004.

2004. "Pond Water Popsicles". Lecture to the National Science Teachers Association. 8 July 2004. Big Sky, Montana.

2004. "Antarctic Subglacial Lakes". Water and Ice, 20th Anniversary Symposium, Swiss Committee on Polar Research, 18 September 2004. Bern, Switzerland.

2004. "Earth's Icy Biosphere", Utah State University. 26 January 2004

2002. "Perennial Antarctic Ice: An Oasis for Life in a Polar Desert and a Model for Other Icy Worlds". Russian Astrobiology Center, St. Petersburg, Russia. March 2002.

2001. "Is there a Deep-Cold Biosphere?". AAAS annual meeting. 15-20 February, San Francisco, California.

2001. American Society of Microbiology "Life in Extremely Cold Environments". 20-24 May, Orlando, Florida.

2001. "What Can We Learn from Polar and Alpine Ecosystems". D.E. Laudenbach Lecture. Univ. of Western Ontario. 2 April 2001.

2000. "Perennially Ice Covered Antarctic Lakes: Oases for Life and Models for Other Icy Worlds". Geosciences lecture series, Princeton University, New Jersey. May 2000.

1999. "Physical, Chemical and Biological Conditions in Deep Subglacial Ice: Evidence for Life in Lake Vostok, Antarctica". Cambridge University, England. October 1999.

1985. "Antarctic Lakes and Streams: Cold Desert Ecosystems". Sigma XI Research Society. Univ. California, Davis.

### **HONORS, AWARDS, SERVICE:**

2014. E.O. Wilson biodiversity and technology pioneer award for seminal discoveries and research on Antarctic microbial life and his advocacy and public outreach of biodiversity. Presented by E.O. Wilson, October 2014.

2014. Nominated for the Einstein Professor Program by the Chinese Academy of Sciences. Goals are to strengthen science and technology links between CAS and Einstein Professors and enhance the training of future generation of scientists in China. [http://english.bic.cas.cn/AF/Fe/200906/t20090615\\_6342.html](http://english.bic.cas.cn/AF/Fe/200906/t20090615_6342.html)

2013. Organized and chaired the 5<sup>th</sup> International Conference on Polar and Alpine Microbiology. 8-12 September 2013, Big Sky, Montana.
2012. International Excellence in Antarctic Science award from the Scientific Committee on Antarctic Research (SCAR).
2012. Featured Scientist. National Public Radio live broadcast -February- "Science Friday" with Ira Flatow.
2010. Fellow of the American Geophysical Union (AGU).
2008. Invited Essay by the National Science Foundation addressing Darwin's influence on polar regions. "Origin and Evolution of Life on a Frozen Earth" [http://www.nsf.gov/news/special\\_reports/darwin/](http://www.nsf.gov/news/special_reports/darwin/)
2006. Fellow of the American Academy for the Advancement of Science (AAAS).
2004. A Valley in Antarctica named for research in Antarctica. Description follows: Priscu Valley. Antarctic I.D. 18658. 772900S 1604700E. An upland ice-free valley on the E side of Prentice Plateau in Olympus Range. The valley opens N to the head of McKelvey Valley. Named by US-ACAN (2004) after John C. Priscu, Department of Biological Sciences, Montana State University, Bozeman, MT; USAP investigator in the McMurdo Dry Valleys, 1984-2002.
2004. Nominated and accepted membership to the World Water and Climate Network (WWCN) as their advisor on Antarctic water bodies.
2004. BBC Radio interview "The Lost World", 19 January 2004.
2003. Richard P. Goldthwaite Award. Presented by the Byrd Polar Research Center for novel research in glaciology.
2000. Featured Scientist. BBC-Discovery documentary: "The Lost World: Lake Vostok".
2000. Featured Scientist. National Public Radio live broadcast -February- "Science Friday" with Ira Flatow.
1996. Robert and Nora Wiley award for meritorious research. Presented by the Montana State University Foundation.
1998. A first order stream named for research in Antarctica. Description follows: Priscu Stream. Antarctic I.D. 17354. 773900S 1624500E. Meltwater stream, 3,000 m long, flowing SW from SE end of Lacroix Glacier to the NE end of Lake Bonney in Taylor Valley, Victoria Land. Named by US-ACAN in 1996 after John C. Priscu, ecologist, Montana State University; principal investigator from 1984 on numerous studies of marine and fresh water systems in the McMurdo region and the author of numerous papers on the ecology of this area; led first WINFLY expedition (1991) into the McMurdo Dry Valleys.
1989. Alexander von Humboldt Foundation research scholarship to study at the Limnology Institute, University of Constance, Germany.
1989. Fulbright Foundation research scholarship to study at the Limnology Institute, University of Constance, Germany. Declined.
1987. Invited participant in the National Science Foundation sponsored workshop "Complex Ecological Interactions in Freshwater Ecosystems", held at the University of Notre Dame, March 1987.
1987. Antarctic service medal from the Secretary of the Navy for field exploration in Antarctica.

1987. Antarctic service medal from the National Science Foundation for scientific exploration in Antarctica.

1979. Jastro-Shields Research Scholarship, Univ. of California, Davis.

1976, 1977. Selected to participate in research on the natural history of Baja, Mexico. Sponsored by the Univ. of Nevada, Las Vegas Biology and Geology Departments.

1975. Continuing education scholarship from the Univ. of Nevada to study the natural history of the Grand Canyon.

1975. Continuing education scholarship from the Univ. of Nevada to study the migration and mating patterns of the Gray Whale and Elephant Seal along the west coast of Baja, Mexico.

1972-1976. Captain, University of Nevada Las Vegas, soccer team.

1976-1978. Captain, Vegas United semiprofessional soccer team.

### **SCIENTIFIC PRESENTATIONS**

Over 250 oral presentations and posters presented at national and international meetings since 1985.

### **SCIENTIFIC PUBLICATIONS:**

#### **Books:**

Grebmeier, J. and J.C. Priscu (co-chairs). 2011. *Frontiers in Understanding Climate Change and Polar Ecosystems*. Committee on Frontiers in Understanding Climate Change and Polar Ecosystems Polar Research Board Division of Earth and Life Studies. The National Academies Press, 86 pp. ISBN-10: 0-309-21087-9.

Chyba, C. et al. 2005. *Prevention of the Forward Contamination of Mars*. The National Academies Press, Washington D.C. 167p.

Detrich, H.W., J.W. Deming, C. Fraser, J.T. Holibaugh, W.M. Mohn, J.C. Priscu, G.N. Somero, M.F. Thomashow and D. H. Wall. 2003. *Frontiers in Polar Biology in the Genomic Era*. The National Academies Press, Washington D.C. 166p.

Priscu, J.C. (oversight editor). 2003. *Biogeochemistry of the Ross Sea*. Vol. 78. American Geophysical Union, Washington, DC. 358p.

Priscu, J.C. (editor) 1998. *Ecosystem Dynamics in a Polar Desert: the McMurdo Dry Valleys, Antarctica*. Vol 72. American Geophysical Union, Washington, DC. 369 pp, includes CDROM.

Priscu, J.C. (oversight editor). 1998. *Sea Ice Microbial Communities*. Vol. 73. American Geophysical Union, Washington, DC. 198 pp.

Priscu, J.C. (oversight editor). 1996. *Foundations for Ecosystem Research: The Palmer Peninsula, Antarctica*. Vol. 70. American Geophysical Union, Washington, DC. 448 pp.



## **Refereed–Journal Articles:**

Spigel, R.H., J.C. Priscu, W. Stone and P. Doran. 2013. The Physical Limnology of A Permanently Ice-Covered and Chemically Stratified Antarctic Lake Using High Resolution Spatial Data From An Autonomous Underwater Vehicle. In Prep.

Liu, Y., T. Yao, J.C. Priscu, T.J. Vick-Majors, B. Xu, P. Santibáñez, N. Jiao, M. Greenwood, S. Huang, J. Wang, L. Sheng. 2014. Influence of recent climate change and anthropogenic activity on bacteria in a Tibetan Glacier. In Prep.

Obryk, M. K., P.T. Doran, P. T. and J.C. Priscu. 2014. The permanent ice-cover of Lake Bonney, Antarctica: The influence of thickness and sediment distribution on photosynthetically available radiation and chlorophyll-a distribution in the underlying water column. *Journal of Geophysical Research-Biogeosciences*. 119, doi:10.1002/2014JG002672.

M. K. Obryk, M.K., P. T. Doran, J. A. Hicks, C. P. McKay, J. C. Priscu. 2014. Perennial ice covers on lakes of the Taylor Valley, Antarctica: Response to changing climate. *Limnology and Oceanography*. Submitted.

Priscu, J.C., J. Laybourn-Parry, M. Haggblom. 2014. Polar and alpine microbiology in a changing world *FEMS Microbiology Ecology*. 89:209-210.

Christner, B.C., J.C. Priscu, A.M. Achberger, C. Barbante, S.P. Carter, K. Christianson, A.B. Michaud, J.A. Mikucki, A.C. Mitchell, M.L. Skidmore, T.J. Vick-Majors, & the WISSARD Science Team. 2014. Ecosystems beneath the West Antarctic Ice Sheet. *Nature* 512:310-313.

Tulaczyk, S., J. A. Mikucki, M.R. Siegfried, J. C. Priscu, C. G. Barcheck, L.H. Beem, A. Behar, J. Burnett, B.C. Christner, A.T. Fisher, H.A. Fricker, K.D. Mankoff, R.D. Powell, F. Rack, D. Sampson, R.P. Scherer, S.Y. Schwartz and The WISSARD Science Team. 2014. WISSARD at Subglacial Lake Whillans, West Antarctica: scientific operations and initial observations. *Annals of Glaciology*, 55(65):1-8. doi: 10.3189/2014AoG65A009.

Liu, Yongqin, John C. Priscu, Tandong Yao, Trista J. Vick-Majors, Alexander B. Michaud, Nianzhi Jiao, Juzhi Hou, Lide Tian, Anyi Hu, Zhong-Qiang Chen. 2014. A comparison of pelagic, littoral, and riverine bacterial assemblages in Lake Bangongco, Tibetan Plateau. *FEMS Microbiology Ecology*. 89:211-221.

Xu, Yuan, Trista Vick-Majors, Rachael Morgan-Kiss, John C. Priscu and Linda Amaral-Zettler. 2014. Ciliate diversity, community structure and novel taxa in lakes of the McMurdo Dry Valleys, Antarctica. *Biological Bulletin*. In press.

Winslow, L.A., H.A. Dugan, P.T. Doran, J.C. Priscu, C. Vesbach, H. Buelow and K. Cronin. 2014. Autonomous year-round sampling and sensing to explore the physical and biological habitability of permanently ice-covered Antarctic lakes. *Marine Technology Society Journal*. In press.

Michaud, A.B., J.E. Dore, D. Leslie, W.B. Lyons, D.C. Sands and J.C. Priscu. 2014. Biological ice nucleation initiates hailstone formation. *J. Geophys. Res.-Atmospheres*. In Press.

Šabacká, M. and J.C. Priscu. 2014. Spatial distribution of microorganisms in the McMurdo Dry Valleys, Antarctica. *Polar Biology*. Submitted.

- Šabacká, M., J.C. Priscu, D. McKnight, D.H. Wall, J. E. Barrett and R.A. Virginia. 2014. Aeolian and fluvial fluxes of carbon and nitrogen among landscape units in Taylor Valley, Antarctica. *Environmental Research Letters*. In revision.
- Morgan-Kiss R.M., Lizotte M.P., Kong W., Priscu J.C. 2014. Photoadaptation to the polar night by phytoplankton in a permanently ice-covered Antarctic lake. *Proceedings of the National Academy of Sciences*. In revision.
- Vick-Majors, T.J., J. C. Priscu, L. Amaral-Zettler. 2013. Modular community structure suggests community plasticity during the transition to polar night in ice-covered Antarctic lakes. *The ISME Journal*. 1-12.
- Priscu, J.C., A. M. Achberger, J. E. Cahoon, B.C. Christner, R. L. Edwards, W.L. Jones, A.B. Michaud, M.R. Siegfried, M.L. Skidmore, R.H. Spigel G.W. Switzer, S. Tulaczyk, T.J. Vick-Majors. 2013. A microbiologically clean strategy for access to the Whillans Ice Stream subglacial environment. *Antarctic Science*, 25(5):637-647.
- Febretti A., K. Richmond K, S. Gulati , C. Flesher, B.P. Hogan, A. Johnson, W. Stone, J.C. Priscu, and P.T. Doran. 2012. *Lecture Notes in Computer Science-Advances in Visual Computing Poisson Reconstruction of Extreme Submersed Environments: The ENDURANCE Exploration of an Under-Ice Antarctic Lake*. Vol 7431. Hutchison D, Kanade T, Kittler J et al., editors. Berlin, Heidelberg: Springer Berlin Heidelberg; 2012
- Barletta, R.E., J.C. Priscu, H.M. Mader, W.L. Jones and C.W. Roe. 2012. Chemical Analysis of Ice Vein  $\mu$ -Environments II – Analysis of Glacial Samples from Greenland and the Antarctic. *J. Glaciology*, 58:1109-1118.
- Vick-Majors, T.J. and John C. Priscu. 2012. Bacterioplankton productivity in lakes of the Taylor Valley, Antarctica during the polar night transition. *Aquatic Microbial Ecology*. 68:57-76.
- Murray, A.E., F. Kenig, C.H Fritsen, C.P. McKay, K.M. Cawley, R. Edwards, E. Kuhn, D.M McKnight, N. E. Ostrom, V. Peng, A. Ponce, J.C. Priscu, V. Samarkin, A.T. Townsen, P.Wag, S.A Young, P.T Yung, P.T. Doran. Microbial Life at -13 °C in the Brine of an Ice-Sealed Antarctic Lake. 2012. *Proceedings of the National Academy of Sciences*. PNAS Early Edition, [www.pnas.org/cgi/doi/10.1073/pnas.1208607109](http://www.pnas.org/cgi/doi/10.1073/pnas.1208607109).
- Jackson, W.A., A.F Davila, N. Estrada, W. B. Lyons, J. D. Coates, and J.C. Priscu. 2012. Perchlorate and chlorate biogeochemistry in ice-covered lakes of the McMurdo Dry Valleys, Antarctica. *Geochimica et Cosmochimica Acta* 98:19-30.
- Christner, B.C., G.G. Montross, and J.C. Priscu. 2012. Dissolved gases in frozen basal water from the NGRIP borehole: implications for biogeochemical processes beneath the Greenland ice sheet. *Polar Biology* 35:1735-1741, doi 10.1007/s00300-012-1198-z.
- Kong, W., J.M. Dolhi, A. Chiuchiolo, J.C. Priscu, R. M. Morgan-Kiss. 2012. High diversity of the form II RubisCO gene in a perennially ice-covered Antarctic lake. *FEMS Microbiology Ecology* 82(2):491-500.
- Kong, W., D.C. Ream, J.C. Priscu, R.M. Morgan-Kiss. 2012. Diversity and Expression of RubisCO Genes in a Perennially Ice-Covered Antarctic Lake during the Polar Night Transition. *Appl. Env. Microbiol.*78(12):4358-4366.

- Thurman, Jill , Jacqueline Parry, Philip J. Hill, John C. Priscu, Trista J. Vick, Amy Chiuchiolo and Johanna Laybourn-Parry. 2012. Microbial dynamics and flagellate grazing during transition to winter in Lakes Hoare and Bonney, Antarctica. *FEMS Microbiology Ecology* 82(2): 449-458.
- Priscu, J.C. and K.O. Hand. 2012. The microbial habitability of extraterrestrial icy worlds: A view from Earth. *Microbe* 7: 167-172.
- Michaud, A. B., Šabacká, M. and Priscu, J. C. 2012. Cyanobacterial diversity across landscape units in a polar desert: Taylor Valley, Antarctica. *FEMS Microbiology Ecology*, 82: 268–278. doi: 10.1111/j.1574-6941.2012.01297.x
- Kristof, R., A. Febretti, S. Gulati, C. Flesher, B.P. Hogan, A. Murarka, G. Kuhlman, M. Sridharan, A. Johnson, W.C. Stone<sup>1</sup>, J. C. Priscu and P. Doran. 2012. Sub-ice exploration of an Antarctic lake: Results from the ENDURANCE Project. Proceedings of the Unmanned Untethered Submersible Technology Conference. August 21-24, 2011—17th, Portsmouth, New Hampshire.
- Šabacká, Marie, John C. Priscu, Hassan J. Basagic, Andrew G. Fountain, Diana H. Wall, Ross A. Virginia, Mark C. Greenwood. 2012. Aeolian flux of biotic and abiotic material in the Taylor Valley, Antarctica *Geomorphology*, 155-156:102-111.
- Mowlem, M.C., M.-N. Tsaloglou, E.M.W., C.F.A. Floquet, K. Saw, L. Fowler, R.Brown, D.Pearce, J. B. Wyatt, A. D. Beaton, M. P. Brito, D. A. Hodgson, G. Griffiths, M. Bentley, D. Blake, H. Campbell, L. Capper, R. Clarke, C. Cockell, H. Corr, W. Harris, C. Hill, R. Hindmarsh, E. King, H. Lamb, B. Maher, K. Makinson, J. Parnell, J. Priscu, A. Rivera, N. Ross, M. J. Siegert, A. Smith, A. Tait, M. Tranter, J. Wadham, B. Whalley, and J. Woodward. 2011. Probe Technology for the Direct Measurement and Sampling of Ellsworth Subglacial Lake. In *Subglacial Antarctic Aquatic Environments* (M. Siegert, C. Kennicutt, B. Bindschadler, eds.). AGU Geophysical Monograph Series 192. Washington DC. ISBN 978-0-87590-482-5.
- Ross, N., M. J. Siegert, A. Rivera, M. J. Bentley, D. Blake, L. Capper, R. Clarke, C. S. Cockell, H. F. J. Corr, W. Harris, C. Hill, R. C. A. Hindmarsh, D. A. Hodgson, E. C. King, H. Lamb, B. Maher, K. Makinson, M. Mowlem, J. Parnell, D. A. Pearce, J. Priscu, A. M. Smith, A. Tait, M. Tranter, J. L. Wadham, W. B. Whalley, and J. Woodward. 2011. Ellsworth Subglacial Lake, West Antarctica: A Review of Its History and Recent Field Campaigns. In *Subglacial Antarctic Aquatic Environments* (M. Siegert, C. Kennicutt, B. Bindschadler, eds.). AGU Geophysical Monograph Series 192. Washington DC. ISBN 978-0-87590-482-5.
- Fricker, H.A., R. Powell, J. C. Priscu, S. Tulaczyk, S. Anandakrishnan, B. Christner, D. Holland, H. Horgan, R., J. Mikucki, A. Mitchell, R. Scherer, J. Severinghaus. 2011. Siple Coast Subglacial Aquatic Environments: The Whillans Ice Stream Subglacial Access Research Drilling (WISSARD) project. In *Subglacial Antarctic Aquatic Environments* (M. Siegert, C. Kennicutt, B. Bindschadler, eds.). AGU Geophysical Monograph Series 192. Washington DC. ISBN 978-0-87590-482-5.
- Ross, N, A. Rivera, M.J. Siegert, M. Bentley, D. Blake, H. Campbell, L. Capper, R. Clarke, C. Cockell, H. Corr, W. Harris, C. Hill, R. Hindmarsh, D. Hodgson, E. King, H. Lamb, B. Maher, K. Makinson, M. Mowlem, J. Parnell, D. Pearce, J.C. Priscu, A. Smith, A. Tait, A., M. Tranter, J. Wadham, B. Whalley, and J. Woodward. 2011. Subglacial Lake Ellsworth, West Antarctica: its history, recent field campaigns and plans for its exploration. In *Subglacial Antarctic Aquatic Environments* (M. Siegert, C. Kennicutt, B. Bindschadler, eds.). AGU Geophysical Monograph Series 192. Washington DC. ISBN 978-0-87590-482-5.

- Priscu, J.C. 2011. Subglacial Lakes, Antarctica. (V.P. Singh, P. Singh and E.K Haritashya eds.) pp. 1099-1101 in, Encyclopedia of Snow, Ice and Glaciers, Springer, The Netherlands (ISBN: 978-90-481-2641-5)
- Bielewicz, S., E. Bell, W. Kong, I. Friedberg, J.C. Priscu and R. M. Morgan-Kiss. 2011. Protist diversity in a permanently ice-covered Antarctic lake during the polar night transition. *The ISME Journal* 5: 1559-1564.
- Dieser, M. A. Nicker, J.C. Priscu and C.M. Foreman. 2010. Viable microbes in ice: application of molecular assays to McMurdo Dry Valley lake ice communities. *Antarctic Science* 22(5), 470–476.
- Wadham, J.L., Tranter, M., Skidmore, M., Hodson, A.J., Priscu, J.C., Lyons, W.B., Sharp, M., Wynn, P., Jackson, M. 2010. Biogeochemical weathering under ice: size matters. *Global Biogeochemical Cycles*, Vol 24, GB3025, doi:10.1029/2009GB003688.
- Stone, W., Hogan, B., Flesher, C., Gulati, S., Richmond, K., Murarka, A., Kuhlman, G., Sridharan, M., Siegel, V., Price, R. M., Doran, P. T., and Priscu, J. 2010. Design and deployment of a four-degrees-of-freedom hovering autonomous underwater vehicle for sub-ice exploration and mapping. *J. Engineering for the Maritime Environment*, 2010, 224 (M4), 341-361. DOI 10.1243/14750902JEME214
- Welch, K.A., W. Berry Lyons, Carla Whisner, Christopher B. Gardner, Michael Gooseff, Diane M. McKnight and John C. Priscu. 2010. Spatial variations in the geochemistry of glacial melt-water streams in the Taylor Valley, Antarctica. *Antarctic Science*, 22(6): 662-672.
- Priscu, J. C., R. D. Powell, and S. Tulaczyk. 2010. Probing Subglacial Environments Under the Whillans Ice Stream, *Eos Trans. AGU*, 91(29), 253, doi:10.1029/2010EO290002.
- Herbei, R. Lyons, W.B., Laybourn-Parry, J., Gardner, C., Priscu, J.C., McKnight, D. M. 2010. Physiochemical Properties Influencing Biomass Abundance and Primary Production in Lake Hoare, Antarctica. *Ecological Modeling* 221: 1184-1193.
- Takacs-Vesbach, C., Zeglin, L., J.E. Barrett, M.N. Gooseff, and Priscu, J.C. 2010. Factors Promoting Microbial diversity in the McMurdo Dry Valleys, Antarctica. p. 221-257, In, Doran, P.T., W.B. Lyons and D.M. McKnight (eds.) *Life in Antarctic Deserts and other Cold Dry Environments*. Cambridge Press, 307 pp.
- Samarkin, V.A., M.T. Madigan, M.W. Bowles, K.L. Casciotti, J.C. Priscu, C.P. Kay, and S.B. Joye. 2010. Abiotic nitrous oxide production in a hypersaline environment, Don Juan Pond, Antarctica. *Nature-Geosciences* 3:41-44.
- Priscu, J.C. 2009. Life at the ends of the Earth. *Bioscience* 59:709-710.
- Jepsen, S.M., E.E. Adams and J.C. Priscu. 2010. Sediment Melt Dynamics in Permanent Antarctic Lake Ice. *Arctic, Antarctic and Alpine Research*. 42: 57–66.
- Hand, K.P., C. F. Chyba, J. C. Priscu, R. W. Carlson and K. H. Nealson. 2009. Astrobiology and the Potential for Life on Europa (p. 589-629). In: R. Pappalardo, W. Mckinnon and K Khurana (eds.) *Europa*. Arizona Press, 727 pp.
- Mikucki, J.A., A. Pearson, D. T. Johnston, A.V. Turchyn, J. Farquhar, D.P. Schrag, A. D. Anbar, J. C. Priscu, P. A. Lee. 2009. A contemporary, microbially-maintained, ferrous subglacial ‘ocean’. *Science*, 324:397.

- Priscu, J.C. and C.M. Foreman. 2009. Lakes of Antarctica. p. 555-566 in G.E. Likens (ed.) Encyclopedia of Inland Waters volume 2. Oxford: Elsevier Press. 6492 pp.
- Jaraula, C.B., F. Kenig, P.T. Doran, J.C. Priscu and K. A. Welch. 2009. Composition and biodegradation of synthetic oils and hydraulic fluid spilled on the perennial ice cover of Lake Fryxell, Antarctica. *Environmental Science and Technology*, 43: 2708-2713.
- Lanoil, B., M. Skidmore, J. C. Priscu, S. Han, W. Foo, S. W. Vogel, S. Tulaczyk, and H. Engelhardt. 2009. Bacteria beneath the West Antarctic Ice Sheet. *Environmental Microbiology* 11(3), 609–615.
- Jaraula, C.B., F. Kenig, P.T. Doran, J.C. Priscu and K. A. Welch. 2008. SPME-GCMS study of the natural attenuation of aviation diesel spilled on the perennial ice cover of Lake Fryxell, Antarctica. *Science of the Total Environment*. 407:250-262.
- Morgan-Kiss, R., A.G. Ivanov, S. Modla, K. Szymmek, N.P.A. Huner, J.C. Priscu, J.T. Lisle and T.E. Hanson. 2008. Identity and physiology of a new psychrophilic eukaryotic green alga, *Chlorella cold*. Sp. isolated from a transitory pond near Bratina Island, Antarctica. *Extremophiles* DOI 10.1007/s00792-008-0176-4.
- Priscu, J.C., B.C. Christner, J.E. Dore, M.B. Westley, B.N. Popp, K.L. Casciotti, and W.B. Lyons. 2008. Extremely supersaturated N<sub>2</sub>O in a perennially ice-covered Antarctic lake: Molecular and stable isotopic evidence for a biogeochemical relict. *Limnology and Oceanography*, 53: 2439-2450.
- Hodson, A., A.M. Anesio, M. Tranter, A. Fountain, M. Osborn, J. C. Priscu, J. Laybourn-Parry, B. Sattler. 2008. Glacial ecosystems. *Ecological Monographs*, 78(1), 41–67.
- Priscu, J.C., S. Tulaczyk, M. Studinger, M. C. Kennicutt II, B.C. Christner, and C.M. Foreman. 2008. Antarctic Subglacial Water: Origin, Evolution and Ecology. *In*: W. Vincent and J. Laybourn-Parry (eds.), *Polar Lakes and Rivers*. Oxford University Press. Pp. 119-135.
- Christner, B.C., M.L. Skidmore, J.C. Priscu, M. Tranter, and C.M. Foreman. Bacteria in subglacial environments. 2008. *In* R. Margesin, F. Schinner, J.-C. Marx, and C. Gerday (eds.), *Psychrophiles: From Biodiversity to Biotechnology*. Springer, New York. Pp. 51-71.
- Säwström, C. J., Lisle, A.M. Anesio, J.C. Priscu and J. Laybourn-Parry. 2008. Bacteriophage in Polar Inland Waters. *Extremophiles*. 12(2):167-175.
- Foreman, C.M., B. Sattler, J. A. Mikucki, D. L. Porazinska and J. C. Priscu. 2007. Metabolic Activity and Diversity of Cryoconites in the Taylor Valley, Antarctica. *JGR-Biogeosciences*, 112: Vol. 112, No. G4, G04S32, 10.1029/2006JG000358.
- Barrett, J.E., R.A. Virginia, W.B. Lyons, D.M. Mcknight, J.C. Priscu, P.T. Doran, A.G. Fountain, D.H. Wall and D.L. Moorhead. 2007. Biogeochemical stoichiometry of Antarctic dry valley ecosystems. *J. Geophysical Research-Biogeochemistry*. 112, G01010, doi:10.1029/2005JG000141.
- The Lake Ellsworth Consortium - A. Behar, M. Bentley, D. Blake, P. Christoffersen, C. Cockell, H. Corr, D.C. Cullen, H. Edwards, A. Ellery, C. Ellis-Evans, G. Griffiths, R. Hindmarsh, D.A. Hodgson, E. King, H. Lamb, L. Lane, K. Makinson, M. Mowlem, J. Parnell, D.A. Pearce, J. C. Priscu, A. Rivera, M.A. Sephton, M.J. Siebert,

- M.R. Sims, A.M. Smith, M. Tranter, J.L. Wadham, G. Wilson, J. Woodward. 2007. Exploration of Ellsworth Subglacial Lake: a concept paper on the development, organisation and execution of an experiment to explore, measure and sample the environment of a West Antarctic subglacial lake. *Rev. Environ. Sci. Biotechnol.* 6:161–179. doi: 10.1007/s11157-006-9109-9. Also published in *Life in Extreme Environments*, Amils, R., Ellis-Evans, C. and Hinghofer-Szalkay, H.G (eds), Springer, Dordrecht, the Netherlands, 25-44 (2007).
- Jepsen, S.M, J.C. Priscu, R. E. Grimm, M.A. Bullock. 2007. The Potential for Lithoautotrophic Life on Mars: Application to Shallow Interfacial-Water Environments. *Astrobiology*, 7:342-354.
- Mikucki, J.A. and J.C. Priscu. 2007. Bacterial diversity associated with Blood Falls, A subglacial outflow from the Taylor Glacier, Antarctica. *Applied and Environmental Microbiology* 73: 4029–4039.
- Priscu, J.C., B.C. Christner, C.M. Foreman and G. Royston-Bishop. 2007. Biological Material in Ice Cores. *Encyclopedia of Quaternary Sciences*. Volume 2. (Editor in Chief, S.A. Elias). p. 1156-1166. Elsevier B.V., UK.
- Lyons, W.B., J. Laybourn-Parry, K. A. Welch and J.C. Priscu. 2006. Antarctic lake systems and climate change. *In: D.M. Bergstrom, P. Convey, A.H.L. Huiskes (Eds.)*. *Trends in Antarctic Terrestrial and Limnetic Ecosystems: Antarctica as a Global Indicator*. Springer, Dordrecht.
- Jepsen, S.M., E. E. Adams and J. C. Priscu. 2006. Fuel movement between grain boundaries in ice. *Cold Regions Science and Technology* 45:158–165.
- Christner, B.C., G. Royston-Bishop, C. M. Foreman, B. R. Arnold, M. Tranter, K. A. Welch, W. B. Lyons, A. I. Tsapin, and J. C. Priscu. 2006. Limnological Conditions in Subglacial Lake Vostok, Antarctica. *Limnology and Oceanography*. 51: 2485-2501.
- Morgan-Kiss, R.M., J.C. Priscu, T. Pockock, L. Gudynaite-Savitch and N. PA Huner. 2006. Adaptation and acclimation of photosynthetic microorganisms to permanently cold environments. *Microbial and Molecular Biology Reviews*. 70: 222–252.
- Priscu, J.C. 2005. An Ecosystem of Superlatives. *Bioscience* 55(9): 804-806.
- Priscu, J.C., M.C. Kennicutt II, R.E. Bell, S.A. Bulat, J.C. Ellis-Evans, V.V. Lukin, J.-R. Petit, R.D. Powell, M.J. Siegert and I. Tabacco. 2005. Exploring subglacial Antarctic lake environments. *EOS, Transactions of the Geophysical Union*. Vol. 86, No. 20: 17,193-17,197.
- Christner, B.C. and J.C. Priscu. 2005. Subglacial Lake Vostok. *Encyclopedia of Water*. Wiley Intersciences.
- Royston-Bishop G., Priscu J.C., Tranter M., Christner B., Siegert M.J., Lee V. 2005. Incorporation of particulates into accreted ice above subglacial Lake Vostok, Antarctica. *Annals of Glaciology* 40: 145-150.
- Tranter, M. A.G. Fountain, C. H. Fritsen, W.B. Lyons, J.C. Priscu, P.J. Stratham and K.A. Welch. 2005. Perturbation of hydrochemical conditions in natural microcosms entombed within Antarctic ice. *Ice and Climate News* 6:22-23.
- Christner, B.C., J. A. Mikucki, C. M. Foreman, J. Denson and J.C. Priscu. 2005. Glacial ice cores: A model system for developing extraterrestrial decontamination protocols. *Icarus* 174: 572–584.

- Priscu, J.C., C.H. Fritsen, E.E. Adams, H.W. Paerl, J.T. Lisle, J.E. Dore, C.F. Wolf and J. A. Mikucki. 2005. Perennial Antarctic lake ice” A refuge for cyanobacteria in an extreme environment. p. 22-49, In: J.D. Castello and S.O. Rogers (Eds.). Life in Ancient Ice. Princeton Press.
- McKay, C.P. D.T. Andersen, W. H. Pollard, J. L. Heldmann, P.T. Doran, C.H. Fritsen, and J. C. Priscu. 2005. Polar Lakes, Streams, and Springs as Analogs for the Hydrological Cycle on Mars. P. 219-233, In Water on Mars and Life (Tetsuya Tokano, Ed). Advances in Astrobiology and Biogeophysics, Springer-Verlag, Berlin, Heidelberg.
- Pocock, T., M.-A. Lachance, T. Proschold, J. C. Priscu, S. Kim, and N. P. A. Huner. 2004. Identification of a psychrophilic green alga from Lake Bonney, Antarctica: *Chlamydomonas raudensis* Ettl. (UWO 241) (Chlorophyceae). Journal of Phycology 40 (6): 1138-1148.
- Foreman, C.M., C. F. Wolf, and J.C. Priscu. 2004. Impact of episodic warming events on the physical, chemical and biological relationships of lakes in the McMurdo Dry Valleys, Antarctica. Aquatic Geochemistry, 10:239-268.
- Mikucki, J.A., C.M. Foreman, J.C. Priscu, W. B. Lyons, B. Sattler, and K. Welch. 2004. Geomicrobiology of Blood Falls: A Saline, Iron-rich Subglacial Feature of Taylor Glacier, Antarctica. Aquatic Geochemistry, 10:199-220.
- Roberts, E.C., J.C. Priscu and J. Laybourn-Parry. 2004. Microplankton dynamics in a perennially ice-covered Antarctic lake-Lake Hoare. Freshwater Biology, 49:853-869.
- Roberts, E.C., Priscu, J.C., Wolf, C., Lyons, W.B. and Laybourn-Parry, J. 2004. The distribution of microplankton in the McMurdo Dry Valley Lakes, Antarctica: Response to ecosystem legacy or present day climatic controls? Polar Biology, 27, 238-249.
- Lee, P.A., J.C. Priscu, G. R. DiTullio, S. F. Riseman, N. Tursich and S. J. De Mora. 2004. Elevated levels of dimethylated-sulfur compounds in Lake Bonney, a poorly ventilated Antarctic lake. Limnology and Oceanography, 49: 1044-1055.
- Lee P.A., J.A. Mikucki, C. M. Foreman, J. C. Priscu, G.R. DiTullio, S. F. Riseman, S. J. de Mora, C. F. Wolf and L. Kester. 2004. Thermodynamic constraints on microbially mediated processes in lakes of the McMurdo Dry Valleys, Antarctica. Geomicrobiology Journal, 21:1–17.
- Neumann, K., W. B. Lyons, J. C. Priscu, D. J. Des Marais, K. A. Welch. 2004. The Carbon Isotopic Composition of Dissolved Inorganic Carbon in Perennially Ice-Covered Antarctica Lakes: Searching for a Biogenic Signature. Annals Glaciol. 39:518-524.
- Lisle, J.T. and J.C. Priscu. 2004. The Occurrence of Lysogenic Bacteria and Microbial Aggregates in the Lakes of the McMurdo Dry Valleys, Antarctica. Microbial Ecology 47:427–439.
- Doran, P.T. J. C. Priscu, W. Berry Lyons, R. D. Powell, D. T. Andersen and R.J. Poreda. 2004. Paleolimnology of Ice-covered Environments. pp. 475-507, In R. Pienitz, M. Douglas and John Smol (eds) Long-term environmental change in Arctic and Antarctic lakes, Kluwer Academic Publishers, Dordrecht, The Netherlands.

Priscu, J.C. and B. Christner. 2004. Earth's Icy Biosphere. p. 130-145, In: A.T. Bull (Ed.) "Microbial Diversity and Prospecting". ASM Press, Washington, D.C.

Lawson, J., P.T. Doran, F. Koenig, D.J. Des Marais, and J.C. Priscu. 2004. Stable carbon and nitrogen isotopic composition of benthic and pelagic organic matter in lakes of the McMurdo Dry Valleys, Antarctica. *Aquatic Geochemistry*, 10: 269–301.

Tranter, M., A. Fountain, C.F. Fritsen, W.B. Lyons, J.C. Priscu, P. Statham and K. Welch. 2004. Extreme hydrochemical conditions in natural microcosms entombed within Antarctic ice. *Hydrological Processes*. 18:379-387.

Tulaczyk, S., G. Clow, D. Elliot, R. Powell and J.C. Priscu. 2003. Workshop Advances Interdisciplinary Polar Science and Ice Sheet Drilling. *EOS* 84:2.

Priscu, J.C., M.C. Kennicutt III, R. E. Bell, S.A. Bulat, C. Ellis-Evans, V.V. Lukin, J-R. Petit, R.D. Powell, M. J. Siegert, I. Tabacco. 2003. An International Plan for Antarctic Subglacial Lake Exploration. *Polar Geography*, 27 (1):69-83.

Pugh, H. E., K.A. Welch, W. B. Lyons, J.C. Priscu and D. M. McKnight. 2003. Biogeochemistry of Si in the McMurdo Dry Valley Lakes, Antarctica. *The International Journal of Astrobiology*. 1:401-413.

McKay, C.P., K.P. Hand, P. Doran, J.C. Priscu. 2003. Clathrate formation and the fate of noble and biologically useful gases in Lake Vostok, Antarctica. *Geophys. Res. Lett.* 30(13):1702.

Colarusso, L.A., J.A. Chermak, J.C. Priscu and F.K. Miller. 2003. Modeling pit lake water column stability using Ce-Qual-W2. *Proceedings of the Tailings and Mine Waste Conference*, 12-15 October 2003. Vail, Colorado. USA.

Siegert, M.J., M. Tranter, J. C. Ellis-Evans, J. C. Priscu and W. Berry Lyons. 2003. The hydrochemistry of Lake Vostok and the potential for life in Antarctic subglacial lakes. *Hydrological Processes* 17: 795–814.

Walsh J. E., P.T. Doran, J.C. Priscu, W.B. Lyons, A.G. Fountain, D.M. McKnight, D.L. Moorhead, R.A. Virginia, D.H. Wall, G.D. Clow, C.H. Fritsen, C.P. McKay and A.N. Parsons. 2002. Recent Temperature Trends in the Antarctic. *Nature* 418: 291-292.

Priscu, J.C. 2002. Commentary: Subglacial Lakes have changed our view of Antarctica. *Antarctic Science*. 14:291.

Psenner, R., M. Felip, J.C. Priscu, D. Wagenbach, A. Wille and B. Sattler. 2002. Extremophiles: Ice Ecosystems and Biodiversity, in: *KNOWLEDGE FOR SUSTAINABLE DEVELOPMENT An Insight into the ENCYCLOPEDIA OF LIFE SUPPORT SYSTEMS Volumes I,II,III*, pp 573-598, UNESCO Publishing-Eolss Publishers, Oxford, UK.

Doran, P.T., C. H. Fritsen, C. P. McKay, J. C. Priscu and E. E. Adams. Formation of the 19 m ice cover and associated brine in Lake Vida, Antarctica. 2002. *Proceedings of the National Academy of Sciences* 100:26-31.

Doran, P.T., J. C. Priscu, W. B. Lyons, J. E. Walsh, A. G. Fountain, D. M. McKnight, D. L. Moorhead, R. A. Virginia, D. H. Wall, G. D. Clow, C. H. Fritsen, C. P. McKay and A. N. Parsons 2002. Antarctic climate



- cooling and terrestrial ecosystem response. *Nature*, 415:517-520. Also published in *Nature On-Line* 13 January 2002, DOI 101038/nature710.
- Lyons, W.B., K.A. Welch, J.C. Priscu, D. Moorhead, D. McKnight, P.T. Doran and M. Tranter. 2001. The McMurdo Dry Valleys Long Term Ecological Research Program: New understanding of the biogeochemistry of the dry valley lakes: A Review. *Polar Geography*. 25:202-217.
- Neumann, K. W. B. Lyons, J. C. Priscu, and Rona J. Donahoe. 2001. CO<sub>2</sub> concentrations in perennially ice-covered lakes of Taylor Valley, Antarctica. *Biogeochemistry* 56:27-50.
- Siegert, M.J., J. C. Ellis-Evans, M. Tranter, C. Mayer, J.-R. Petit, A. Salamatin and J.C. Priscu. 2001. Physical, chemical and biological processes in Lake Vostok and other Antarctic subglacial lakes. *Nature* 414:603-609.
- Dore, J. E. and J.C. Priscu. 2001. Phytoplankton phosphorus deficiency and alkaline phosphatase activity in the McMurdo Dry Valley lakes, Antarctica. *Limnology and Oceanography* 46:1331-1346.
- Takacs, C.D. J.C. Priscu and D. McKnight. 2001. Bacterial dissolved organic carbon demand in McMurdo Dry Valley lakes, Antarctica. *Limnology and Oceanography* 46:1189-1194.
- Fritsen, C.H., A. Grue and J.C. Priscu. 2000. Distribution of organic carbon and nitrogen in surface soils in the McMurdo Dry Valleys, Antarctica. *Polar Biology* 23:121-128.
- Lyons, W.B., A. Fountain, P. Doran, J.C. Priscu and K. Neumann. 2000. The importance of landscape position and legacy: The evolution of the Taylor Valley Lake District, Antarctica. *Freshwater Biology* 43:355-367.
- Gordon, D.A., J.C. Priscu and S. Giovannoni. 2000. Distribution and phylogeny of bacterial communities associated with mineral particles in Antarctic lake ice. *Microbial Ecology* 39:197-202.
- Fritsen, C.H. and J.C. Priscu. 1999. Seasonal change in the optical properties of the permanent ice cover on Lake Bonney, Antarctica: Consequences for lake productivity and dynamics. *Limnology and Oceanography* 44:447-454.
- Psenner, R., B. Sattler, A. Willie, C.H. Fritsen, J.C. Priscu, M. Filip and J. Catalan. 1999. Lake Ice Microbial Communities in Alpine and Antarctic Lakes. p. 17-31. *In* P. Schinner and R. Margesin, (eds.) *Adaptations of Organisms to Cold Environments*. Springer-Verlag.
- Priscu, J.C. 1999. Life in the valley of the "dead." *Bioscience* 49:959.
- Priscu, J.C. C. F. Wolf, C.D. Takacs, C.H. Fritsen, J. Laybourn-Parry, E.C. Roberts and W. Berry Lyons. 1999. Carbon transformations in the water column of a perennially ice-covered Antarctic Lake. *Bioscience* 49:997-1008.
- Fountain, A.G., W.B. Lyons, M.B. Burkins, G.L. Dana, P. T. Doran, K.J. Lewis, D.M. McKnight, D. Moorhead, A.N. Parsons, J.C. Priscu, D.H. Wall, R.W. Wharton and R.A. Virginia. 1999. Physical controls on the Taylor Valley Ecosystem, Antarctica. *Bioscience* 49:961-971.

- Moorhead, D.L., P. Doran, A.G. Fountain, W.B. Lyons, D.M. McKnight, J.C. Priscu, R.A. Virginia and D.H. Wall. 1999. Ecological Legacies: Impacts on Ecosystems of the McMurdo Dry Valleys. *Bioscience* 49:1009-1019.
- Priscu, J.C., E.E. Adams, W.B. Lyons, M.A. Voytek, D.W. Mogk, R.L. Brown, C.P. McKay, C.D. Takacs, K.A. Welch, C.F. Wolf, J.D. Kirstein. R. Avci. 1999. Geomicrobiology of sub-glacial ice above Vostok Station. *Science* 286:2141-2144.
- Voytek, M.A., J.C. Priscu and B.B. Ward. 1999. The distribution and relative abundance of ammonium-oxidizing bacteria in lakes of the McMurdo Dry Valleys, Antarctica. *Hydrobiologia* 401:113-130.
- Spigel, R.H. and J.C. Priscu. 1998. Physical limnology of the McMurdo Dry Valley lakes. p. 153-188. *In* J.C. Priscu (ed.) *Ecosystem Dynamics in a Polar Desert: The McMurdo Dry Valleys, Antarctica*. Antarctic Research Series, Vol. 72, American Geophysical Union.
- Lizotte, M.P. and J.C. Priscu. 1998. Distribution, succession and fate of phytoplankton in the dry valley lakes of Antarctica, based on pigment analysis. p. 229-240. *In* J.C. Priscu (ed.) *Ecosystem Dynamics in a Polar Desert: The McMurdo Dry Valleys*. Antarctic Research Series, Vol. 72, American Geophysical Union.
- Neale, P.J. and J.C. Priscu. 1998. Fluorescence quenching in phytoplankton of the McMurdo Dry Valley lakes (Antarctica): Implications for the structure and function of the photosynthesis apparatus. p. 241-254. *In* J.C. Priscu (ed.) *Ecosystem Dynamics in a Polar Desert: The McMurdo Dry Valleys, Antarctica*. Antarctic Research Series, Vol. 72, American Geophysical Union.
- Howard-Williams, C., A. Schwarz, I. Hawes and J.C. Priscu. 1998. Optical properties of lakes of the McMurdo Dry Valleys. p. 189-204. *In* J.C. Priscu (ed.) *Ecosystem Dynamics in a Polar Desert: The McMurdo Dry Valleys, Antarctica*. Antarctic Research Series, Vol. 72, American Geophysical Union.
- Fritsen, C. H., E. E. Adams, C. M. McKay and J. C. Priscu. 1998. Permanent ice covers of the McMurdo Dry Valley Lakes, Antarctica: Liquid water content. p. 269-280. *In* J.C. Priscu (ed.) *Ecosystem Dynamics in a Polar Desert: The McMurdo Dry Valleys, Antarctica*. Antarctic Research Series, Vol. 72, American Geophysical Union.
- Adams, E.E., J.C. Priscu, C.H. Fritsen, S.R. Smith and S.L. Brackman. 1998. Permanent ice covers of the McMurdo Dry Valley Lakes, Antarctica: bubble formation and metamorphism. p. 281-296. *In* J.C. Priscu (ed.) *Ecosystem Dynamics in a Polar Desert: The McMurdo Dry Valleys, Antarctica*. Antarctic Research Series, Vol. 72, American Geophysical Union.
- Moorhead, D. and J.C. Priscu. 1998. Linkages among ecosystem components within the McMurdo Dry valleys: A synthesis. 1998. p. 351-364. *In* J.C. Priscu (ed.) *Ecosystem Dynamics in a Polar Desert: The McMurdo Dry Valleys*. Antarctic Research Series, Vol. 72, American Geophysical Union.
- Voytek, M.A., B.B. Ward and J.C. Priscu. 1998. The abundance of ammonium-oxidizing bacteria in Lake Bonney, Antarctica, Determined by immunofluorescence, PCR, and in situ hybridization. p. 217-228. *In* J.C. Priscu (ed.) *Ecosystem Dynamics in a Polar Desert: The McMurdo Dry Valleys*. Antarctic Research Series, Vol. 72, American Geophysical Union.

- Takacs, C.T. and J.C. Priscu. 1998. Bacterioplankton dynamics in the McMurdo Dry Valley lakes: Production and biomass loss over four seasons. *Microbial Ecology* 36:239-250.
- Morgan, R.M. A.G. Ivanov, J.C. Priscu, D. P. Maxwell and N.P.A. Huner. 1998. Structure and composition of the photochemical apparatus of the Antarctic green alga, *Chyamydomonas subcaudata*. *Photosynthesis Research* 56:303-314.
- Paerl, H.W. and J.C. Priscu. 1998. Microbial phototrophic, heterotrophic and diazotrophic activities associated with aggregates in the permanent ice cover of Lake Bonney, Antarctica. *Microbial Ecology* 36:221-230.
- Priscu, J.C., C.H. Fritsen, E.E. Adams, S.J. Giovannoni, H.W. Paerl, C.P. McKay, P.T. Doran, D.A. Gordon, B.D. Lanoil and J.L. Pinckney. 1998. Perennial Antarctic Lake Ice: An Oasis for Life in a Polar Desert. *Science* 280:2095-2098.
- Fritsen, C.H. and J.C. Priscu. 1998. Cyanobacterial assemblages in permanent ice covers of Antarctic lakes: distribution, growth rate, and temperature response of photosynthesis. *J. Phycology* 34:587-597.
- Priscu, J. C. and C.W. Sullivan. 1998. Nitrogen metabolism in Antarctic fast-ice microalgal assemblages. p. 147-160. *In* M.L. Lizotte and K. Arrigo (ed.) *Antarctic Sea Ice: Biological Processes, Interactions and Variability*. Antarctic Research Series, Vol. 73, American Geophysical Union.
- Laybourn-Parry, M. James, D. McKnight, J. C. Priscu, S. Spaulding and R. Shiel. 1997. The microbial plankton of Lake Fryxell, Southern Victoria Land, Antarctica. *Polar Biology* 17:54-61.
- Ward, B.B. and J.C. Priscu. 1997. Detection and characterization of denitrifying bacteria from a permanently ice-covered Antarctic lake. *Hydrobiology* 347:57-68.
- Priscu, J.C. 1997. The biogeochemistry of nitrous oxide in permanently ice-covered lakes of the McMurdo Dry Valleys, Antarctica. *Global Change Biology* 3:301-305.
- Vincent, W.F., R. Rae, I. Laurion, C. Howard-Williams and J.C. Priscu. 1997. Transparency of Antarctic ice-covered lakes to solar UV radiation. *Limnology and Oceanography* 43:618-624.
- Lizotte, M.L., T.R. Sharp and J.C. Priscu. 1996. Phytoplankton dynamics in the stratified water column of Lake Bonney, Antarctica: I. Biomass and productivity during the winter-spring transition. *Polar Biology* 16:155-162.
- Spigel, R.H. and J.C. Priscu. 1996. Evolution of temperature and salt structure of Lake Bonney, a chemically stratified Antarctic lake. *Hydrobiology* 321:177-190.
- Priscu, J.C., M.T. Downes and C.P. McKay. 1996. Extreme super-saturation of nitrous oxide in a permanently ice-covered Antarctic Lake. *Limnology and Oceanography* 41:1544-1551.
- Goldman, C.R., J.J. Elser, R.C. Richards, J.E. Reuter, J.C. Priscu and A.L. Levin. 1996. Thermal stratification, nutrient dynamics, and phytoplankton productivity during the onset of spring phytoplankton growth in Lake Baikal, Russia. *Hydrobiologia* 331:9-24.
- Neale, P.J. and J.C. Priscu. 1995. The photosynthetic apparatus of phytoplankton from an ice-covered Antarctic lake: Acclimation to an extreme shade environment. *Plant and Cell Physiology* 36:253-263.

- Priscu, J.C. 1995. Phytoplankton nutrient deficiency in lakes of the McMurdo Dry Valleys, Antarctica. *Freshwater Biology* 34:215-227.
- Wang, L. and J.C. Priscu. 1994. Stimulation of aquatic bacterial activity by cyanobacteria. *Hydrobiologia* 277:145-158.
- Wang, L. and J.C. Priscu. 1994. Influence of phytoplankton on the response of bacterioplankton growth to nutrient enrichment. *Freshwater Biology* 31:183-190.
- Lizotte, M.P. and J.C. Priscu. 1993. Natural fluorescence and quantum yields in vertically stationary phytoplankton from perennially ice-covered lakes. *Limnology and Oceanography* 39:1399-1410.
- Kangatharalingam, N. and J.C. Priscu. 1993. Isolation and verification of anatoxin-a producing clones of Anabaena flos-aquae. *FEMS Microbial Ecology* 12: 127-130.
- Lizotte, M.P. and J.C. Priscu. 1992. Photosynthesis-irradiance relationships in phytoplankton from Lake Bonney, a perennially ice-covered lake (Antarctica). *Journal of Phycology* 28:179-185.
- Lizotte, M.P. and J.C. Priscu. 1992. Spectral irradiance and bio-optical properties in perennially ice-covered lakes of the dry valleys (McMurdo Sound, Antarctica). *Antarctic Research Series* 57: 1-14.
- Kangatharalingam, N. J., J.C. Priscu and H. W. Paerl. 1992. Heterocyst wall thickness, heterocyst frequency, nitrogenase activity and reducing condition in heterocysts of Anabaena flos-aquae: influence of exogenous oxygen tension. *Journal of General Microbiology* 138:2675.
- Lohman, K. and J.C. Priscu. 1992. Physiological indicators of nutrient deficiency in *Cladophora* (Chlorophyta) in the Clark Fork of the Columbia River, Montana. *Journal of Phycology* 28:443-448.
- Wang, L., T. D. Miller and J.C. Priscu. 1992. Bacterioplankton nutrient deficiency in a eutrophic lake. *Archives for Hydrobiology* 125:423-439.
- Priscu, J.C., M.P. Lizotte, G.F. Cota, A.C. Palmisano and C.W. Sullivan. 1991. Diel patterns of photosynthesis and nitrogen uptake by Antarctic sea ice Microalgae: Response to continuous but variable irradiance. *Marine Ecology Progress Series* 70:201-210.
- Dodds, W.K., B.K. Ellis and J.C. Priscu. 1991. Zooplankton induced decrease in inorganic phosphorus uptake by phytoplankton in an oligotrophic lake. *Hydrobiologia* 211:253-259.
- Dodds, W.K. and J.C. Priscu. 1991. Stimulation of dark inorganic carbon incorporation by ammonium as an indicator of phytoplankton nitrogen deficiency: Possible misinterpretation caused by ammonium oxidizing bacteria. *Journal of Phycology* 27:79-82.
- Dodds, W.K., J.C. Priscu and B.K. Ellis. 1991. Seasonal uptake and regeneration of inorganic nitrogen and phosphorus: Size fractionation and antibiotic treatment. *Journal of Plankton Research* 13:1339-1358.
- Kangatharalingam, N., L. Wang and J.C. Priscu. 1991. Evidence for bacterial chemotaxis to cyanobacteria from a radioassay technique. *Applied and Environmental Microbiology* 57:2395-2398.
- Kangatharalingam, N., W.K. Dodds, J.C. Priscu and H.W. Paerl. 1991. Nitrogenase activity, photosynthesis and the degree of heterocyst-aggregation in the cyanobacterium Anabaena flos-aquae. *Journal of Phycology* 27:680-686.
- Dodds, W.K. and J.C. Priscu. 1990. Development and application of a technique for estimating nutrient deficiency in soft sediments. *Hydrobiologia*. *Hydrobiologia* 203:93-97.

- Dodds, W.K. and J.C. Priscu. 1990. Mesocosm studies on the influence of phosphate enrichment on ammonium and nitrate flux in an oligotrophic lake. *Hydrobiologia* 206:235-243.
- Priscu, J.C., M.T. Downes, L.R. Priscu, A.C. Palmisano and C.W. Sullivan. 1990. Dynamics of ammonium oxidizer activity and nitrous oxide (N<sub>2</sub>O) within and beneath Antarctic Sea Ice. *Marine Ecology Progress Series* 62:37-46.
- Priscu, J.C., L.R. Priscu, A.C. Palmisano and C.W. Sullivan. 1990. Estimation of neutral lipid levels by Nile red fluorescence in Antarctic sea-ice microalgae. *Antarctic Science* 2:149-155.
- Kangatharalingam, N. and J.C. Priscu. 1990. An in situ technique to measure bacterial chemotaxis in natural aquatic environments. *Microbial Ecology* 20:3-10.
- Dodds, W. K. and J.C. Priscu. 1990. A seasonal comparison of methods for assessment of nutrient deficiency or phytoplankton in a large oligotrophic lake. *Canadian Journal of Fisheries and Aquatic Sciences* 47:2328-2338.
- Priscu, J.C. 1989. Photon dependence of inorganic nitrogen transport by phytoplankton in Antarctic lakes, p. 173-182. *In* W.F. Vincent and C. Ellis-Evans (eds.), *High Latitude Limnology*. *Hydrobiologia* 172, Kluwer Publ.
- Howard-Williams, C., J.C. Priscu and W.F. Vincent. 1989. Nitrogen dynamics in two Antarctic streams. *In* W. F. Vincent and E. Ellis-Evans (eds.), *High Latitude Limnology*. *Hydrobiologia* 172, Kluwer Publ.
- Priscu, J.C. W. F. Vincent and C. Howard-Williams. 1989. Inorganic nitrogen uptake and regeneration in lakes Fryxell and Vanda, Antarctic. *Journal of Plankton Research* 11:335-351.
- Dodds, W.K., J.C. Priscu and K. Johnson. 1989. Simultaneous nitrogen and phosphorus deficiency in natural phytoplankton assemblages: theory, empirical evidence, and implications for lake management. *Journal of the North American Lake Management Society* 5:21-26.
- Priscu, J.C., A.C. Palmisano, L.R. Priscu and C.W. Sullivan. 1989. Temperature dependence of inorganic nitrogen uptake and assimilation in Antarctic Sea-ice microalgae. *Polar Biology* 9:443-446.
- Dodds, W.K. and J.C. Priscu. 1989. Ammonium, nitrate, phosphate and inorganic carbon uptake in an oligotrophic lake: Seasonal variations in light response variables. *Journal of Phycology* 25:699-705.
- Paerl, H.W., J.C. Priscu and D. L. Brawner. 1989. Immunochemical localization of nitrogenase in marine Trichodesmium aggregates: Relation to N<sub>2</sub> fixation. *Applied and Environmental Microbiology* 55:2965-2975.
- Porter, K.G., H. Paerl, R. Hodson, M. Pace, J. Priscu, B. Riemann, D. Scavia and J. Stockner. 1988. Microbial interactions in lake food webs. p.209-227. *In* S. R. Carpenter (ed.) *Complex interactions in lake communities*. Springer-Verlag.
- Dodds, W.K. and J.C. Priscu. 1988. An inexpensive device for sampling large volumes of lake water from discrete depths. *Freshwater Biology* 20:113-115.
- Murry, R.E., K.E. Cooksey and J.C. Priscu. 1987. Influence of physical disruption on growth rate of attached bacteria. *Applied and Environmental Microbiology* 53:2997-2999.
- Priscu, J.C. and M.T. Downes. 1987. Microbial activity in surficial lake sediments, with particular reference to dissimilatory nitrate reduction. *Archives for Hydrobiology* 108:385-409.
- Priscu, J.C. 1987. Time-course of inorganic nitrogen uptake and incorporation by natural populations of freshwater phytoplankton. *Freshwater Biology* 17:331-339.
- Priscu, J.C., L. R. Priscu, W.F. Vincent, and C. Howard-Williams. 1987. Photosynthate distribution by microplankton in permanently ice-covered Antarctic lakes. *Limnology and Oceanography* 32:260-270.

- Priscu, J.C., L. R. Priscu, C. Howard-Williams and W.F. Vincent. 1987. Photosynthate biosynthesis by phytoplankton in permanently ice-covered Antarctic lakes under continuous sunlight. *Journal of Plankton Research* 10:333-340.
- Timperly, M.H. and J.C. Priscu. 1986. Nitrogen-15 analysis by optical emission spectrometry using an atomic absorption spectrometer. *Analyst* 111:23-28.
- Priscu, J. C., R. Spigel, M. Gibbs and M.T. Downes. 1986. Nitrogen, phosphorus and chlorophyll decomposition in the hypolimnion of a geothermal lake: A numerical analysis. *Limnology and Oceanography* 31:812-831.
- Murry, R.E, K. E. Cooksey, and J.C. Priscu. 1986. Stimulation of bacterial DNA synthesis by algal exudates in an attached algal-bacterial consortium. *Applied and Environmental Microbiology* 52:1177-1182.
- Priscu, J.C., R.P. Axler and C.R. Goldman. 1985. Nitrogen Metabolism of the Shallow and Deep-water Phytoplankton in a Sub-alpine Lake. *Oikos* 45:137-147.
- Priscu, J.C. and M.T. Downes. 1985. Relationships among nitrogen uptake, ammonium oxidation and nitrous oxide concentration in the coastal waters of western Cook Strait, New Zealand. *Estuarine, Coastal and Shelf Science* 20:529-542.
- Priscu, J.C. and C.R. Goldman. 1984. The effect of temperature on photosynthetic and respiratory electron transport system activity in the shallow and deep-living phytoplankton of a sub-alpine lake. *Freshwater Biology* 14:143-155.
- Priscu, J.C. 1984. *In situ* quantum yield by phytoplankton in a sub-alpine lake. *Journal of Plankton Research* 6:531-542.
- Priscu, J.C. and L.R. Priscu. 1984. Photosynthate partitioning by phytoplankton in a New Zealand coastal upwelling system. *Marine Biology* 81:31-40.
- Priscu, J.C. 1984. A comparison of carbon and nitrogen metabolism in the shallow and deep-water phytoplankton populations of a sub-alpine lake: Response to photosynthetic photon flux density. *Journal of Plankton Research* 6:733-749.
- Priscu, J.C. and L.R. Priscu. 1984. Inorganic nitrogen uptake in oligotrophic Lake Taupo, New Zealand. *Canadian Journal of Fisheries and Aquatic Sciences* 41:1463-1445.
- Axler, R.P., J.E. Reuter, J.C. Priscu, S.Loeb, R. Carlton, J.P. Zehr and C.R. Goldman. 1984. Transformations of nitrogen following epilimnetic nitrogen fertilization in Castle Lake, CA. Nitrate and ammonium depletion pathways. *Verh. Internat. Verein. Limnol.* 22:583.
- Priscu, J.C. and C.R. Goldman. 1983. Suspensoid characteristics in sub-alpine Castle Lake, California: I. Chemical composition. *Archives for Hydrobiology* 97:373-388.
- Priscu, J.C. 1983. Suspensoid characteristics in sub-alpine Castle Lake, California: II. Optical properties. *Archives for Hydrobiology* 97:425-433.
- Priscu, J.C. and C.R. Goldman. 1983. The seasonal dynamics of the deep-chlorophyll maximum in Castle Lake. *Canadian Journal of Fisheries and Aquatic Sciences* 40:208-214.
- Priscu, J.C. and C.R. Goldman. 1983. Carboxylating enzyme activity and photosynthetic end-products in the shallow and deep-chlorophyll layers of a sub-alpine lake. *Limnology and Oceanography* 28:1168-1181.
- Priscu, J.C., J. Verduin and J.E. Deacon. 1982. Primary productivity and nutrient balance in a lower Colorado River Reservoir. *Archives for Hydrobiology* 94:1-23.

Priscu, J.C. and C.R. Goldman. 1982. Vertical patterns of primary productivity, biomass and physical-chemical properties in meromictic Big Soda Lake, Nevada. *Hydrobiologia* 96:113-120.

Axler, R.P., C.R. Goldman, J.E. Reuter, S.L. Loeb, J.C. Priscu and R.G. Carlton. 1982. A comparative study of the nitrogen metabolism of phytoplankton and periphyton in a sub-alpine lake p. 315-318. *In Agrochemicals: Fate in food and the Environment*. Proc. Symp. Internat. Atomic Energy Agency-Food and Agricultural Organization. 7-11 June 1982, Rome, Italy.

Priscu, J.C. 1982. Physiological ecology of Castle Lake phytoplankton: A comparison of the shallow and deep-water communities. Ph.D. dissertation. Univ. Calif., Davis. 259 p.

Priscu, J.C., J. Verduin and J.E. Deacon. 1981. The fate of biogenic suspensoids in a desert reservoir. p. 1657-1667. *In Stefan, H. G. (ed.) Proceedings of a Symposium on Surface Water Impoundments*. ASCE, 2-5 June, 1980. Minneapolis, Minn.

Priscu, J.C. 1978. Primary productivity and related limnological factors in Lake Mohave (Colorado River). M.S. thesis, University of Nevada, Las Vegas. 154 p.

Priscu, J.C. 1978. Estimates of primary productivity in the Colorado River below Hoover Dam. *Journal of the Arizona-Nevada Academy of Sciences*. Proceedings Supplement 13:16.

Priscu, J.C. 1978. Nutrient budget in Lake Mohave (Colorado River). *Journal of the Arizona-Nevada Academy of Sciences*. Proceedings Supplement 13:20.

Keenan, C., J. Baker and J.C. Priscu. 1978. Algal nutrient limitation in Lake Mead and Lake Mohave (Colorado River). *Journal of the Arizona-Nevada Academy of Sciences*. Proceedings Supplement 13:16.

### **Government/Committee Reports:**

Priscu, J.C. and M. Kennicutt. September 2001. Report of the Subglacial Antarctic Lake Exploration Group of Specialists. Meeting I, Bologna Italy. <http://salegos-scar.montana.edu/>

Priscu, J.C. and M. Kennicutt. May 2002. Report of the Subglacial Antarctic Lake Exploration Group of Specialists. Meeting 2, Columbia University, New York. USA. <http://salegos-scar.montana.edu/>

Priscu, J.C. and M. Kennicutt. October 2002. Report of the Subglacial Antarctic Lake Exploration Group of Specialists. Meeting 3, University of California, Santa Cruz. USA. <http://salegos-scar.montana.edu/>

Priscu, J.C. and M. Kennicutt. April 2003. Report of the Subglacial Antarctic Lake Exploration Group of Specialists. Meeting 4, Chamonix, France. <http://salegos-scar.montana.edu/>

Priscu, J.C. (editor). Year-Round Access to the McMurdo Region: Opportunities for Science and Education. Proceedings of an NSF funded workshop. 8-10 September 1998. Arlington, Virginia.

Grue, A.M., C.H. Fritsen and J.C. Priscu. 1996. Nitrogen fixation within permanent ice covers on lakes in the McMurdo Dry Valleys, Antarctica. *Antarctic Journal of the United States* 32: 218-220.

Adams, E.A. and J.C. Priscu. 1995. Some metamorphic processes in the lake ice in the McMurdo Dry Valleys. *Antarctic Journal of the United States* 30:307-309.

- Downes, M.T. and J.C. Priscu. 1995. Profiles of electrode potential and dissolved oxygen in lakes of the McMurdo dry valleys. *Antarctic Journal of the United States* 30:305-307.
- Edwards, R.L. and J.C. Priscu. 1995. Relationships between vertical nutrient flux and phytoplankton biomass and productivity in lakes of the Taylor Valley, Antarctica. *Antarctic Journal of the United States* 30:303-305.
- Priscu, J.C. and P.J. Neale. 1995. Phototactic response of phytoplankton forming discrete layers within the water column of Lake Bonney, Antarctica. *Antarctic Journal of the United States* 30:301-303.
- Takacs, C.D. and J.C. Priscu. 1995. Responses of bacterial growth to inorganic and organic nutrient enrichment in the lakes of the dry valleys, Antarctica. *Antarctic Journal of the United States* 30:303-305.
- Priscu, J.C., B.B. Ward and M.T. Downes. 1993. Water column transformations of nitrogen in Lake Bonney, A perennially ice-covered Antarctic Lake. *Antarctic Journal of the United States, 1993 Review Volume* 28:237-239.
- Ward, B.B., A.R. Cockcroft and J.C. Priscu. 1993. Nitrification and denitrification in Lake Bonney. *Antarctic Journal of the United States, 1993 Review Volume* 28:239-241.
- Bartlett, R.D. J.C. Priscu and C. D. Woolston. 1993. Influence of high salinity levels on ambient inorganic nitrogen and 15-nitrogen extraction efficiency in Lake Bonney, Antarctica. *Antarctic Journal of the United States, 1993 Review Volume* 28:245-246.
- Woolston, C.D. and J.C. Priscu. 1993. Phytoplankton utilization of ammonium and nitrate in Lake Bonney: A preliminary assessment. *Antarctic Journal of the United States, 1993 Review Volume* 28:241-243.
- Wing, K.T. and J.C. Priscu. 1993. Microbial communities in the permanent ice cap of Lake Bonney, Antarctica: Relationships among Chlorophyll *a*, gravel and nutrients. *Antarctic Journal of the United States, 1993 Review Volume* 28:246-249.
- Smith, J.J. and J.C. Priscu. 1993. Microbial respiration potential in Lake Bonney using a novel tetrazolium reduction method. *Antarctic Journal of the United States, 1993 Review Volume* 28:244-245.
- Priscu, J.C. 1992. Particulate organic matter decomposition in the water column of Lake Bonney, Taylor Valley, Antarctica. *Antarctic Journal of the United States, 1992 Review Volume* 27:260-262.
- Lizotte, M.L. and J.C. Priscu. 1992. Algal pigments as markers for stratified phytoplankton populations in Lake Bonney (dry valleys). *Antarctic Journal of the United States, 1992 Review Volume* 27:260-262.
- Sharp, T.R., and J.C. Priscu. 1992. Temporal variation of specific growth rates for phytoplankton in Lake Bonney, Antarctica. *Antarctic Journal of the United States 1992 Review Volume* 27:259-260.
- Spigel, R.H., I. Forne, I. Sheppard and J.C. Priscu. 1991. Differences in temperature and conductivity between the east and west lobes of Lake Bonney: evidence for circulation within and between lobes. *Antarctic Journal of the United States* 26:221-223.
- Priscu, J.C. 1991. Variation in light attenuation by the permanent ice cap of Lake Bonney during spring and summer. *Antarctic Journal of the United States* 26:223-225.
- Sharp, T.R. and J.C. Priscu. 1991. Rates of primary production and growth for phytoplankton in Lake Bonney. *Antarctic Journal of the United States* 26:225-226.
- Lizotte, M.P. and J.C. Priscu. 1991. Natural fluorescence and photosynthetic quantum yields in vertically stable phytoplankton from perennially ice-covered lakes (dry valleys). *Antarctic Journal of the United States* 26:226-228.



Neale, P.J. and J.C. Priscu. 1991. Variation of the fluorescence quantum yield in relation to photosynthesis by phytoplankton from perennially ice-covered Lake Bonney. *Antarctic Journal of the United States* 26:228-230.

Priscu, J.C., T.R. Sharp, M.P. Lizotte and P.J. Neale. 1990. Photoadaptation by phytoplankton in permanently ice-covered Antarctic lakes: Response to a non-turbulent environment. *Antarctic Journal of the United States* 25:221-223.

Lizotte, M.P. and J.C. Priscu. 1990. Photosynthesis-irradiance relationships in phytoplankton from Lake Bonney. *Antarctic Journal of the United States* 25:223-224.

Neale P.J. and J.C. Priscu. 1990. Structure and function of the photochemical apparatus in the phytoplankton of ice covered Lake Bonney. *Antarctic Journal of the United States* 25:224-226.

Sharp, T.R. and J.C. Priscu. 1990. Ambient nutrient levels and the effects of nutrient enrichment on primary productivity in Lake Bonney. *Antarctic Journal of the United States* 25:226-228.

Spigel, R.H., I.V. Sheppard and J.C. Priscu. 1990. Temperature and fine structure from Lake Bonney. *Antarctic Journal of the United States* 25:228-229.

Priscu, J.C., A.C. Palmisano, C.W. Sullivan and L.R. Priscu. 1987. The effect of temperature on inorganic nitrogen and carbon metabolism in Antarctic sea-ice microalgae. *Antarctic Journal of the United States*, 1987 Review Issue.22:196-198.

Priscu, J.C. 1987. Environmental factors regulating the dynamics of blue-green algal blooms in Canyon Ferry Reservoir, Montana. Final report to the Montana Water Resources Research Institute. 158 p.

Priscu, J.C., L.R. Priscu, C.W. Sullivan and A.C. Palmisano. 1987. A comparison of neutral lipid content among sea-ice microbial communities in McMurdo Sound, Antarctica. *Antarctic Journal of the United States*, 1987 Review Issue 22:191-193.

Priscu, J.C. and A. Palmisano. 1986. Contribution of carbon fixed by nitrifying bacteria during ice cover in McMurdo Sound, Antarctica. *Antarctic Journal of the United States*, 1986 Review Issue 21:171-172.

Priscu, J.C., editor. 2001. Year-Round Access to the McMurdo Region: Opportunities for Science and Education. Special publication 01-10. Department of Land Resources and Environmental Sciences, College of Agriculture, Montana State University, USA, 60 pp.

### **MAJOR RESEARCH PROPOSALS OF WHICH I AM/WAS PRINCIPAL OR CO-PRINCIPAL INVESTIGATOR:**

"A Laboratory and Field Study of the Interaction of Microalgae and Bacteria in Aquatic Biofilms", 1985-1986. Funded by NSF Ecology Program. Amount: \$93,000/1 year.

"Response of Aquatic Nitrogen Cycling and Plankton Productivity to Acidification", 1985-1988. Funded by the College of Graduate Studies, Montana State University, Faculty Creativity Program and the U.S. Fish and Wildlife Service. Amount: \$28,500/1 year.

"Factors Regulating Nuisance and Potentially Toxic Blue-Green Algal Blooms in a Through-Flow Ecosystem", 1986. Funded by the Montana State Water Resources Research Center. Amount: \$24,000/1 year.

"Quantitative Estimation of the Effects of Operation of Libby and Hungary Horse Dams on the Reservoirs Fisheries", 1988-1989. Funded by Montana Department of Fish, Wildlife and Parks. Amount: \$137,561/2 years.

"Regulation of Nitrogen Fixation by Organic Matter in Aquatic Ecosystems", 1987-1990. Funded by Procter and Gamble. Amount: \$300,000/4 years.

"Nutrient Dynamics and Attached Algal Growth in a Large River", 1990. Funded by The Soap and Detergent Association, Procter and Gamble and Stone Container Company. Amount: \$80,000/1 year.

"The Effects of Nutrient Enrichment on Benthic Algae and Young-of-the-Year Salmonid Production in the Clark Fork River". 1991. Funded by the Soap and Detergent Association and Stone Container Company. Amount: \$70,000/1 year.

"Photoadaptation by Phytoplankton in Permanently Ice-Covered Antarctic Lakes: Response to a Non-Turbulent Environment", 1989-1992. Funded by NSF Division of Polar Programs. Amount: \$315,000/3 years.

"Persistence, Distribution and Environmental Impact of Enteric Bacteria in Antarctic Seawater", 1990. Funded by NSF Division of Polar Programs. Amount: \$77,000/1 year.

"Impact of Sewage Effluent and Survival of Pathogenic Organisms in McMurdo Sound, Antarctica", 1991-1992. Funded by NSF Division of Polar Programs. Amount: \$212,414/2 years.

"Influence of Phosphorus and Other Environmental Parameters on Toxin Production by the Blue-Green Alga Anabaena flos-aquae", 1991. Funded by the Soap and Detergent Association and Procter and Gamble. Amount: \$38,451/1 year.

"Biogeochemistry of nitrogen in a highly stratified, permanently ice-covered Antarctic Lake". 1992-1995. NSF Division of Polar Programs. Amount: \$340,000/3 years.

"Antarctic Dry Valleys: A Cold Desert Ecosystem", 1993-1999. This is an interdisciplinary project, of which I am a co-principal investigator, (involving 8 scientists) focusing on the effects that global climate change will have on an Antarctic desert ecosystem. NSF LTER Program. Amount: \$4,000,000/6 years. My component: \$450,000/6 years.

"Biogeochemistry of Nitrogen in a Highly Stratified, Permanently Ice-Covered Antarctic Lake". 1992-1995. NSF Division of Polar Programs. Amount: \$340,000/3 years.

NSF Research for Undergraduate Education (RUE) supplemental award to "Biogeochemistry of Nitrogen in a Highly Stratified, Permanently Ice-Covered Antarctic Lake". 1993. Amount: \$5,000/4 months.

"Nuisance Algal Blooms in the Colstrip Surge Pond: Causes and Consequences", 1992-1993. Funded by Montana Power Company. Amount: \$39,204/1 year.

"Antarctic lake ice microbial consortia: Origin, distribution, and growth physiology". 1995-1998. NSF Office of Polar Programs,. Amount: \$550,000/3 years.

NSF Research Education for Undergraduate Education (RUE) supplemental award to "Antarctic Dry Valleys: A Cold Desert Ecosystem", 1993. Amount: \$5,000/4 months.

NSF Research for Undergraduate Education (RUE) supplemental award to "Antarctic Lake Ice Microbial Consortia: Origin, Distribution, and Growth Physiology", 1997. Amount: \$5,000/4 months.

NSF Research for Undergraduate (RUE) supplemental award to "Antarctic Dry Valleys: A Cold Desert Ecosystem", 1997. Amount: \$5,000/4 months.

"Microbial life within the extreme environment posed by permanent Antarctic lake ice". 1998-2000. NSF Life In Extreme Environments Program (LEn). Amount: \$488,758/3 years.

"The Role of Natural Legacy on Ecosystem Structure and Function in a Polar Desert: The McMurdo Dry Valley LTER Program", 1999-2005. This is an interdisciplinary project, of which I am a co-principal investigator,

(involving 8 scientists) focusing on the role of resource legacy on ecosystem properties in an Antarctic desert. NSF LTER Program and the Division of Polar Programs \$4,200,000/6 year. My component: \$519,812/6 years.

“The Biogeochemistry of Dimethylsulfide (DMS) and Related Compounds in a Chemically Stratified Antarctic Lake”. 1999-2002. NSF Office of Polar Programs. Amount: \$468,819/3 years.

“The Search for Life in Deep-Ice associated with Lake Vostok, East Antarctic Ice Sheet”. 1999-2001. NSF Office of Polar Programs. \$13,000/4 months.

Phytoplankton in the McMurdo LTER lakes. 1999-2001. NSF Office of Polar Programs. \$30,000.

NSF Research for Undergraduate Education (RUE) supplemental award to "Biogeochemistry of DMS and related sulfur compounds in a Chemically Stratified Antarctic Lake", 1999. Amount: \$5,000/4 months.

“Bacterial Dynamics Under Antarctic Lake Ice”. 1996-1999. Montana Space Grant Consortium Graduate Student Award. \$52,000/3 years.

“Microbial Nutrition in Icy Systems”. 1999-2002. NASA Graduate Student Researchers Program (GSRP). \$66,000/3 years.

“Carbon and sediment cycling between soil and lake ice in the Taylor Valley, Antarctica”. 2000-2003. Montana Space Grant Consortium Graduate Student Award. \$17,500/year.

“Mars Immunoassay Life Detection Instrument (MILDI). Volume 1: Investigation and Technical Plan”. 2000-2002. NASA Office of Life and Microgravity Sciences and Applications, and Office of Space Flight. Total cost \$298,194/2 years (\$146,000 to MSU).

“Collaborative Research on the Geomicrobiology of Vostok Ice: Implications for Life in Lake Vostok”. 2001-2004. NSF LExEn Program. \$760,000/3 years.

“Microbial Diversity and Function in the Permanently Ice-Covered Lakes of the McMurdo Dry Valleys, Antarctica”, NSF Microbial Observatories Program. 2003-2008. \$1,200,000.

NSF Research Education for Undergraduate Education (RUE) supplemental award to “Microbial Diversity and Function in the Permanently Ice-Covered Lakes of the McMurdo Dry Valleys, Antarctica”, 1993. Amount: \$12,000.

“Life in Polar Regions Lake Ice”. 1999-2004. Montana Space Grant Consortium Graduate Student Award. \$52,000/3 years.

“Physical and biological consequences of a hydrocarbon spill on the ice cover of Lake Fryxell, Antarctica”. NSF Office of Polar Programs. \$75,034. 2004-2007.

“The Role of Resource Legacy on Contemporary Linkages Between Biodiversity and Ecosystem Processes in a Cold Desert Ecosystem: The McMurdo Dry Valley LTER Program”. \$7 million/6 years., 2005-2011. \$619,506/6 years to MSU.

“Nuclear-Magnetic Resonance and Electrical Measurements of Unfrozen Water in Mars-Analog Materials: Implications for Habitability at Subfreezing Temperatures on Mars”. NASA Exobiology Program. 2006-2009. \$99,998 to MSU. Collaboration with R. Grimm, Southwest Research Institute, Boulder, CO.

“Application for cold chambers and associated equipment to complete a subzero science and engineering facility at Montana State University”. NSF-MRI Program. \$1,200,000. 2005-2007.

“Science and Engineering Research Facility for the Study of Subzero Environments”. Murdock Charitable Trust”. \$800,000. 2005-2007.

“Paleo Records of Biotic and Abiotic Particles in Polar Ice Cores”. NSF Office of Polar Programs. \$254,827. 2006-2008.

“IPY-The McMurdo Dry Valley Lakes: Plankton Responses During the Transition to Polar Night”. NSF Office of Polar Programs \$350,000. 2007-2010.

“The presence of hydrocarbon contaminants and biodegradation in lake ice from the McMurdo Dry Valleys”. Pending. NSF-Office of Polar Programs. \$306,655. 2007-2010.

Crary Laboratory (Antarctica) Analytical Services. NSF-OPP. \$450,000 supplement to “The Role of Resource Legacy on Contemporary Linkages Between Biodiversity and Ecosystem Processes in a Cold Desert Ecosystem: The McMurdo Dry Valley LTER Program” . 2008-2011.

“Environmentally Non-Disturbing Under-ice Robotic ANtarctic Explorer (ENDURANCE)”. NASA ASTEP Program. \$99,235. 2008-2011.

“Astrobiology of Icy Worlds”. NASA Astrobiology Institute. Total budget: \$8,184,000/5 yrs. MSU component: \$240,975. 2008-2013.

“Collaborative Research: Integrated High Resolution Chemical and Biological Measurements on the Deep WAIS Divide Core”. NSF Office of Polar Programs- Antarctic Glaciology. Total budget: \$2,182,530. MSU Component: \$631,900. 2010-2014.

“Collaborative Research: GeomicroBiology of Antarctic Subglacial Environments (GBASE) Beneath the Mercer and Whillans Ice Streams”. Submitted to NSF Office of Polar Programs- Antarctic Integrated System Science (AISS). Total budget \$10,000,000. MSU component: \$2,540,260. October 2009-October 2014.

“Increased Connectivity in a Polar Desert Resulting from Climate Warming: The McMurdo Dry Valley LTER Program”. \$5.6 million/6 years, 2011-2017. \$696,276/6 years to MSU.

“Habitability of Antarctic lakes and detectability of microbial life in icy environments by autonomous year-round instrumentation”. NSF Office of Polar Programs/NASA ASTEP. \$114,633 /2 years. 1 February 2013-1 February 2015.

“Whillans Ice Stream Subglacial Access Research Drilling: Integrative Study of Marine Ice Sheet Stability and Subglacial Habitats in West Antarctica”. NSF Office of Polar Programs. \$997,705/1 year. September 2014-September 2015.

“Raman Planetary Ice Diver: RaPID”. NASA Maturation of Instruments for Solar System Exploration. Submitted.

### **MAJOR ADVISOR TO THE FOLLOWING GRADUATE STUDENTS:**

1. Robert T. Angelo, Ph.D. June 1989. "Hydrogen ion concentration and microbial activity in aquatic alpine systems".
2. Lizhu Wang, Ph.D. 1992. "Control of bacterioplankton activity in a eutrophic lake emphasizing relationships among bacteria, cyanobacteria and nutrients".

3. Thomas Miller, M.Sc. 1991. "Influence of inorganic and organic nutrient enrichment on blue-green algal activity and relative biomass in a eutrophic southwest Montana reservoir".
4. Thomas Sharp, M.Sc. 1993. "Temporal and spatial variation of light, nutrients and phytoplankton production in Lake Bonney, Antarctica, Antarctica".
5. Katrin Schwarz, M.Sc. 1991. "Phytoplankton responses to phytoplankton growth in a large pre-alpine lake: Lake Constance, West Germany".
6. Christopher Woolston, M.Sc. 1994. "Nitrogen dynamics in Antarctic lakes".
7. Michael Briggs, M.Sc. 1994. "Chemical and physical factors regulating blue-green algal abundance in a regulated reservoir; Colstrip, Montana".
8. Christina Takacs. Ph.D. 1999. "Bacterial activity and secondary production in Antarctic lakes".
9. Nicole Tursich. M.Sc. 2002. "The use of Antarctic lake phytoplankton to track climate change".
10. Scott Konley. M.Sc. 2003. "Carbon and sediment cycling between soil and lake ice in the Taylor Valley, Antarctica".
11. Jill A. Mikucki. Ph.D. 2005. "Microbial Ecology of an Antarctic Subglacial environment".
12. Joel Moore. M.Sc. 2007. "Microbial Processes in the Moats of Lakes in the Taylor Valley, Antarctica."
13. Trista Vick. 2010. M.Sc. Bacterial Process in Lakes of the Taylor Valley, Antarctica.
14. Marie Sabacka. Ph.D. 2011. "Microbial Diversity Across Landscape Units in the McMurdo Dry Valleys, Antarctica".
15. Alexander Michaud. Subglacial Processes beneath the West Antarctic Ice Streams. In progress.
16. Pamela Santibinez. High Resolution Biological Measurements in Ice Cores. In progress.
17. Katherina Hell. The Role of Viruses in the Carbon Cycle of Antarctic Lakes. In progress.
18. Trista Vick-Majors. Viral Dynamics in Subglacial Ecosystems. In progress.
19. Priyanka Kudalar. Fungi in Antarctic lake ice. In progress.
20. Jeff Patriarch. Overwinter trends in phytoplankton pigment composition in a permanently ice covered Antarctic lake. In progress.

**SUPERVISOR TO THE FOLLOWING POST-DOCTORAL SCIENTISTS:**

- |                            |                            |                           |
|----------------------------|----------------------------|---------------------------|
| 1. Dr. Robert Murry        | 9. Dr. Christopher Fritsen | 16. Dr. Jill Thurman      |
| 2. Dr. Walter Dodds        | 10. Dr. Emily Roberts      | 17. Dr. Sunita Shah       |
| 3. Dr. Michael Lizotte     | 11. Dr. Peter Lee          | 18. Dr. Juliana D'Adrilli |
| 4. Dr. N. Kangatharalingam | 12. Dr. Christine Foreman  | 19. Dr. Heather Adams     |
| 5. Dr. Kirk Lohman         | 13. Dr. Brent Christner    | 20. Dr. John Dore         |
| 6. Dr. Robert Spigel       | 14. Dr. Steve Jepsen       |                           |
| 7. Dr. Patrick Neale       | 15. Dr. Elanor Bell        |                           |
| 8. Dr. Diane Brawner       |                            |                           |

## **TECHNICIANS SUPERVISED:**

- |                             |                           |                     |
|-----------------------------|---------------------------|---------------------|
| 1. Mary Ellen Dietz         | 13. Van Kalbach           | 25. Tucker Stevens  |
| 2. Lori Dwyer               | 14. Alix Cockcroft        | 26. Craig Wolf      |
| 3. John Beehler             | 15. Margaret Giessler     | 27. Amy Chiuchiolo  |
| 4. Kirk Johnson             | 16. Jordon Grover         | 28. Nicholas Andrew |
| 5. Thomas Sharp             | 17. Anne Lundberg-Martell | 29. Brianna Arnold  |
| 6. Patty Denke              | 18. Conrad Cooper         | 30. Rob VanTreese   |
| 7. Teresa Tonkovich (Galli) | 19. Kate Wing             | 31. Janet Lynch     |
| 8. Linda Loetterle          | 20. Jordan Grover         | 32. Andrew Baber    |
| 9. Ian Shepard              | 21. Amanda Grue           | 33. Philip Lee      |
| 10. Ian Forne               | 22. Scott Konley          | 34. Erik Bottos     |
| 11. Richard Bartlett        | 23. Jill Mikucki          |                     |
| 12. Rob Edwards             | 24. Nicole Tursich        |                     |

## **COURSES TAUGHT:**

1. Molecular and Cellular Biology/Principles of Biology (Biol 102/Biob160, freshman level): This course presents a survey of cellular metabolism (plants and animals) and genetics.
2. Algal Ecology-Phycology (Biol 433, senior level): This course is divided into two parts. The first covers taxonomy and evolution of attached and free-living algae, the second is involved with the biochemistry, physiology and ecology of algae. Both marine and freshwater forms are covered.
3. Energetics in Aquatic Systems (Biol 502, graduate level): Covers advanced aspects of heat flow, light penetration, advection and diffusion dynamics of gases and nutrients within a liquid, and gas transfer at the air/water interface. Examines how aquatic microorganisms (bacteria and algae) reciprocate with each other and with their surrounding environment. Particular emphasis is placed on physiological adaptations by the organisms to changing environmental conditions. The course stresses how these processes relate to the biological component of marine and freshwater systems.
4. Physical-Chemical Limnology (graduate level): Focuses on the interaction of optics, mixing/diffusion and lake chemistry. Both marine and freshwater systems are discussed.
5. Advanced Biological Limnology (graduate level): Covers physiological responses of microplankton to the physical and chemical environment. The approach is examine the role of microorganisms to ecosystem structure and function.