

## Erica B. Young

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### Professional Preparation

University of Western Australia	Botany BS	1987
University of Western Australia	First Class Honors BS	1988
Monash University, Australia	Algal Physiology PhD	1999
Queen's University of Belfast, UK	Postdoc, algal ecology	1999-2002
Monash University, Australia	Postdoc, algal physiology	1999

### Appointments

Associate Professor	University of Wisconsin-Milwaukee	2010-
Assistant Professor	University of Wisconsin-Milwaukee	2002-10
Research Assistant	Uppsala University, Sweden	1990-92
Research Assistant	University of Western Australia	1989-90, 92-3

### Selected Publications

- Béchet A, Stojavljevic T, Tessmer M, Berges J, Pinter G, Young EB. Mathematical Modeling of Bacteria and Virus Interactions in Lake Michigan with an Internal Phosphorus Quota. *Journal of Great Lakes Research*. In Review
- Zulkifly SB, Graham JM, Young EB, Mayer RJ, Flores CS, Piotrowski MJ, Smith BD, Graham LE. 2013. The genus *Cladophora*: An ecological engineer in globally distributed marine and freshwater littoral habitats. *Journal of Phycology* 49: 1- 17.
- Xiao L, Young EB, Berges J, He J. 2012. Integrated Photo-Bioelectrochemical System for Contaminant Removal and Bioenergy Production. *Environmental Science and Technology* 46: 11459-11466.
- Choi CJ, Berges JA, Young EB. 2012. Rapid Effects of Diverse Toxic Water Pollutants on Chlorophyll *a* Fluorescence: Variable Responses Among Freshwater Microalgae. *Water Research*, 46: 2615 - 2626.
- Mills, JE, Meyer GA, Reinartz J, and Young EB. 2012. An exotic invasive shrub has greater recruitment than native shrub species within a large, undisturbed wetland. *Plant Ecology* 213 (9): 1425-1436.
- Zulkifly SB, Hanshew A, Young EB, Lee PO, Graham ME, Graham ME, Graham LE. 2012. The epiphytic microbiota of the globally widespread macroalga *Cladophora* (Chlorophyta, Cladophorales) *American Journal of Botany* 99 (9): 1542-1553.
- Young, EB, Lowes CI, Hanson AM, Onorevole K. 2011. Alkaline phosphatase activity and use of alternative phosphorus sources by phytoplankton in P-limited freshwater ecosystems. *J. Phycology* 47 SI 18-19
- Young EB, Tucker RC, Pansch L. 2010. Alkaline phosphatase in freshwater *Cladophora*-epiphyte assemblages: regulation in response to phosphorus supply and localization. *Journal of Phycology* 46: 93-101.

- Mills JE, Reinartz J, Meyer GA and Young EB. 2009. Consequences of glossy buckthorn (*Rhamnus frangula*) invasion of a large wetland complex. *Biological Invasions* 11: 1803-1820.
- Young EB, Berges JA and Dring MJ. 2009. Physiological responses of intertidal marine algae to nitrogen deprivation and resupply of nitrate and ammonium. *Physiologia Plantarum* 135: 400-411.
- Bott T, Meyer GA and Young EB. 2008. Nutrient limitation and morphological plasticity of the carnivorous pitcher plant *Sarracenia purpurea* in contrasting wetland environments. *New Phytologist* 180: 631-641.
- Young EB, Dring MJ, Birkett DA, Savidge GS and Berges JA. 2007. Seasonal variation in nitrate reductase activity and internal N pools in intertidal brown algae correlate with ambient nitrate availability. *Plant, Cell and Environment* 30: 764-774.
- Young EB, Dring MJ and Berges JA. 2007. Distinct patterns of nitrate reductase activity in brown algae: light and ammonium sensitivity in *Laminaria digitata* is absent in *Fucus* species. *Journal of Phycology* 43: 1200 – 1208.
- Young, EB, Lavery PS, van Elven B, Dring MJ and Berges JA. 2005. Dissolved inorganic nitrogen profiles and nitrate reductase activity in macroalgal epiphytes within seagrass meadows. *Marine Ecology Progress Series* 288:103-114.
- Young EB and Beardall J. 2005. Modulation of photosynthesis and inorganic carbon acquisition in a marine microalga by nitrogen, iron and light availability. *Canadian Journal of Botany* 83: 917-928.
- Young E and Beardall J. 2003. Photosynthetic function in *Dunaliella tertiolecta* during a nitrogen starvation and recovery cycle. *Journal of Phycology* 39: 897-905.
- Young E and Beardall J. 2003. Rapid ammonium- and nitrate-induced perturbations to chl a fluorescence in nitrogen-stressed *Dunaliella tertiolecta* (Chlorophyta). *Journal of Phycology* 39: 332-342
- Beardall J, Young E and Roberts S. 2001. Interactions between nutrient uptake and cellular metabolism: approaches for determining algal nutrient status. *Aquatic Sciences* 63: 44-69.
- Young E, Giordano M and Beardall J. 2001. Inorganic carbon acquisition by *Dunaliella tertiolecta* (Chlorophyta) involves external carbonic anhydrase and direct HCO<sub>3</sub><sup>-</sup> utilisation (insensitive to the anion exchange inhibitor DIDS). *European Journal of Phycology* 36: 81-88.
- Johansson S, Wide M, **Young E** and Lindblad, P. 1993. Expression of alkaline phosphatase in mature mouse placenta visualised by *in situ* hybridization and enzyme histochemistry. *Anatomy and Embryology* 187: 409-414.
- Atkins CA, Storer PJ and Young EB. 1991. Translocation of nitrogen and expression of nodule-specific uricase (nodulin-35) in *Robinia pseudoacacia*. *Physiologia Plantarum* 83: 483-491.

### **Other Publications and Recent Conference proceedings/published abstracts**

- Thorhaug A., Raven JA, Young EB, Franklin LA. 2009. Climate Change Symposium: Carbon Cycling and Sequestration in the Sea by Phytoplankton and Macrophytes. *Plant Science Bulletin* 55: 15-163.
- Young EB and Janssen J. 2009. Ecological Processes across the salinity divide: Contrasts and comparisons in marine and Great Lakes ecosystems. Invited Review for *Bulletin of the Ecological Society of America*. 90 (1) 115-133.
- Reinartz JA, Mills JE, Young EB and Meyer GA. 2007. 15 years of change in the vegetation of the Cedarburg Bog. UWM Field Station 2006 Annual Report.

- Bott T, Meyer G and Young E. 2007. Distinct morphologies and nutrient status of the Northern Pitcher Plant, *Sarracenia purpurea* in the Cedarburg Fen and Sapa Bog. UWM Field Station 2006 Annual Report.
- Young EB, Reinartz JA, Mills JE, Meyer GA and Schwartz M. 2007. Long term ecological change in a vulnerable Wisconsin wetland. UWM Field Station 2006 Annual Report.
- Young E, Pansch L and Tucker R. 2007. Nearshore nutrient fluxes and organic P use by benthic algae. American Society of Limnology and Oceanography Meeting Santa Fe, February 2007.
- Young E, Bootsma H and Berges J. 2005. The Recent Resurgence of *Cladophora sp.* on the Western Shore of Lake Michigan: Research Perspectives. State of Lake Michigan Conference, Green Bay, WI, 2-3 November 2005.
- Bootsma HA, Young EB, Berges JA and Maybruck B. 2005. Phosphorus Dynamics in the Lake Michigan Nearshore Zone. State of Lake Michigan Conference, Green Bay, WI, 2-3 November 2005.
- Roth T and Young E. 2005. Factors limiting growth of *Cladophora sp.*: P status and alkaline phosphatase. State of Lake Michigan Conference, Green Bay, WI, 2-3 November, 2005.
- Young E, Bootsma H and Berges J. 2004. Can Activity of Enzymes Involved in Nutrient Assimilation be Useful as Indices of Nutrient Status in *Cladophora*? 'Cladophora Research and Management in the Great Lakes' A Workshop at the Great Lakes WATER Institute, University of Wisconsin-Milwaukee, December 8 2004.  
[http://www.uwm.edu/Dept/GLWI/cladophora/page\\_report.html](http://www.uwm.edu/Dept/GLWI/cladophora/page_report.html)
- Bootsma H, Young EB and Berges JA. 2004. Temporal and spatial patterns of *Cladophora* biomass and nutrient stoichiometry in Lake Michigan. *Cladophora Research and Management in the Great Lakes' A Workshop at the Great Lakes WATER Institute, University of Wisconsin-Milwaukee, December 8 2004.*  
[http://www.uwm.edu/Dept/GLWI/cladophora/page\\_report.html](http://www.uwm.edu/Dept/GLWI/cladophora/page_report.html)
- Beardall J, Young E and Roberts S. 1995. Interactions between photosynthesis and the acquisition of N and P in *Dunaliella*. In P.Mathis (Ed) 'Photosynthesis : from Light to Biosphere" Vol. V pp435-438. Kluwer Academic Publishers.
- Giordano M, Young E and Beardall J. (1997) Evidence for the absence of a DIDS-sensitive Anion-Exchange type HCO<sub>3</sub><sup>-</sup> transporter in *Dunaliella tertiolecta*. *Plant Physiology* 114: 1103 Suppl. S Jul 1997.

### **Synergistic Activities:**

- Editorial board member, *Journal of Phycology* 2008 – 2010. Ad hoc reviewer for *Aquaculture*, *Aquatic Botany*, *Botanica Marina*, *Conservation Biology*, *European Journal of Phycology*, *Environmental Science and Technology*, *Harmful Algae*, *International Journal of Plant Sciences*, *Journal of Experimental Botany*, *Journal of Phycology*, *Limnology and Oceanography*, *Marine and Freshwater Research*, *Marine Biology*, *Marine Ecology Progress Series*, *New Phytologist*, *Photosynthesis Research*, *Phycologia*, *Plant Biology*.
- Proposal reviewer and panelist for US National Science Foundation, Israel Science Foundation, Netherlands Organisation for Scientific Research.
- National Ocean Science Bowl State competition Science Judge.

**Collaborators** (last 5 years):

John Berges, Harvey Bootsma, John Janssen, Gretchen Meyer, James Reinartz, Sandra McLellan (University of Wisconsin-Milwaukee), Linda Graham (Univ Wisconsin-Madison), R. Michael McKay, George Bullerjahn (Bowling State Univ, OH), Steven Wilhelm (Univ Tennessee), Claudia Benitez-Nelson, Tammi Richardson (Univ South Carolina), Matthew Dring (Queen's Univ Belfast, UK), Paul Lavery (Edith Cowan Univ, Australia), PhD Advisor - John Beardall (Monash University).

Graduate student advisees: Chelsea Lowes, Alicia Hanson, Terry Bott, Jason Berg, Philip Lee, Jacob Grothjan. Postdoctoral advisee: Jason Mills.