# **Astrid Schnetzer**

# Education

- 2001 Ph.D. in Marine Biology. University of Vienna, Austria, Active transport of Particulate Organic Carbon and Nitrogen (POC/PON) by vertically migrating zooplankton in the Sargasso Sea. Advisors: Drs G. Herndl and D. Steinberg
- 1996 M.S. in Zoology / Ecology. University of Vienna, Austria, Episodic sedimentation and following remineralization of differently-aged marine snow stages: a Laboratory Study; Advisor: Dr. Ott

# **Professional Experience**

- 2016 present MEAS Honors Program Director
- 2012 present North Carolina State University, Associate Professor
- 2006 2012 University of Southern California, Research Assistant Professor
- 2002 2005 University of Southern California, Postdoctoral Research Associate

# **Current Grants**

- NC Sea Grant: \$24,980 Food Web Transfer of Cyanobacterial Toxins in the Chowan River and western Albemarle Sound, North Carolina, LeadPI 2019 2020
  - UNC Chapel Hill / NC Policy Collaboratory: \$70,000 Cyanotoxin presence and yearround dynamics in Falls Lake, North Carolina, **LeadPI** – 2019 - 2020
- North Pacific Research Board/NOAA: \$131,512 Microzooplankton biomass and grazing rates on Arctic Program Cruises. **CoPI** with M. Lomas (Bigelow Lab for Ocean Sc), J. Krause (Dauphin Island Sea Lab) 2016-2019 *non-cost extension*
- NSF/ RAPID: \$199,782 Response of phyto-, zoo-, and ichthyoplankton assemblages to a hurricane-induced historic floodwater plume: food web regime shifts in a subtropical, pelagic environment. **CoPI** with Robinson K. and Stauffer B. (UL Lafayette) and Geist S. (Texas A&M), 2017-2018 *non-cost extension*

# **Pending Grants**

- NSF/ MRI: \$177,356 Acquisition of a BD FACSMelody flow cytometer to promote microbe-focused research, training, and teaching at NC State University. **CoPI** with Paerl, R. Hyman, M. Kelly, R. Williams, G. J. (NCSU), 2019
- ECOHAB19: \$2,068,506 Cyanotoxin Trophic Transfer to a Key Fisheries Resource: Blue Crabs in East Coast Estuaries. **CoPI** with Hall N., Paerl H. (UNC Chapel Hill), Paerl R. (NCSU), 2019-2024

# **Past Grants**

• NCSU Center for Human Health and the Environment (CHHE) Community Mini-Grant Program: \$7,921. Cyanotoxins & Riverkeepers : Assessing toxin patterns and pathways in North Carolina waters. **CoPI** with the Yadkin Riverkeeper and the Sound Rivers Association, 2017-2018

- Chancelor's Innovation Fund: \$75,000 Application of novel reagents for detection and quantification of the environemental toxin BMAA in humans diagnosed with ALS. **CoPI** with D. Muddiman and P. Loziuk (NCSU) 2017-2018
- NSF/Chemical Oceanography: \$ 568,888 Collaborative Research: Planktonic Sources of Chromophoric Dissolved Organic Matter in Seawater. CoPI with C. Osburn (NCSU), Thomas Bianchi (UF) and Kai Ziervogel (UNC Chapel Hill) - 2015-2019
- Urban Water Consortium (UWC) Grant: \$ 143,502 Cyanobacteria Blooms in North Carolina Lakes and Reservoirs: Examining Drivers of Bloom Patterns and Testing for Cyanotoxin Presence. LeadPI – 2016-2018
- NOAA/NCSU Sea Grant: \$ 150,000 Going with the flow: New approaches for determining drivers of toxic cyanobacteria blooms in the Cape Fear River, NC. CoPI with H. Paerl and N. Hall (UNC Chapel Hill) and S. Ensign (NCSU) 2016-2018
- NOAA/ NCSU Seed Sea Grant: \$5,678 Cyanobacterial Blooms and Cyanotoxin Dynamics in the Chowan River, NC. Lead PI 2016–2017
- NSF/Chemical Oceanography REU Supplementary Grant: \$ 5,760 LeadPI for NSF supplement grant (NCSU) 2015-2018
- NCSU Faculty Research & Professional Development Fund: \$4,000 Microeukaryote assemblage structure and diversity: Links to rapid regional climate change along the Western Antarctic Peninnsula? LeadPI 2015-2016
- NCSU Research and Innovation Seed Funding Program: \$ 20,000 Development of a Reservoir Column Reactor to Experimentally Evaluate the Effect of Mixing on Harmful Algal Communities. **CoPI** with T. Aziz and D. Obenour (CCEE at NCSU) 2015-2016
- NOAA/ NCSU Seed Sea Grant: 2014–2015, \$5,000 *Pseudo-nitzschia* blooms in Bogue Sound: Examining Bloom Patterns and Risk of Domoic Acid Exposure. Lead PI
- NOAA/ USC Seed Sea Grant: 2012-2014, \$179,056 Resolving the annual pattern of algal toxins in coastal waters off Los Angeles. **Lead PI** with CoPI: D. Caron (USC)
- NSF/ Biological Oceanography: 2010-2014, \$ 710,000 Experimental studies to understand and evaluate acclimation of marine plankton assemblages to increased CO<sub>2</sub> and temperature. **Lead PI** with CoPIs: D. Caron, D. Hutchins and F-X. Fu (USC)
- NOAA/ NC Sea Grant: 2012-2013, \$5,000 Plankton assemblages as sentinels for ecosystem change within estuarine food webs. Lead PI
- NOAA/ USC Sea Grant: 2010-2012, \$151,783 Impacts of algal toxins on diversity and species composition of coastal plankton communities. Lead PI with CoPI D. Caron (USC)
- USC WiSE (Women in Science&Engineering): Major Faculty Support Grant; 2010-2011; \$19,500 - Protistan community structure as a function of top-down processes in the Southern Ocean. Lead PI

- NSF/ Office of Polar Programs: non-cost extension, \$601,014 Collaborative Research: Do Crustacean Zooplankton Play a Pivotal Role in Structuring Heterotrophic Plankton Communities? **CoPI** with D. Caron (USC) and D. Lonsdale (Stony Brook);
- NOAA/ MERHAB RAPDALERT: 2005-2010, \$2,858,159 Rapid Analyses of *Pseudo-nitzschia* & Domoic Acid, Locating Events in near-Real Time. Research Associate; with PIs: D. Caron (USC), B. Jones (USC), G. Sukhatme (USC), D. Estrin (UCLA), P. Miller (UCSC), S. Weisberg (SCCRWP) and P. DiGiacomo (JPL);
- NOAA/ USC Sea Grant: Emergency Response Funds; 2011, \$4,500 Redondo Beach Fish kill: oxygen depletion and algal toxins; Lead PI
- NOAA/ SCCOOS (Southern California Regional Coastal Ocean Observing System): 2008-2010, \$540,927 HAB monitoring along Californian Coast; CoPI with PIs: B. Jones (USC/SCOOS), D. Caron (USC) and others;
- NOAA/ USC Sea Grant: 2008-2010, \$141,225 Emerging Harmful Algal Blooms in Coastal Southern California: A Case Study in King Harbor, Redondo Beach. **CoPI** with D. Caron (USC);
- EPA/ ECOHAB: 2005-2008, \$350,765 Stimulation of Toxic Blooms of the Diatom *Pseudo-nitzschia* spp. by Urban River Discharge into the Southern California Coastal Waters. **Research Associate** with PIs: D. Caron (USC) and P. Miller (UCSC);
- FWF Austrian Science Fund: Schroedinger Stipend; 2002-2004; \$64,000 Changes in protistan community structure due to zooplankton predation: Application of molecular techniques to study food web dynamics. **Postdocotral Research Fellow**.
- Travel Grant, Women in Science and Engineering (WISE); 2009, 2010, 2011
- Sydney L. Wright Memorial Fellowship, Ph.D. Research; 2000
- Stone Fellowship, Ph.D. Research; 1999
- Munson Foundation Stipend, Ph.D. Research, 1998 & 1999
- Special grant from native district in Austria (Oberoesterreich), Ph.D. Research 1997 & 1998
- Grants from Center for Foreign Studies (Austria); MS & Ph.D. Research 1994, 1995, 1998 ;

# **Teaching Experience**

Co-Coordinator/Co-Instructor: Field-Investigations of Coastal Processes (MEA459, NCSU)
Instructor: Biological Oceanography (MEA 449/549, NCSU)
Instructor: Marine Biology undergraduate course (MEA220, NCSU)
Co-Instructor: Field-Investigations of Coastal Processes (MEA459, NCSU)
Co-Instructor: Senior Seminar in MEAS (MEA 495, NCSU)
Co-Instructor: Exploring the Enironment (ENV101, NCSU)
Co-Instructor: Ecology of Coastal Resources (MEA 469, NCSU)
Instructor: Marine Plankton Ecology graduate course (MEA752, NCSU)
Guest Lecturer & Labs: Biological Oceanographic Instrumentation (USC)

# Astrid Schnetzer

2010	Instructor: Undergraduate Research Course 'Oceans in a Changing World'; developed and taught together with W. Ziebis, USC Wrigley Institute for Environmental Sciences, Catalina
2007, 2009	Instructor: Advanced Graduate Seminar in Plankton Biology with D. Caron & K. Heidelberg, USC
2007, 2008, 2010	Guest Lecturer: Advanced General Biology: Organismal Biology and Evolution, USC
2001	Instructor: Biological Oceanography with M. Lomas, Bermuda Institute of Ocean Sciences (BIOS; formerly the Bermuda Biological Station for Research or BBSR)
1999, 2000	Teaching Assistant for Biological Oceanography (BIOS)
1999	Teaching Assistant for Marine Microbial Ecology: Molecular Ecology and Biogeochemistry (BIOS)
1999	Teaching Assistant for Marine Microbial Ecology (BIOS)
1994, 1995, 1996	Teaching Assistant for Field Course in Marine Ecology in Rovinj (Croatia), University of Vienna

### Graduate Mentor (NCSU)

- Miranda Irby, Ph.D. Current,
- Aubree Szczepanski, M.S. Current, Impact of Copepod Grazing on Coastal Microplankton Assemblages in the Northwestern Gulf of Mexico.
- **Gabrielle Corradino**, Ph.D. Current, Marine Nanoflagellates on the Prowl: Trophic Interactions and Energy Flow.
- **Daniel Wiltsie**, M.S. awarded 2017, Spatiotemporal Trends in Phytoplankton Community Shifts and Toxin Presence in Jordan Lake, North Carolina.
- Joseph Bursey, M.S. awarded 2016, Protistan-copepod Trophic Interactions in Bogue Sound, NC.
- **Robert Duke**, M.S. awarded 2014, Phytoplankton-Oyster Trophic Dynamics in a North Carolina Estuary.

# **Graduate Advisory Committees**

- A. Brym, MS NCSU, 2012
- Y. Li, PhD NCSU, 2012
- o D. McVeigh, PhD NCSU, 2016
- o D. Lichti, PhD ECU, 2018
- K. Theuerkauf, MS NCSU, 2017
- o L. McGee, MS NCSU, 2017
- o A. Mangot, MS NCSU, 2018
- o J. Smithheart, MS NCSU, 2018
- o R. Taylor, PhD 2018
- o R.Venezia, MS 2018-
- o Y. Han, PhD 2018 -
- o C. Lebrasse, PhD 2018 -

- o K. Christianson, MS 2018 -
- o L. McGee, PhD 2017 -

# Undergraduate Research Mentor in Plankton Ecology Lab (NCSU)

- o Madeleine Anderson (2019 ): volunteer, MEA493
- o Aidan Smith (2019 ): volunteer, MEA493, NC Provost Fellowship
- Emily Griffith (2019 ): volunteer, MEA493, NC Sea Grant undergraduate support
- o Riley Zoldi (2019): MEA493
- o Allen Moore (2018 2019): volunteer, MEA493
- Miranda Irby (2018 2019): volunteer, NC Provost Fellowship, MEA493
- o Nolynn Powell (2017 2019): NC Provost Fellowship; MEA493
- o Cassie Skrutowski (2017): volunteer, AEC492
- Brooke Barber (2017): Honors research fellow, MEA493
- o Mackenzie Fiss (2017 2018): volunteer, NSF REU undergraduate support
- Victoria Guitarte (2016 2017): NC Sea Grant Research Fellow
- Brendan Boyle (2017): volunteer, BIO493
- Kendelle Cooper (2016): volunteer, Honors MEA220
- Alexandra Gizzi (2016 2017): volunteer, NC Provost Fellowship
- Madeleine Guyant (2015 2016): NSF REU undergraduate support
- o Jared Everson (2015 2016): volunteer, MEA493
- Maggie Fuentes (2014 2015): volunteer, AEC492
- o Robert Lampe (2014 2015): NCSU DASA undergraduate fellowship
- o Stephanie Wenclawski (2012 016): Park fellow, MEA498
- Tori Jefferson (2013 2015): NCSU DASA, ACCIAC and NC Sea Grant fellowships
- o Alison Fowler (2013- 2016): NCSU DASA and NSF REU undergr. Support, MEA493
- $\circ$  Eileen Gu (2013 2016): Wise fellowship, NC Provost fellowship
- Adam Stewart (2013): volunteer

# **Undergraduate Students Recruited into Honors Program (NCSU since 2016)**

K. Christianson, E. Scott, J. LaFond, J. Harker, M Cowan, S. Bryant, C. Ring, B. Brooke, M. Fizz, L. Lovell, A. Elkins, J. Golden, D. Hueholt, L. Hochstatter, M. Irby, J. Spore, A. Gooch, S. Menten, M. Diard, G. Hopkins, A. Teergarden

# **Undergraduate Research Mentor (USC)**

K. Robins (2010-2011), A. Grabowski (2011), E. Fitzpatrick (2006-2009), S. Moy (2007), G. Song (2006-2007), L. Farrar (2004-2006), B. Pan (2005–2006), K. Tum (2005), E. Brauer (2003–2004), C. Teuscher (2003)

# Graduate and Postdoctoral Students Co-Mentored (USC)

Alle Lie, Beth Stauffer, Diane Kim, Adriane Jones Dr. Steffi Moorthi, Dr. Marie-Eve Garneau, Dr. Xumei Bai

# **Publications** (\*graduate, \*\*undergraduate, #corresponding author) 2019

Shields M., Bianchi T., Osburn C., Kinsey J., Ziervogel K., Schnetzer A. and \*Corradino G. (*accepted*) Linking chromophoric organic matter transformation with biomarker indices in a marine phytoplankton growth and degradation experiment – Marine Chemistry: 214: 103665 - https://doi.org/10.1016/j.marchem.2019.103665

# 2018

- \*Smith J., \*Connell P., Evans RH., Gellene AG., Howard MDA., Jones BH., Kaveggia S., Palmer L., Schnetzer A., \*Seegers BN., \*Seubert EL., Tatters AO. and Caron DA. (2018) A decade and a half of *Pseudo-nitzschia* spp. and domoic acid along the coast of southern California – Harmful Algae (Special Issue) - https://doi.org/10.1016/j.hal.2018.07.007
- \*Wiltsie D., Schnetzer A.<sup>#</sup>, Green J., Vander Borgh M. and Fensin E. (2018) Algal Blooms and Cyanotoxins in Jordan Lake, North Carolina – Toxins 2018, 10(2), 92; doi:10.3390/toxins10020092
- Kinsey JD., \*Corradino G., Ziervogel K., **Schnetzer A**. and Osburn CL. (2018) Formation of Chromophoric Dissolved Organic Matter by Bacterial Degradation of Marine Particles – Frontiers in Marine Science, 4(430). doi:10.3389/fmars.2017.00430
- Tatters O.A., Schnetzer A., Xu K., Walworth N., Fu F., Spackeen J.L., Sipler R.E., Bertrand E.M., McQuaid J.B., Allen A.E., Bronk D.A., Gao K., Sun J., Caron D.A. and Hutchins D.A. (2018) Interactive Effects of Temperature, CO<sub>2</sub>, and Nitrogen Source on Community Composition and Domoic Acid Production in a California Coastal Diatom Assemblage – Journal of Plankton Research – 40(2): 151-164; doi:10.1093/plankt/fbx074

# 2017

- Schnetzer A., \*\*Lampe R., Benitez-Nelson C., Marchetti A., Osburn C. and Tatters O.A. (2017) Marine snow formation by the toxin producing diatom, *Pseudo-nitzschia australis* – Harmful Algae, 64: 23-30
- Caron D.A., Connell P., Schaffner R.A., **Schnetzer A.,** Fuhrman J.A., Countway P.D. and \*Kim D.Y. (2017) Planktonic food web structure at a coastal time-series site Deep Sea Research, 121:14-29

# 2016

SOCAN 2016 State of the Science Workshop Report: synthesizing the 2016 State of the Science Workshop that aimed to identify (1) research needs and capabilities, (2) unique aspects and vulnerabilities and (3) stakeholder needs of the Southeast Region. -<u>http://secoora.org/wp-content/uploads/2015/01/SOCAN-2016-State-of-the-Science-Workshop-Report.pdf</u>

# 2015

Andersson S.J., Kline D.I., Edmunds P.J., Archer S. D., Bednaršek N., Carpenter R.C., Chadsey C., Goldstein P., Grottoli A. G., Hurst T.P., King A.L., Kübler J.E., Kuffner I.B., Mackey K.R.M., Paytan A., Menge B.E., Riebesell U., Schnetzer A., Warner M.E., Zimmerman R.C. (2015) Understanding ocean acidification impacts on organismal to ecological scales – Oceanography, 28: 16–27

### 2014

\*Kim D.Y., Countway P.D., \*Jones A.C., Schnetzer A., \*\*Yamashita W., \*\*Tung C. and Caron D.A. (2014) Monthly to interannual variability of microbial eukaryote assemblages at four depths in the eastern North Pacific – ISME Journal, 8: 515-530

### 2013

- Schnetzer A., \*Jones B.H., Schaffner R.A., \*Cetinic I., \*\*Fitzpatrick E., Miller P.E. and Caron D.A. (2013) Coastal upwelling linked to toxic *Pseudo-nitzschia australis* blooms in Los Angeles coastal waters, 2005 2007 Journal of Plankton Research, 35: 1080-1092.
- \* Lie A., \* Kim D.Y., **Schnetzer A.** and Caron D.A. (2013) Small-scale temporal and spatial variations in protistan community composition at the San Pedro Ocean Time-series station off the coast of southern California Aquatic Microbial Ecology, 70: 93-110
- \*Stauffer B., **Schnetzer A.**, Gellene A.G., Oberg C., Sukhatme G.S. and Caron D.A. (2013) Effects of an acute hypoxic event on microplankton community structure in a coastal harbor of Southern California – Estuaries and Coasts: 36: 135-148
- \* Tatters A.O., Schnetzer A., Fu F., Lie A, David A. Caron and David A. Hutchins (2013) Shortversus long-term responses to changing CO<sub>2</sub> in a coastal dinoflagellate bloom: implications for interspecific competitive interactions and community structure. – Evolution 67: 1879-1891
- \*Tatters A.O., Roleda M.Y., Schnetzer A., Fu F., Hurd C., Boyd P.W., Caron D.A., \*Lie A., Hoffmann L. and Hutchins D.A. (2013) Short- and long-term conditioning of a temperate marine diatom community to acidification and warming- Philosophical Transactions R. Soc. B. 368: 20120437

# 2012

- \*Seubert E.L., Eagleton J., Donovan M., **Schnetzer A.**, Cetnić I., Trussell S., Lauri L., Jones B.H. and Caron D.A. (2012) Algal toxins and reverse osmosis desalination operations: laboratory bench testing and field monitoring of domoic acid, saxitoxin, brevetoxin and okadaic acid – Water Research: 46: 6563-73
- \*Stauffer B., Gellene A.G., **Schnetzer A.**, \*Seubert E., Oberg C., Sukhatme G.S. and Caron D.A. (2012) An oceanographic, meterological and biological 'perfect storm' yields a massive fish kill – Marine Ecology Progress Series: 468: 231-243
- Howard M.D.A., \*Jones A.C., Schnetzer A., Countway P.D., Tomas C., Kudela R.M., \*Hayashi K., Chia P. and Caron D.A. (2012) Quantitative real-time PCR for *Cochlodinium fulvescens* (Dinophyceae), a potentially harmful dinoflagellate from California Coastal waters Journal of Phycology: 48: 384-393
- Caron D.A., Countway P.D., \*Jones A.C., \*Kim D.Y. and **Schnetzer A.** (2012) Marine Protistan Diversity Annual Review Marine Science: 4: 6.1-6.27

2011

- Garneau M.E., **Schnetzer A**., Countway P.D., \*Jones A.C., \*Seubert E. and Caron D.A. (2011) Seasonal dynamics of the toxic dinoflagellate *Alexandrium catenella* in Redondo Beach, California, examined by quantitative PCR –Applied and Environmental Microbiology 77: 7669-7680
- Schnetzer A., Moorthi S., Gast R.J., Countway P.D., \* Gilg I.C. and Caron D.A. (2011) Depth matters: Microbial eukaryote diversity and community structure in the eastern North Pacific as indicated by environmental gene libraries Deep Sea Research I 58: 16-26

- Smith R.N., Das E.C., Heidarsson H., Pereira A.M., Arrichiello F., Cetnic I., Darjany L., Garneau M.E., Howard M.D., Oberg C., Ragan M., Seubert E., Smith E.C., Stauffer B.A.,
  Schnetzer A., Toro-Farmer G., Caron D.A., Jones B.H. and Sukhatme G.S. (2010) IEEE Robotics & Automation Magazine 17: 20-30
- Countway P.D., \*\*Vigil P.D., Schnetzer A., Moorthi S.D. and Caron D.A. (2010) Seasonal analysis of protistan community structure and diversity at the USC microbial observatory (San Pedro Channel, North Pacific Ocean) – Limnology and Oceanography 55: 2381-2396
- \*\* Fitzpatrick E., Caron D.A. and Schnetzer A. (2010) Development and environmental application of a genus-specific quantitative PCR approach for *Pseudo-nitzschia* species – Marine Biology 157:1161-1169
- Smith R.N., \* Jnaneshwar D., Hordur H, Pereira A., Arrichiello P., \* Cetinic I., Darjany L., Garneau M., Howard M., Oberg C., Ragan M., Seubert E., Smith E.C., \* Stauffer B., Schnetzer A., Toro-Farmer G., Caron D.A., Jones B.H., Sukhatme G. (2010) USC CINAPS Builds Bridges: Observing and Monitoring the Southern California Bight– IEEE Robotics and Automation Magazine; Mar 2010. Special Issue on Marine Robotic Systems
- Caron D.A., Garneau M.-E., \* Seubert E., Howard M.D.A., Darjany L., Schnetzer A., \* Cetinic I., Filteau G., Lauri P., Jones B.H. and Trussell S. (2010) Harmful algae and their potential impacts on desalination operations off Southern California. Water Research 44: 385-416
- \* Gilg I.C., Amaral-Zettler L.A., Countway P.D., Moorthi S., Schnetzer A. and Caron D.A. (2010) Phylogenetic affiliations of mesopelagic acantharia and acantharian-like environmental 18S rRNA genes in the San Pedro Channel Protist 161: 197–211

#### 2009

- Caron D.A., Countway P.D., Savai P., Gast R.J., **Schnetzer A**., Moorthi S., Dennett, M.R. Moran, D.M. and \* Jones A.C. (2009) Defining DNA-based operational taxonomic units for microbial eukaryote ecology – Applied Environmental Microbiology 75: 5797-5808
- \* Wood E.S, Schnetzer A., Benitez-Nelson C.R., Anderson C., Berelson W., Brzezinksi M., Burns J., Caron D.A.,\* Cetinic I., Ferry J., \*\* Fitzpatrick E., Jones B., Miller P.E., Morton S.L., Schaffner R.A., Siegel D., Thunell R. (2009) Rapid downward transport of the neurotoxin domoic acid in coastal waters – Nature Geosciences 2: 272 - 275

#### 2008 and prior

Litaker, R.W., Stewart, T.N., Eberhart, B.T.L., Wekell, J.C., Trainer, V.L., Kudela, R.M., Miller, P.E., Roberts, A., Hertz, C., Johnson, T.A., Frankfurter, G., Smith, J., **Schnetzer, A**., Schumacker, J., Bastian, J.L., Odell, A., Gentien, P., Le Gal, D., Hardison, D.R., Tester,

P.A (2008). Rapid Enzyme-linked Immunosorbent Assay for Detection of the Algal Toxin Domoic Acid – Journal of Shellfish Research 27: 1-10

- Schnetzer, A., Miller, P. E., Schaffner, R. A., \* Stauffer, \* Rose, J. M., B., Jones, B., Weisberg, S. B, DiGiacomo, P. M., Berelson, W., and Caron, D. A. (2007) *Pseudo-nitzschia* spp. and domoic acid in the San Pedro Channel and Los Angeles harbor areas of the Southern California Bight, 2003-2004 - Harmful Algae 6: 372-387
- Loveland, J, DA Caron, A Schnetzer, I Cetinić, RA Schaffner, <u>BA Stauffer</u>, E Means, P Lauri, P Shoenberger, G Oelker, B Jones. 2007. Occurrence and Removal of Marine Biotoxins for the Seawater Reverse Osmosis Treatment Process: Phytoplankton and Domoic Acid Correlations at the West Basin MWD Seawater Desalination Pilot Plant in El Segundo, CA. AMTA Solutions, Spring 2007: 14-17.
- Caron, D.A., Schnetzer, A. Protistan community structure (2006). In: Hurst, C.J., Knudsen, G.R., McInerney, M.J., Stetzenbach, L.D. and M.V. Walter (eds.). Manual of Environmental Microbiology, Section IV, ASM Press, Washington, D.C.
- Schnetzer, A., Caron, D.A. (2005) Copepod grazing impact on the trophic structure of the microbial assemblage of the San Pedro Channel, California Journal of Plankton Research 27:959-972
- Schnetzer, A., Steinberg, D.K. (2002) Active Transport of particulate organic carbon and nitrogen by vertically migrating zooplankton in the Sargasso Sea. Marine Ecology Progress Series 234:71-84
- Schnetzer, A., Steinberg, D.K. (2002) Natural Diets of Vertically Migrating Zooplankton in the Sargasso Sea. Marine Biology 141(1):89-99
- Schnetzer, A. (1996) Episodic Sedimentation and Following Remineralization of Differently-Aged Marine Snow Stages: a Laboratory Study, MS thesis, University of Vienna, Austria

# **Professional Societies**

American Society of Limnology and Oceanography (ASLO), The Oceanographic Society (TOS), American Geophysical Union (AGU), International Society for the Study of Harmful Algae (ISSHA), North Carolina Water Resources Association (NCWRA)

# **Oceanographic Cruises**

#### Arctic Ocean

Spring & Summer of 2017, Summer 2018 & 2019: IES and ASGARD cruise collaborations to characterize microzooplankton populations

# Gulf of Mexico

Oct 2017, Jan & Mar 2018: RAPID cruises, Protistan diversity, production & copepod feeding ecology altered by freshwater impact from Hurricane Harvey

Jul-Aug 2017: GOMECC3 participants, Protistan diversity, production & copepod feeding ecology along gradients of eutrophication-induced acidification and hypoxia

### North Atlantic Coast

Apr 2017: PEACH participants, North Atlantic coast from MA to NC, plankton community sampling, offshore and longshore cruise transect; spatiotemporal patterns of protist plankton;

### Northern Carolina Coast, North Western Atlantic

2012 – present: Bogue Sound, phyto- and zooplankton community dynamics, weekly to monthly sampling; physiochemical time-series;

### Southern California Coast, North Eastern Pacific

2006 - 2012: Redondo Beach, HAB-related weekly sampling

2005 – 2010: MERHAB-Rapdalert, Harmful Algal Blooms (HAB) quarterly sampling

- 2005 2008: ECOHAB: San Pedro Basin, HAB-related weekly to monthly sampling
- 2002 2005: MO Observatory. San Pedro Channel. Protistan Diversity, monthly sampling

# Coastal Southern Ocean and Ross Sea, Antarctica

Jan/Feb 2008: 7-week cruise: Ecology of mid-trophic food web interactions Oct-Dec 2005: 7-week cruise: Protistan Diversity in open water and sea-ice communities. Oct/Nov 2003: 4-week cruise: Protistan diversity & copepod feeding ecology.

### Hydrothermal Vents, Equatorial Pacific

Nov/Dec 2004: 6-week cruise to hydrothermal vents along the East Pacific Rise (9°N and 13°N). Protistan diversity within hydrothermal vent habitats (Alvin dive to 2600m)

#### Sargasso Sea, North Western Atlantic

April 1998-2001: Bermuda Atlantic Time-series Study. Monthly cruises to study ocean biogeochemistry and food web dynamics.

# Northern Adriatic, Mediterrenean

1992 – 1996: Benthic-pelagic coupling in the coastal Northern Adriatic Sea (Ruder Boskovich Institute in Rovinj, Croatia). Marine snow and sediment – water exchange processes (SCUBA diving and sediment trap work).

# **Professional Activities / Service**

2019 – present	Departmental Work Load Equity Committee
2018 - 2019	NCSU Department Head Search Committee
2015 – present	Southeast Ocean and Coastal Acidification Network (SOCAN) Steering Committee, NOAA
2015 – present	Scientific Advisory Council (SAC), NC Division of Water Resources for the Development of Nutrient Criteria
2015 - 2016	NCSU Marine Microbiology Hiring Committee
2014 - 2015	NCSU Undergraduate Advisory Committee
2012 - 2018	NCSU Safety Committee
2012 - 2013	NCSU Global Education Hiring Committee

- Grant Reviews: NSF Panelist (Office for Polar Programs); EPA Panelist (regular external NSF Reviews: Office for Polar Programs, Biological Oceanography, Dimensions of Biodiversity, CAREER-program, Ocean Acidification; NOAA Reviews: Seagrant programs; NIH; AAAS, Velux Foundation
- Manuscript Reviews: Aquatic Microbial Ecology, Animal Ecology, Deep Sea Research, Environmental Microbiology, Estuaries and Coasts, Journal of Plankton Research, Limnology and Oceanography, Marine Ecology Progress Series, Harmful Algae, Applied and Environmental Microbiology, Journal of Eukaryotic Microbiology, ISME Journal, PLOS, Microbial Ecolgy, Polar Biology, Resaerch in Microbiology, Nature Communications

# Invited Seminars, Features, Workshops or Public Outreach

2019	Invited speaker at the Jordan Lake Nutrient Management Study Research Symposium, NC Policy Collaboratory, Raleigh, NC
2018	Mothur Workshop Participant - open source software package for bioinformatics data processing, Detroit, MI
2018	Session co-organizer for the WWRI Annual Conference on the topic of Harmful Algal Blooms, Raleigh, NC
2018	Participation in Arctic Integrated Ecosystem Research Program Principal Investigator Meeting, Anchorage, AK
2017	Invited speaker for 2017 Confluence Conference on"Toxic Algae: The Not-so-Simple State of the Science and Considerations for Water Management and Utilities", Charleston, SC
2017	Algal Forum Outreach Event organized through NC Sea Grant and the NC Division of Water Research, Edenton, NC
2017	Invited speaker for SE Climate Science Center Seminar Series on "Harmful Algae and Global Change", Raleigh, NC
2016	Invited speaker at American Meterological Society (AMS) on "Harmful Algal Blooms: Problems and Trends", Raleigh, NC
2016	Invited presentation, Department of Environmental Quality (NC DEQ) on "Detection and Screening Methods for Cyanobacerial Toxins", Raleigh NC
2016	Invited Seminar, Dept. of Civil Construction & Environmental Engineering, 'Production and Fate of Marine Algal Toxins', NCSU
2016	Invited speaker for annual NC Lake Management Society Conference, HighPoint, NC
2016	Participation and Session Presenter at the NOAA SOCAN (Southeast Ocean and Coastal Acidification Network) workshop, Charleston, SC
2016	Invited participation to Planning Workshop on"The Biology of the Biological Pump – a Conceptual Framework", organized by the Ocean Carbon and Biogeochemistry (OCB) Office & NSF, New Orleans, LA

- 2015 Invited Seminar, Southeast Ocean and Coastal Acidification Network (SOCAN) webinar series on the status of Science "Deciphering the effects of OA on microbial assemblage structure and community function
- 2015 Invited Seminar' Understanding protistan species diversity: who counts when, where, why....?' Dept. of Marine Science, UNC Chapel Hill
- 2015 Invited Seminar 'Protist diversity and plankton trophic dynamics: new insights using molecular approaches', Institute for Coastal Science and Policy, ECU
- 2014 Invited contribution to "Women in Oceanography A Decade Later" Special Issue by 'Oceanography' Magazine
- 2014 NCSU Blue Heron Bowl, Ocean-focused competition for high school students.
- 2013 Invited Scope Academy Talk 'Coastal waters in trouble', PAMS/ NCSU
- 2013 Invited Seminar "Microeukaryote community shifts and their implications on coastal food webs', Dept. of Microbiology, NCSU
- 2013 Invited participant, Ocean Acidification PI Workshop (OCB)
- 2012 Invited Seminar: 'Protists: who is there and why we ought to know', Duke University Marine Laboratory (DUML), Beaufort, NC
- 2012 Invited Seminar 'Urban ocean in distress: a tale of algal blooms and fish kills', Center of Marine Sciences and Technology (CMAST), Morehead City, NC
- 2012 'Invited Seminar 'Plankton assemblages: from community structure to ecosystem function', North Carolina State University (NCSU), Raleigh, NC
- 2011 Invited participant, Ocean Acidification PI Workshop (OCB)
- 2011 Multiple interviews and outreach on Redondo Beach fish kill: USC Sea Grant's Urban Ocean Report, Sept 2011: http://urbanmariner.urbanocean.org/
- 2010 Outreach on Ocean Acidification and plankton diversity: USC News Science:
- 2009 Dec Invited USC Women In Science and Engineering (WISE) Grad. Student Luncheon
- 2009, 2008 Bight Water Quality Project: 1-day workshops to train coastal monitoring agencies in sample collection methods to determine water quality parameters, identify algae and measure their toxins; held at Southern California Coastal Research Water Project (SCCWRP), CA
- 2008 Invited participant, Women Evolving Biological Sciences (WEBS)
- 2007, 2006 Documentaries 'Men and the Sea' and 'In Harm's Way' on toxic algal blooms and their impact on sea lions produced by Amy Tenowich and Lauren Farrar, respectively; (USC Annenberg School of Communication, Wrigley Institute of Environmental Studies;
- 2007 Interview in CBS Evening News: http://www.cbsnews.com/stories/2007/01/30/eveningnews/main2415306.shtml?CMP =ILC-SearchStories; multiple newspaper and online articles
- 2005 Invited Ocean Literacy Workshop, Consortium for Oceanographic Research and Education (CORE); Aquarium of the Pacific, Long Beach, CA

- 2004-2011 Participation in Center for Ocean Sciences Education Excellence (COSEE), Lectures and workshops to increase the awareness of Ocean Sciences. Vistis to various highschools and elementary schools;
- 2003 Invited participant, Advancement of Climate Change Research (DISCCRS)
- 2002-2008 Participation in yearly Ocean Science Bowl at USC; Ocean-focused academic competition for high school students.
- 1998 Invited participant NSF Symposium: '50 Years NSF' (Washington DC)

#### **Conferences and Published Abstracts**

#### 2019

- Alves-de-Souza C., Wingert C., Schmitt M., Recchia M., Williamson TR., Schnetzer A. and Strangman W. (2019) A cyanobacteria collection from NC freshwater and estuarine systems: an asset for CyanoHAB research and discovering of natural products. Oral presentation at the NC Lake Management Society Workshop. Wilmington, NC
- Irby M., M., Valera M. and **Schnetzer A.** (2019). Algal toxin dynamics around St. Paul Island in the Bering Sea. 2019 NC Undergraduate Research and Creativity Symposium (SNCURCS), Raleigh, NC
- Zoldi R., M., Valera M. and Schnetzer A. (2019) Microplankton Dynamics in Bogue Sound, NC. 2019 NC Undergraduate Research and Creativity Symposium (SNCURCS), Raleigh, NC
- Schnetzer A., Wiltsie D., Valera M., Green J., Vander Borgh M., Fensin E., Obenour D. and Aziz T. (2019) Cyanotoxin Dynamics in B. Everett Jordan Reservoir, 2014-2016. Invited talk at the Jordan Lake Nutrient Management Study Research Symposium, NC Policy Collaboratory, Raleigh, NC
- Stauffer B., Pathare M., Kurtay G., **Schnetzer A.** and Szczepanski A. (2019) Enhanced microzooplankton grazing in surface waters of the norther Gulf of Mexico following Hurricane Harvey, 2019 ASLO/AGU/TOS Science Meeting in San Juan, Puerto Rico.
- Schnetzer A., Valera M., Wiltsie D., Vander Borgh M., Fensin E., Wrenn B., Aziz T. And Obenour D. (2019) Cyanotoxins in North Carolina Lakes and Reservoirs: Year-round Occurrences of Multiple Toxins, 2016-2017. Oral presentation at 2019 WRRI Annual Conference, Raleigh, NC
- Moore A, Valera M., English F., Fannon B. and **Schnetzer A**. (2019) Assessing Temporal Cyanotoxin Patterns in North Carolina Waters. Center for Human Health and Environment (CHHE) Third Annual Symposium, Raleigh, NC;
- Szczepanski A. and **Schnetzer A.** (2019) Impact of Copepod Grazing on Microplankton Assemblages in the Northwestern Gulf of Mexico. Oral Presentation at the 14th Annual NC State University Graduate Student Research Symposium, Raleigh, NC

#### 2018

Irby M., Corradino G., Szczepanski A. and Schnetzer A. (2018) Automated Image Analysis of Microplankton from the Gulf of Mexico. 2018 NC Undergraduate Research and Creativity Symposium (SNCURCS), Raleigh, NC

- Powell P., Valera M. and Schnetzer A. (2018) On the Hunt for Cyanotoxins in Two North Carolina Lakes. Center for Human Health and Environment (CHHE) Third Annual Symposium, Raleigh, NC;
- Thompson, C.K., **Schnetzer A**. And Kinzel M. (2018) Student-centered teaching demonstration for ocean acidification. 2018 Geological Society of America Meeting, Indianapolis, IN
- Wiltsie D., Green J., Vander Borgh M., Fensin E. and **Schnetzer A**. (2018) Bloom Dynamics and Cyanotoxins in Jordan Lake. Souteastern Lake Management Conference, North American Lake Management Society, Asheville, NC
- Beri J., Kirkwood K.I., Valera M, Schnetzer A., Muddiman D.C. and Bereman M.S. (2018) Analysis of β-N-Methylamino- L-Alanine in Environmental Samples Using a Novel Integrated Strategy. American Society for Mass Spectrometry (ASMS) 66th Conference, San Diego, CA
- Osburn C.L., Kisey J.D., Shields M.R., Bianchi T.S., **Schnetzer A.**, Ziervogel K. and Corradino G. Formation of Chromophoric Dissolved Organic Matter by Bacterial Degradation of Phytoplankton-derived Aggregates: A Case for the Charge Transfer Model; Poster presentation at the 2018 Ocean Science Meeting, Portland, OR.
- Schnetzer A., Valera M., Wiltsie D., Green J., Vander Borgh M., Fensin E., Aziz T., Obenour D., and Smithheart J. (2018) On the Hunt for Cyanotoxins in North Carolina.Oral presentation at 2018 WRRI Annual Conference, Raleigh, NC

- Corradino G. and **Schnetzer A.** (2017) Tiny but mighty: Characterizing Nanoflagellates in Planktonic Ecosystems. Graduate Climate Conference at WHOI/MIT, Woods Hole, MA
- Thompson, C.K., Kinzel, M. and **Schnetzer A**. (2017) Teaching the importance of ocean sustainability using active learning techniques. Geological Society of America (GSA) Annual Meeting, Washington DC
- Shields, M.R., Bianchi, T.S., Osburn, C.L., Kinsey, J.D., Ziervogel, K. and Schnetzer A. (2017) Investigating marine dissolved organic matter fluorescence transformations with organic geochemical proxies in a growth and degradation experiment using amino acids, amino sugars, and phenols. AGU Fall Meeting, New Orleans, LA
- Smith J., Connell P., Evans RH., Gellene AG., Howard MDA., Jones BH., Kaveggia S., Palmer L., Schnetzer A., Seegers BN., Seubert EL., Tatters AO. and Caron DA. (2017) A decade and a half of Pseudo-nitzschia spp. and domoic acid along the coast of Southern California, 9<sup>th</sup> US Harmful Algal Bloom Symposium, Baltimore, MD
- Wiltsie D., Green J., Vander Borgh M., Fensin. E., and **Schnetzer A**. (2017) Cyanobacterial Dynamics and Toxins in Jordan Lake, North Carolina. Poster presentation at the North Carolina Lake Management Society 2017 Spring Workshop, Graham, NC.
- Hall N., Paerl H., Ensign S., Wiltsie D. and Schnetzer A. (2017) Unraveling the multifaceted effects of changing flow regimes on cyanobacterial bloom potentials on the Cape Fear River, NC. Oral presentation to Society for Freshwater Science (SFS) Annual Meeting, Raleigh, NC and at the 9<sup>th</sup> US Harmful Algal Bloom Symposium, Baltimore, MD

- Smithheart J., Obenour D., **Schnetzer A.** and Aziz T., (2017) Exploring Harmful Algal Bloom formation in the lab – using a novel reactor and computational fluid dynamics to Explore phytoplankton community shifts. Poster presentation at 2017 EWRI World Environmental and Water Resources Congress, New Orleans, LA
- Mangot A., Obenour, D., **Schnetzer A.** and Aziz T. (2017) Testing of a Novel Laboratory-based Reactor to Explore the Effects of Mixing on Cyanobacteria Suppression. Poster presentation at 2017 WRRI Annual Conference, Raleigh, NC
- Hall N., **Schnetzer A.**, Ensign S., Wiltsie D. and Paerl H. (2017) Unraveling dual influences of increasing nutrients and changing flow regimes on bloom potentials along the middle Cape Fear River. Poster presentation at 2017 WRRI Annual Conference, Raleigh, NC
- Kinsey J. D., Corradino G., Ziervogel K., **Schnetzer A**., Bianchi T. S. and Osburn C. L. (2017) Contribution of plankton-derived aggregates to open-ocean CDOM. Poster presentation at 2017 ASLO/AGU/TOS Science Meeting in Honolulu, HI.
- Corradino G., Kinsey J. D., Osburn C. L. and **Schnetzer A.** (2017) Predatory flagellates: trophic interactions in the microbial loop. Poster presentation at 2017 ASLO/AGU/TOS Science Meeting in Honolulu, HI.
- Wiltsie D., Green J., Vander Borgh M., Fensin E., Aziz, T., Obenour D., Smithheart J., and Schnetzer A. (2017) Cyanobacterial dynamics in Jordan Lake, North Carolina. Poster presentation at 2017 ASLO/AGU/TOS Science Meeting in Honolulu, HI.
  2016
- Lichti D.A., Miller R., Rinchard J., **Schnetzer A.**, Fowler A. and Kimmel D.G. (2016) The dynamics of community composition and fatty acid profiles of seston and zooplankton in contrasting estuarine systems. Poster presentation at ICES/PICES 6th Zooplankton Production Symposium, Bergen, Norway.
- Fowler, A., Lichti D.A., Kimmel D.G. and **Schnetzer A** (2016) Shifts in protistan community structure along the freshwater salinity interface. Poster presentation at NCSU Undergraduate and Creativity Symposium. Raleigh, NC.
- Hall, N., Paerl, H., Ensign S. and **Schnetzer A**. (2016) Leveraging cutting-edge techniques to determine drivers of water quality in the Cape Fear River. Poster presentation at the WRRI 2016 Annual Conference, Raleigh, NC.
- Kinsey, J.D., Schnetzer A., Ziervogel K., Bianchi, T. S., Lampe R. and Osburn C. L. (2016) Autochtonous optical signals in CDOM from phytoplankton culutre and open ocean observations. Presentation at 2016 ASLO/AGU/TOS Science Meeting in New Orleans, LA.
  2015
- Mangot A., Tarek A., Obenour D. and **Schnetzer A.** (2016) The Reservoir Column Reactor An Innovative Experimental System to Explore the Mitigation of Harmful Algal Blooms. Poster at Research Symposium in Water Resources, Coastal, and Environmental Engineering from NCSU

Fowler A., Jefferson T., Gilmartin J. and **Schnetzer A**. (2014) Seasonal Plankton Abundance and Community Composition in Bouge Sound NC. Poster presentation at NCSU Undergraduate and Creativity Symposium. Raleigh, NC.

- Lampe R. and **Schnetzer A**. (2014) The production and fate of a marine algal toxin. Poster presentation at NCSU Undergraduate and Creativity Symposium. Raleigh, NC.
- Jefferson T., Bursey J., Duke R., Gilmartin J., Boddiford L., Byrum J., Peters J., Eggleston D. and **Schnetzer A.** (2014) Plankton assemblages as sentinels for ecosystem change within estuarine food webs. Poster presentation at NC Sea Grant Research Symposium, Raleigh, NC
- Tatters A.O., Xu K., Fu F., Spackeen J., Walworth N., Sipler R., Bertrand E., McQuaid J., Schnetzer A., Allen A.E., Bronk D., Caron D.A., Sun J., Gao K., Hutchins D.A. (2014) Interactive Effects of Environmental Change Variables on a Southern California Marine Diatom Community. Presentation at 2014 ASLO/AGU/TOS Science Meeting in Honolulu, HI.

- Schnetzer A., Jones A.C., Tatters A.O., Fu F., Lie A.Y.A., Hutchins D.A. and Caron D.A. (2013) Short-term changes in overall community structure and diversity within a marine natural protistan assemblage in response to changed pCO<sub>2</sub> concentration assessed by high-throughput sequencing. Ocean Acidification PI Workshop, Washington D.C.
- Seubert E., Gellene A.G, Connell P., Smith J., Robertson G., Schnetzer A., Caron D.A. (2013) Implementation of solid phase adsorption toxin tracking (SPATT) for the monitoring of Harmful Algal Blooms in Southern California. Presentation at 7th Harmful Algal Bloom Conference in Sarasota, Florida.
- Stauffer B.A., **Schnetzer A.**, Gellene A., Seubert E.L, Caron D.A. (2013) Coastal sensor networks allow elucidation of causative mechanisms underlying algal bloom and fish kill events. Presentation at 2013 ASLO/AGU/TOS Science Meeting in New Orleans, LA.
- Lie A.A.Y., Kim D.Y., **Schnetzer A.**, Caron D.A. (2013) Small-scale temporal and spatial variations in protistan community composition at the USC Microbial Observatory off the coast of Southern California. Presentation at 2013 ASLO/AGU/TOS Science Meeting in New Orleans, LA.

# 2012

Tatters A., Fu F., **Schnetzer A.**, Lie A., Caron D.A., Hutchins D.A. (2012) Comparing shortterm and long-term adapted responses to changing pCO<sub>2</sub> in a coastal dinoflagellate bloom. Poster at 2012 ASLO/AGU/TOS Science Meeting in Salt Lake City, UT

# 2011

- Caron D.A., Schnetzer A., Seubert E., Gellene A., Jones B., Ragan M., Seegers B., Sukhatme G., Weisberg S., Howard M., Schaffner R., Palmer L., Evans R., Kaveggia S. A nearly-decadal perspective on *Pseudo-nitzschia* blooms and domoic acid events in Southern California waters. (2011) 6<sup>th</sup> Symposium of Harmful Algae Research in the US, Austin, TX
- Howard M.D.A., Caron D.A., Chao Y., Jones B.H., Nezlin N., Robertson G., Schnetzer A., Seegers B., Senqupta A., Seubert E., Sutula M. (2011) The Southern California Bight (SCB) regional monitoring program: a *Pseudo-ntizschia* spp. bust in a bloom-ready SCB. 6<sup>th</sup> Symposium of Harmful Algae Research in the US, Austin, TX

Schnetzer A. Ocean Acidification PI Workshop (2011) Woods Hole, MA

Schnetzer, A., Lonsdale D. and Caron D.A. (2011) A gene sequencing approach to study protistan-copepod feeding relations. Oral Presentation at 2011 ASLO/AGU Science Meeting in San Juan, Puerto Rico; Chair and Organizer for special session on 'Molecular Approaches to Study Microbe-Metazoan Trophic Dynamics'

# 2010

- Tatters A.O., **Schnetzer A.**, Caron D.A., Fu F. and Hutchins D.A. (2010) An assessment of acclimation and adaptation of a harmful dinoflagellate community to environmentally relevant future pCO2 concentrations. ISSHA (International Society for the Study of Harmful Algae) Symposium 2010, Greece
- Schnetzer A., Lonsdale D., Kim D., Jones A.C., Cerrato R., Countway P.D., Mcnamara M.E. and Caron D.A. (2010) Protistan community structure as a function of top-down processes in the Southern Ocean: environmental gene libraries to study trophic dynamics, Poster at 2010 ASLO/AGU Science Meeting in Portland, OR
- Seubert E.L., Garneau M.E., Howard M.D.A., Darjany L., Schnetzer A., Cetinić I., Eagleton J., Filteau G., Lauri P., Jones B.H, Trussell S., Caron D.A. (2010) Implications of phycotoxins on Seawater Desalination in Southern California. GRC Ocean and Human Health Conference, Biddeford, ME

### 2009

- Caron D.A., Cetinic I., Darjany L., Das J., Garneau M., Heidarsson H., Howard M.D., Jones B.H., Oberg C., Pereira A.M., Ragan M., Schnetzer A., Seubert E., Smith E.C., Smith R.N., Stauffer B.A., Sukhatme G.S. (2009) Characterizing Subsurface Blooms of *Pseudo-nitzschia* and Outbreaks of Domoic Acid in Coastal Waters off Southern California. 5<sup>th</sup> Symposium of Harmful Algae Research in the US, Woods Hole Oceanographic Institute, WA
- Sekula-Wood E., Benitez-Nelson C., Anderson C., Schnetzer A., Guillocheau N., Morton S., Siegel D., Thunell R. (2009) A historical record of vertical Domoic Acid fluxes from Santa Barbara Basin (CA). 5<sup>th</sup> Symposium of Harmful Algae Research in the US, WHOI, WA
- Garneau M., **Schnetzer A**., Fitzpatrick E., Seubert E., Jones A.C., Countway P.D., Caron D.A. (2009) Abundance and dynamics of Alexandrium catenella offshore Redondo Beach (CA) as detected by quantitative PCR. 5<sup>th</sup> Symposium of Harmful Algae Research in the US, WHOI, WA
- Howard M.D., Jones A.C., Schnetzer A., Tomas C., Kudela R.M., Smith G.S., Chia P., Caron D.A. Quantitative Real-Time PCR for *Cochlodinium sp.*, a Potentially Harmful Dinoflagellate from California Coastal Waters. (2009) 5<sup>th</sup> Symposium of Harmful Algae Research in the US, Woods Hole Oceanographic Institute, WA
- Aswin B., Butler C., Caron D.A., Harmon T., Ho C-M., Judy J., Kim D., Liu M., Ratâko A., Sabet L., Schnetzer A., Stauffer BA., Tai Y-C. (2009) New Wireless Miniature Sensor Technologies for CENS. 2009 Center for Embedded Network Sensing, Site visit; UCLA
- Liu M., Leyla Sabet L., Stauffer B.A., Caron D.A., Ho C.-M., **Schnetzer A**., Tai Y.-C. (2009) Field Operational Sensor and Lab-on-a-Chip System for Marine Environmental Monitoring and Analysis. 2009 Center for Embedded Network Sensing, Site visit; UCLA

- Schnetzer A., Moorthi S., Gast R.J., Countway P.D., Gilg IC. and Caron D.A. (2009) Depth matters: Microbial eukaryote diversity and community structure in the western North Pacific as indicated by environmental gene libraries. Talk at 2009 ASLO/AGU Science Meeting in Nice, France
- Moorthi S., **Schnetzer A**., Countway P.D., Savai P. and Caron D.A. (2009) Interannual seasonal variability of protistan diversity and community structure in the San Pedro Channel, Western North Pacific; Poster at 2009 ASLO/AGU Science Meeting in Nice, France
- Schnetzer A. (2008) Protistan diversity: from biogeography to food web dynamics, Women Evolving Biological Science (WEBS) conference, Seattle, WA

- Schaffner R., **Schnetzer A**., Weisberg S., Caron D.A. and Jones B.H. (2008) GIS analysis of Harmful Algal Blooms in Southern California, 2008 ESRI International User Conference, San Diego, CA
- Caron D.A., Kaveggia S., Palmer L., Evans R.H., Hunter M., Fitzpatrick E. and **Schnetzer A**. (2008) Annual Meeting of the National Military Fish and Wildlife Association (NMFWA), Phoenix, AZ
- Benitez-Nelson C. R., Sekula E., Schnetzer A., Caron D.A., Anderson C., Thunell R., Morton S., Burns J., and Ferry J. (2008) Persistence of the Marine Biotoxin Domoic Acid at Depth in the Santa Barbara Basin, California, Regional workshop for Harmful Algal Blooms (HABs) in California coastal waters, Southern California Coastal Water Research Project (SCCWRP), Costa Mesa, CA
- Palmer L., Schnetzer A., Caron D.A. and St. Leger, J. (2008) Domoic acid concentration in stranded pinnipeds in Los Angeles County 2006-2007. Southwest Annual Regional Stranding Conference, Santa Cruz, CA

# 2007 and prior

- Schnetzer A, Caron DA., Palmer L, Hunter M., Evans R. (2007) *Pseudo-nitzschia* bloom dynamics and domoic acid-related strandings for Californian sea lions in the Los Angeles area during a significant toxic event in 2006. Oral presentation at the 2007 California Marine Mammal Stranding Network Conference, San Diego, CA
- Caron DA., **Schnetzer A.**, Miller, PE., Schaffner, RA,. Jones, A., Jones B, Cetinic I., Kim, D., Pan, B., Weisberg, SB., Kaveggia, S., Palmer L. (2006) *Pseudo-nitzschia* and Domoic Acid in the San Pedro Bay: Anatomy of a Recent Harmful Algal Bloom. Oral presentation at the California and the World Ocean Conference, Long Beach, CA
- Schnetzer A., Caron DA. (2006) Molecular Approaches to study the impact of copepod grazing on protistan community structure in Southern California coastal waters. Poster presentation at the Gordon Research Conference on Marine Microbes, Biddeford, MN
- Caron DA., **Schnetzer A**. (2006) Harmful Algae Blooms. Oral presentation at the 2006 California Marine Mammal Stranding Network Conference, San Pedro, CA
- Schnetzer A., Schaffner RA, Stauffer BA, Miller PE, Jones AC, Cetinic I, Jones B, Weisberg SB, Caron, DA. (2006) *Pseudo-nitzschia* Blooms in the Los Angeles Harbor and Adjacent

Coastal Waters. Poster Presentation at the SCCOOS Ocean Observing Conference, Long Beach, CA

- Schnetzer A, Caron DA, Miller PE, Schaffner RA, Jones AC, Jones B, Cetinic I, Kim D, Pan B (2006) *Pseudonitzschia* and Domoic Acid in the Los Angeles Harbor and Adjacent Coastal Waters. Oral presentation at Red Tide Symposium organized by the Southern California Academy of Sciences, Malibu, CA
- Cetinic I., **Schnetzer A**., Caron DA, and Jones B. (2006) Red tide blooms (*Lingulodinium polyedra*) in San Pedro Bay. Oral presentation at Red Tide Symposium organized by the Southern California Academy of Sciences, Malibu, CA
- Schnetzer A, Caron DA. (2006) Exploring Protistan diversity in Antarctic coastal waters. Oral presentation at the Census of Marine Antarctic Microbes Workshop, Innsbruck, Austria
- Schnetzer, A., Schaffner, R. A., Stauffer, B. A., Miller, P. E., Jones, AC, Cetinic, I., Jones, B., Weisberg, S. B., Caron, D. A. (2006) Toxic Blooms of the Diatom *Pseudo-nitzschia* spp. and Urban River Discharge Into Southern California Coastal Waters. Poster presentation at the 2006 ASLO/AGU Science Meeting in Honolulu, HI
- Cetinic, I., **Schnetzer, A**., Caron, D. A. and Jones, B. (2006) Seasonal evolution of the phytoplankton community in San Pedro Bay Poster presentation at the 2006 ASLO/AGU Science Meeting in Honolulu, HI
- Schnetzer, A., Miller, P. E., Schaffner, R. A., Stauffer, B., Jones, B., Weisberg, S. B, DiGiacomo, P. M., Berelson, W., and Caron, D. A. (2005) *Pseudo-nitzschia* spp. and domoic acid in the San Pedro Channel and Los Angeles harbor areas of the Southern California Bight, 2003-2004. Poster presentation at the 3<sup>rd</sup> Symposium for Harmful Algae in the US, Monterey, CA
- Caron, D.A., Gast, R.J., Countway, P.D., Savai, P., **Schnetzer**, A., Moorthi, S. (2005) Protistan DNA sequence information and the species concept: defining taxa for ecological studies. Oral presentation at the 2005 ASLO/AGU Science Meeting in Salt Lake City, UT
- Moorthi, S.D., Countway, P.D., **Schnetzer**, A., Caron, D.A. (2005) Use of molecular approaches to investigate the dynamics of the red tide dinoflagellate *Lingulodinium polyhedrum*. Poster presentation at the 2005 ASLO/AGU Science Meeting in Salt Lake City, UT
- Fuhrman, J.A., Caron, D.A., Brown, M.V., Countway, P.D., Hernandez, X.A., Hewson, I., Moorthi, M., Savai, P., Schaffner, R., Schnetzer, A., Schwalbach, M.S., Steele, Thakkar, S., Vigil, P. (2004) The USC Microbial Observatory, 3rd Annual NSF Microbial Observatory Principal Investigators' Workshop 2004, in Big Sky, MT
- Schnetzer, A., Caron, D. A., Countway, P. D. (2003) A Molecular Approach to Assess the Impact of Zooplankton Grazing, Poster presentation at the 2003 ASLO Meeting, Salt Lake City, UT
- Caron, D.A., Gast, R.J., Countway, P.D., Schnetzer, A., Moran, D.M., Dennett, M.R., Travao, M. (2003) Unicellular Eukaryotic Biodiversity in Environmental Samples from the Western North Atlantic and Eastern North Pacific, Poster presentation at the 2003 ASLO Meeting, Salt Lake City, UT

- Countway, P.D., Caron, D.A., **Schnetzer**, **A**., Travao, M., Gast R.J., Dennett, M.R. (2003) Community Fingerprints of Eukaryotic Marine Microbes at a Coastal Time-Series Station, Poster presentation at the 2003 ASLO/AGU Science Meeting, Salt Lake City, UT
- Fuhrman, J.A., Caron, D.A., Brown, M.V., Countway, P.D., Hernandez, X.A., Hewson, I., Liang, X., Patel, A., Savai, P., Schaffner, R., Schnetzer, A., Schwalbach, M.S., Steele, J.A., Travao, M. (2003) The USC Microbial Observatory, Poster presentation at the 2nd Annual NSF Microbial Observatory Principal Investigators' Workshop 2003 in Arlington, VA
- Schnetzer, A., Steinberg, D. K. (2003) The Impact of Diel Vertical Migration on Surface Export of Particulate Organic Matter and Cycling of Energy in the Mesopelagic Zone, Poster presentation at Final Open JGOFS Conference, 2003 in Washington DC, MD
- Steinberg, D. K., Madin, L. P., Landry, M. R., Schnetzer, A., Sheridan, C. C. (2003) Zooplankton and Biogeochemical Cycling in the Subtropical Atlantic and Pacific Oceans, Poster presentation at 3<sup>rd</sup> International Zooplankton Symposium, 2003 in Gijón, Spain
- Fuhrman, J., Caron, D., Brown, M., Countway, P., Hewson, I., Hernandez, X., Liang, X., Patterson, D. J., Schwalbach, M., Schnetzer, A., Schaffner, R., Travao, M. (2002) The USC Microbial Observatory, Poster at the 1st Annual NSF Microbial Observatory Principal Investigators' Workshop, 2002 in Arlington, VA
- Schnetzer, A., Steinberg, D. K. (2002) Natural Diets of Vertically Migrating Zooplankton in the Sargasso Sea, Poster presentation at the 2002 ASLO/AGU Science Meeting in Honolulu, HI
- Schnetzer, A., (2001) Vertical Migration in the Sargasso Sea: Implications on Export Flux and Resource Partitioning, Oral presentation at the University of California at Davis, 2001 in Davis, CA
- Schnetzer, A., Steinberg, D. K. (2000) Active Transport of Particulate Organic Carbon (POC) by Vertically Migrating Zooplankton in the Sargasso Sea, Oral Presentation at the 2000 ASLO/AGU Sciences Meeting in San Antonio, TX
- Schnetzer, A., Ott, J. A. (1996) Adaptative Strategies to Extreme Environmental Conditions, Oral Presentation at the 31st European Marine Biology Symposium, 1996 in St. Petersburg, Russia
- Schnetzer, A., Ott, J. A. (1994) Changes in Nutrient Dynamics Between Marine Sediment and Overlying Water Caused by Sedimentation of Marine Snow, Poster presentation at the 1994 ASLO/AGU Sciences Meeting in San Diego, CA