

Richard A. Snyder, Ph.D.

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Education

M.S., Ph.D. in Zoology, 1989

University of Maryland, College Park. Dissertation Title: *Chemosensory Mediated Reactions of a Suspension Feeding Ciliate Protist to Surface Compounds of its Bacterial Prey.*

Graduate Study in Oceanography & Salt Marsh Ecology, 1982-83

Virginia Institute of Marine Science, College of William & Mary, Gloucester Point, Virginia

B.S. Biology, 1980

College of Charleston, Charleston, South Carolina.

Professional Affiliations

American Society for the Advancement of Science
Society of Protozoologists (Editorial Board Member)
Estuarine Research Federation

Academic and Research Experience

Director, January 2008-

Center for Environmental Diagnostics and Bioremediation (CEDB)

Professor of Biology, August 2008-

Biology Department, University of West Florida

Interim Director CEDB, 2007-2008

University of West Florida.

Associate Director, 2007-

Center for Environmental Diagnostics and Bioremediation (CEDB)
University of West Florida.

Associate Professor, 2002-

Center for Environmental Diagnostics and Bioremediation (CEDB) and Biology Department,
University of West Florida.

Assistant Professor, 1997-2002

CEDB, University of West Florida.

Research Assistant Professor 1991-1997.

CEDB, University of West Florida.

Academic and Research Experience (continued)

Research Associate 1991.

CEDB, University of West Florida.

Post-Doctoral Fellow 1989-1991.

Joint project with the Department of Applied Microbiology, University of Saskatchewan (Dr. D.E. Caldwell) and the Environment Canada National Hydrology Research Institute (Dr. R.D. Robarts)

Research Associate 1989.

Scripps Institution of Oceanography (Dr. M.D. Ohman)

Instructor, University of Maryland (Fall 1986 & Spring 1987)

Course Taught: *Life in the Oceans* (Introductory course in oceanography and marine biology) sabbatical replacement for Dr. Eugenie Clark.

Instructor & Project Co-Leader, School For Field Studies, Boston, MA. (1985)

Field Course Taught: *Hazardous Wastes in Chesapeake Bay*, salt marsh and estuarine ecology, *Littorina irrorata* demographics and tissue hydrocarbon loads; Survey of fish diversity in Baltimore Harbor.

Research Assistant 1985.

Zoology Department, Univ. MD (Dr. J.O. Corliss): Smithsonian Sorting Center Contract Identification and description of new species of ciliate protists from Antarctic Sea Ice.

Field Station Manager & Ciliate Protist Faunal Survey 1984.

Smithsonian Mangrove and Coral Reef Study, Carrie Bow Cay, Belize.

Teaching Assistant, University of Maryland (1982-1988):

Courses Taught:

Vertebrate Physiology (lab instructor)

Protozoology (lab instructor)

Natural history of the Chesapeake Bay (lecturer & shipboard lab instructor)

Life in the Oceans

Courses taught (UWF)

Biology of the Protists (Undergrad/Graduate): Evolution, diversity, and physiology of unicellular eukaryotes. <http://www.uwf.edu/rsnyder/courses/protist/bop.html>

Microbial Food Webs (Undergrad/Graduate): Population and ecosystem dynamics of bacteria and protists. <http://www.uwf.edu/rsnyder/courses/mfws/mfw.html>

Ecology (Undergraduate): Principles of ecological science
<http://www.uwf.edu/rsnyder/courses/ecology/ecol.html>

Estuarine Ecology (Undergrad/ Graduate): Hydrological, geological, chemical, and biological aspects of estuaries. <http://www.uwf.edu/rsnyder/courses/estecol/eesyl.html>

Tropical Marine Ecology (Undergrad/Grad): <http://www.uwf.edu/rsnyder/courses/tme.html>

Marine Operations

SHIPTIME EXPERIENCE

Large Sailing Vessels

Schooner ARIADNE (123 ft)

Atlantic Crossing (21 days; 1979)

Brigantine PHOENIX (112 ft)

Baltic Sea, Scandinavia & Russia (4 months; 1979)

Topsail Schooner PRIDE OF BALTIMORE (120 ft)

East Coast US, Bermuda, Caribbean, Venezuela, Gulf of Mexico (7 months; 1980)

Chesapeake Bay Log Canoe MYSTERY (30 ft), Chesapeake Bay (day trips; 1980-1989)

Research Vessels/Cruises

R/V RIDGLEY WARFIELD, John Hopkins University

Southern Chesapeake Bay 1981

Offshore Cape Charles 1981

Northern Chesapeake Bay Day Trips 1982-1989

R/V AQUARIUS, University of Maryland

Chesapeake Bay Day trips 1982-1989

R/V ORION, University of Maryland

Chesapeake Bay Day trips 1982-1989

R/V CAPE HATTERAS, University of North Carolina

Offshore Cape Hatteras 1984

R/V CAPE FLORIDA, RSMAS, University of Miami

Outer Bahamas Islands 1986

R/V COLUMBUS ISLEN, RSMAS, University of Miami

Outer Bahamas Islands 1987

R/V ANDERSON, U.S. Environmental Protection Agency

Gulf of Mexico Mississippi River Delta 1993, 1994

R/V GYRE, Texas A & M University

Western Gulf of Mexico and Mississippi River Delta 1995

R/V BELLOWS, Florida Institute of Oceanography (FIO)

Northern Gulf of Mexico Estuaries 1994, 1995,

Dry Tortugas 2000,

Pensacola Bay, 2000, 2003, 2004, 2005, 2006.

R/V SUNCOASTER, Florida Institute of Oceanography (FIO)

Gulf of Mexico, 2001, 2002

R/V NAUTILUS, University of West Florida

Pensacola Bay System, 2003

Owner/Operator 20ft Mako center console outboard

Small craft handling, sail and power.

Coastal and Celestial Navigation

Marine electronics operator (Radio, Loran, GPS, Depth Sounder, CTD)

CERTIFICATIONS

PADI # 80253085 OPEN WATER DIVER

8/10/80

Instructor: Donna R. Askew, #009608

US EPA WORKING DIVER

5/8/92

Instructor: James Patrick

NITROX (#2105)

5/8/92

Instructor: Dick Rutkowski

UWF Scientific Diver

5/8/01

Instructor: Capt. Keith Plaskett

Red Cross CPR & Basic First Aid

2004

DAN O₂ First Aid

8 May 2001

Instructor: Capt. Keith Plaskett

RESEARCH DIVING AFFILIATIONS

University of West Florida Scientific Diving Program PENSACOLA, FL 2001-

NOAA Caribbean Marine Research Center (CMRC) Lee Stocking Island, Bahamas 1995

NOAA National Undersea Research Center (NURC) Laboratory Key Largo, FL 1993;
Florida Keys Reef Tract

The Johns Hopkins University R/V RIDGELY WARFIELD 1988; Chesapeake Bay

The University of Miami, Rosentiel School of Marine and Atmospheric Science (RSMAS) R/V'S
CAPE FLORIDA; COLUMBUS ISLEN 1985, 1986; Outer Bahamas Islands

Smithsonian Institution Carrie Bow Cay Field Station, Belize Station Manager
(coordinate diving ops, fill tanks, boat maintenance) 1984

Graduate Student Supervision as Advisor

Paula Nicola, MS student, Affect on JP8 on Membrane Phospholipids of *Tetrahymena*.
Graduated 1998

Catie Breithoff, MS student, Metal Uptake by Freshwater Wetland Macrophytes.
Graduated 1999

Theresa Tomas, MS student, LPS-Protist Interactions. Graduated 2001

Kerry Flaherty, MS student, Metals partitioning in salt marsh invertebrates. Graduated 2001

Carrie Stevenson, MS student, Fish assemblages associated with Estuarine habitat restoration

Eva Pasko, MS student, Stormwater impacts to Bayou Texar; Graduated 2001

Joshua O'Leary, MS student, Effects of electrofishing on Sturgeon egg development.

Laura Pennington, MS student, Habitat fidelity of estuarine microbial biofilm communities

Joseph Moss, MS student, Temporal variation in estuarine biofilm diversity and activity.

Graduated 2005

Jeffrey Alison, MS Student. Sand bottom respiration and production in estuaries. Graduated 2006

Rayne Maisel, M.S. Student. Barrier island plant community ecology.

Matthew Wagner, M.S. Student Periphyton assays as an indicator of benthic production.

Graduated 2006

Robert Turpin, M.S. Student. Population dynamics of *Donax variabilis* and beach renourishment.

Ph.D student training at UWF

Jorg Winkler, Ph.D. student, GBF Braunschweig, Germany, Tracking Genetically Engineered Bacteria. Graduated 1996

Jaana Sipura, PhD. student, University of Joensuu, Finland, Effects of Copepods on microbial plankton populations. Graduated 2002

Research and Training Grants Received

Molecular Microbial Ecology Research Program, (PI: *W. Jeffrey, R. Snyder*),
EPA, 10/91-9/94 \$626,158

Microbial Gene Expression, Trophic Interactions & Nutrient Dynamics,
(PI: *W. Jeffrey, R. Snyder*), **Florida Institute of Oceanography (FIO)**, 5/2/93 - 5/6/93 \$7,200

In Situ Bioremediation of Trichloroethylene Using Microbial Cassettes in
a Funnel-and-Gate System, and Risk Assessment Procedures for aquifers,
(PI: *R. Snyder/M. Shields*), **EPA**, 10/1/93 - 9/30/96 \$509,566

Effects of Microbial Trophic Interactions on the Fate and Mobility of Polychlorinated
Biphenyls, (PI: *R. Snyder, P. Morris*), **US Air Force**, 5/1/94 - 4/30/97 \$252,759

Effects of Microbial Population Interactions on the Mobilization and Mineralization
of Jet Fuel, (PI: *R. Snyder*), **AASERT/AFOSR**, 7/95 - 6/98 \$352,239

A limnological survey of enclosed water bodies located on the Fort Pickens area
of the Gulf Islands National Seashore, Santa Rosa Island, Florida,
(PI: *R. Snyder*), **US Dept. of the Interior**, 9/1/96 - 8/31/97 \$ 11,887

Research and Training Grants Received, continued

An analysis of plant succession in a post-storm surge barrier island environment. (H.G. Stopp & R.A. Snyder), US Dept. of the Interior (1996-1998)	\$15,830.
An Internet Database of The Flora and Fauna of Northwest Florida, (PI:R.A. Snyder), Solutia , Inc. 1998	\$2000
Bacterioplankton Analysis, (PI: R. Snyder), EPA , 7/98 - 11/98	\$ 1,443
Microzooplankton Population Analysis, (PI: R. Snyder), EPA , 7/98 - 11/98	\$ 2,486
Biological survey of FCT Project #96-035-P7A, (PI: R. Snyder), Holmes County , 10/1/99-10/29/99	\$ 1,804
Water Quality Monitoring in Bayou Texar and Bayou Grande, and Development of Enhanced Molecular Genetic Techniques for this Purpose, (PI: M. Shields and R. Snyder), Escambia County Health Department , 12/21/99-12/21/2000	\$127,604
Impact of Fluoridation of the Municipal Drinking Water, (PI: J. Lepo and R. Snyder), Escambia County Utilities Authority , 1/15/2000-9/30/00	\$ 29,876
The Evaluation of Wetland Restoration Management Strategies for a Wet Prairie on Garcon Point, (PI: R. Snyder), Northwest Florida Water Management District , 3/1/00-2/28/01	\$ 5,007
Estuarine Ecology Shipboard Laboratory, 2000 (Shiptime Request for RV Bellows), (PI: R. Snyder), Florida Institute of Oceanography	\$ 4,000
Tropical Marine Ecology Field Course, 2000 (Shiptime Request for RV Bellows), (PI: W. Bennett & R. Snyder), Florida Institute of Oceanography	\$ 8,000
Wet Prairie Habitat Restoration 2001. (PI: R. Snyder), Northwest Florida Water Management District , 4/1/01 - 3/31/02	\$ 7,081
Bayou Grande and Bayou Texar Water Quality Monitoring, (PI: M. Shields and J. Lepo), Escambia County Health Department 7/1/01 - 6/30/02	\$ 130,000
Biological Survey of FCT Project: Town of Century North Escambia River Mangement Plan. (PI: R. Snyder), West Florida Regional Planning Council , 7/23/01 - 6/30-02	\$ 1,800
Estuarine Ecology Shipboard Laboratory, 2001 (Shiptime Request for RV Bellows), (PI: R. Snyder), Florida Institute of Oceanography	\$ 4,000

Research and Training Grants Received, continued

Impact of Agricultural Runoff on Total Maximum Daily Loads (PI: <i>J. Lepo</i> and <i>R. Snyder</i>), Department of Agriculture , 9/15/01 - 9/14/05	U.S. \$532,000
Bayou Texar Nutrient Level Water Quality Sampling, (PI: <i>R. Snyder</i>), West Florida Regional Planning Council , 10/15/01 - 9/30/02	\$ 2,000
Microbial Biofilms as Indicators of Estuarine Ecosystem Condition, (PI: <i>J. Lepo</i> and <i>R. Snyder</i>), Part of Consortium for Estuarine Ecoindicators Research for the Gulf of Mexico, STAR EaGLes Cooperative Agreement, USEPA , 11/1/01 – 11/20/05	\$1,563,11
An Assessment of the Source of Human Sewage Waste Input into Coldwater and Pond Creeks, (PI: <i>R. Snyder</i>), Bay Area Resource Council , 2/6/02 - 12/31/02	\$ 18,998
Microzooplankton Sample Analysis, (PI: <i>R. Snyder</i>), USEPA , 9/28/01 - 9/30/02	\$ 2,400
Wet Prairie Habitat Restoration Evaluation and Management Strategies for the Garcon Point Water Management Area, (PI: <i>R. Snyder</i>), Northwest Florida Water Management District , 4/01/02 - 3/31/03	\$ 7,081
Estuarine Ecology Shipboard Laboratory, 2003 (Shiptime Request for RV Bellows), (PI: <i>R. Snyder</i>), Florida Institute of Oceanography	\$ 6,000
Biological Survey of FCT Project: Washington County Holmes Creek Site, (PI: <i>R. Snyder</i>), West Florida Regional Planning Council, 1/1/2003-6/30/2003	\$ 2,400
Wet Prairie Habitat Restoration Evaluation and Management Strategies For Garcon Point Water Management Area 2004, (PI: <i>R. Snyder</i>), NW Florida Water Management District , 4/1/03 - 3/31/04	\$ 7,081
Evaluation of Ciliate Protozoans as a First Food for Red Snapper <i>Lutjanus campechanus</i> Larvae, (PI: <i>R. Snyder</i>), NOAA National Marine Fisheries Service , 5/1/03 – 5/30/06	\$ 87,151
Microbiological Indicators of Water Quality in Submerged Karst Caves of Northern Florida, (PI: <i>R. Snyder</i>), Florida DEP , 12/2/03 – 6/30/04	\$ 44,995
Estuarine Ecology Shipboard Laboratory (Shiptime), (PI: <i>R. Snyder</i>), Florida Institute of Oceanography , 2004	\$ 6,000
Importance of Microalgal Production on the Northern Gulf of Mexico Sand Bottom Nutrient Trapping and Support of Fisheries Production, (PI: <i>R. Snyder</i>), Escambia County , 04/20/04 – 12/30/05	\$ 24,000

Research and Training Grants Received, continued

Wet Prairie Habitat Restoration Evaluation and Management Strategies For Garcon Point Water Management Area, (PI: <i>R. Snyder</i>), Northwest Florida Water Management District , 5/1/04 – 4/30/05	\$ 7,081
Environmental Monitoring of Bathing Places, (Co-PIs: <i>R. Snyder, J. Macauley, And J. Lepo</i>), Florida Department of Health, Escambia County Health Department , 07/01/04 – 06/30/05	\$ 39,000
Fecal Source Tracking Research, (Co-PIs: <i>J. Lepo and R. Snyder</i>), Florida Department of Health, Escambia County Health Department , 07/01/04 – 06/30/05	\$ 76,500
Post Hurricane Opal Assessment GUIs, (PI: <i>R. Snyder</i>), National Park Service , 07/28/04 – 07/01/06	\$ 9,962
Estuarine Ecology Shipboard Laboratory (Shiptime), (PI: <i>R. Snyder</i>), Florida Institute of Oceanography , 2005	\$ 6,000
Health Beaches Sampling for Okaloosa County, (PI: <i>R. Snyder</i>), Florida Department of Health, Okaloosa County Health Department , 7/1/2005 – 6/30/2006	\$19,843
Environmental Monitoring of Bathing Places, (Co-PIs: <i>R. Snyder, J. Macauley, And J. Lepo</i>), Florida Department of Health, Escambia County Health Department , 07/01/05 – 06/30/06	\$39,000
Fecal Source Tracking Research (Co-PIs: <i>J. Lepo and R. Snyder</i>), Florida Department of Health, Escambia County Health Department , 7/1/2005 – 6/30/2006	\$ 76,500
Estuarine Ecology Shipboard Laboratory (Shiptime), (PI: <i>R. Snyder</i>), Florida Institute of Oceanography , 2006	\$ 6,000
Pre-Reefing Environmental Assessment for the <i>ex-Oriskany</i> . Snyder R.A. and W.F. Patterson III, PIs. Computer Services Corporation subcontractor to US Navy 2006	\$315,056.
Wet Prairie Habitat Restoration: Evaluation and Management Strategies. R.A. Snyder, Northwest Florida Water Management District , 2006	\$7081.
Florida Institute of Oceanography Shiptime award on the R/V BELLOWS, Snyder, R.A.	\$8,400.
Wet Prairie Habitat Restoration: Evaluation and Management Strategies. R.A. Snyder, Northwest Florida Water Management District (2007-2008)	\$7081.

Enhancement of the UWF Marine Biology Program's Underwater Teaching and Research. Pace Academic Development Proposal (CO-PI's Patterson and Snyder) **UWF Foundation** \$42,803

Tracking Source of Fecal Contamination in Environmental Waters (Co-PIs: J. Lepo and R. Snyder), Florida Department of Health, **Escambia County Health Department**, /2007 –2008 \$40,000

Publications

Snyder, R.A. 1985. Ciliate protists from the Western Atlantic barrier reef system, Carrie Bow Cay, Belize. *Fifth International Coral Reef Congress, Tahiti*. 5:215-220.

Corliss, J.O. & **Snyder**, R.A. 1985. Preliminary description of eight new ciliates from Antarctic sea ice, including *Cohnilembus grassii*. *Protistologica* 22:39-46.

Snyder, R.A. 1991. Chemoattraction of a bacterivorous ciliate to bacteria surface compounds. *Hydrobiologia* 215:205-213.

Ohman, M.D. & **Snyder**, R.A. 1991. Growth kinetics of the omnivorous oligotrich ciliate *Strombidium* sp. *Limnol. Oceanogr* 36:922-935.

Snyder, R.A. & Ohman, M.D. 1991. A new species of Strombidinopsidae (Ciliophora, Choreotrichida), *Strombidinopsis chesire* n.sp. *Trans. Am. Microsc. Soc.* 110:237-243.

Snyder, R.A. & Brownlee, D.C. 1991. *Nolaclusilis bicornis* n.g., n.sp. (Tintinnina: Tintinnidiidae): a Tintinnine ciliate with novel lorica and cell morphology from the Chesapeake Bay estuary. *J. Protozool.* 38:583-589.

Snyder, R.A., Robarts, R.D., & Caldwell, D.E. (1994). [*methyl*-³H]thymidine and ³H leucine incorporation in *Vibrio* spp. grown in nutrient limited continuous cultures. *Can. Journal Microbiol.* 40:375-381.

Winkler, J. Timmis, K., & **Snyder** R.A. (1994). Tracking response of *Burkholderia cepacia* G4 5223-PR1 in aquifer microcosms. *Applied and Environmental Microbiology* 61:448-455

Hoch, M.P., **Snyder**, R.A., Cifuentes L., & Coffin, R.B. (1996). Stable isotope dynamics of nitrogen recycled during interactions among bacteria and protists. *Marine Ecology Progress Series* 132:229-239.

Snyder, R.A. & M.P. Hoch. (1996). Consequences of protist-stimulated bacterial production for estimating protist growth efficiencies. *Hydrobiologia* 341:113-123.

Snyder, R.A. (1996). Response of Microorganisms to Chemical Gradients. pp 151-156 in: Druger, M. & Anderson, O.R., eds., *Explore the World Using Protozoa*. National Science Teachers Association & Society of Protozoologists.

Snyder, R.A. (1996). Predator-Prey Interactions. pp 142-150 in: Druger, M. & Anderson, O.R., eds., *Explore the World Using Protozoa*. National Science Teachers Association & Society of Protozoologists.

Lawrence, J.R. and R.A. **Snyder**. (1998). Feeding behavior and grazing impacts of a *Euplotes* sp. on attached bacteria. *Canadian Journal of Microbiology* 44:623-629.

Research and Training Grants Received, continued

Lores, E., **Snyder**, R.A., & Pennock, J. 1998. The effect of humic acid on uptake/adsorption of copper by a marine bacterium and two marine ciliates. *Chemosphere* 38:293-310.

Snyder, R.A., Millward, J. & Steffensen, W.S. (2000). Aquifer protist response and the potential for TCE bioremediation with *Burkholderia cepacia* G4 PR1. *Microbial Ecology* 40:189-199.

Publications, Cont.

Snyder, R.A. & C.L. Boss. (2002). Recovery and Stability in Barrier Island Plant Communities. *Journal of Coastal Research* 18:530-536..

Sipura, J., E. Lores, & **R.A. Snyder**. (2003). Effect of copepods on estuarine microbial plankton in short-term microcosms. *Aquatic Microbial Ecology* 33:181-190.

Kiely, C.L., **R.A. Snyder**, A.M Lazur, J.E. Lepo. 2004. Vegetated filter strip evaluated for storm water effluent treatment in catfish pond. *Global Aquaculture Advocate* 7:67-68.

Snyder, R.A., M.A. Lewis, A. Nocker, & J.E. Lepo. (2004). Microbial biofilms as integrative sensors of environmental quality. In: Bortone, S., ed. *Estuarine Indicators*. CRC Press.

Nocker, A. J.E. Lepo, **R.A. Snyder**. (2004). Diversity of microbial biofilm communities associated with an oyster reef and an adjacent muddy-sand bottom habitat. *Applied and Environmental Microbiology* 70:6834-6845.

Moss, J.A., A. Nocker, J.E. Lepo, & **R.A. Snyder** (2006). Stability and change in estuarine biofilm bacterial community diversity. *Applied and Environmental Microbiology* 72:5679-5688

Hoch, M.P., R.A. Snyder, W.H. Jeffrey, K.S. Dillon, and R.B. Coffin. 2006. Expression of glutamine synthase and glutamate dehydrogenase by marine bacterioplankton: assay optimizations and efficacy for assessing nitrogen to carbon metabolic balance in situ. *Limnology and Oceanography Methods* 4:318-328.

Karouna-Renier, N., **R.A. Snyder**, & K.R. Rao. (2007). Accumulation of organic and inorganic contaminants in shellfish collected in estuarine waters near Pensacola, Florida: Contamination profiles and risks to human consumers. *Environmental Pollution* 145:474-488.

Nocker, A. J.E. Lepo, L.L. Martin, & **R.A. Snyder**. (2007) Response of Estuarine Biofilm Microbial Community Development to Changes in Dissolved Oxygen and Nutrient Concentrations. *Microbial Ecology* (in press).

Technical Reports

- Snyder, R.A.** 1998. *In situ* bioremediation of trichloroethylene using *Burkholderia cepacia* G4 PR1: Analysis of microbial ecology parameters for Risk Assessment. Environmental Research Brief, US EPA May, 1998, 7 pp.
- Breithoff, C.L. & R.A. **Snyder** 1998. Revegetation-Succession Study Post-Hurricane Erin & Opal on Santa Rosa Island, Fort Pickens Gulf Islands National Seashore. Final Report Submitted to Gulf Islands National Seashore, Dept. of the Interior.
- Snyder, R.A.** 1999. Biological Survey of FCT Project #96-035-P7A Holmes County Wright's Creek Site Management Plan. Prepared for West Florida Planning Council.
- Lepo, J.E. & and R. A. **Snyder**. 2000. Impact of Fluoridation of the Municipal Drinking Water Supply: Review of the Literature. Prepared for: Escambia County Utilities Authority. <http://www.uwf.edu/rsnyder/fluoride/fluorid.html>
- Lepo, J.E. & and R. A. **Snyder**. 2001. Impact of Fluoridation of the Municipal Drinking Water Supply: Results of Field and Laboratory Study and Supplement to Review of the Literature. Prepared for: Escambia County Utilities Authority.
- Snyder, R.A.** Lacina, S. & Bennett, W., and R. Heise. 2001. Biological Survey of FCT Project Century Boat Ramp. Report to the West Florida Regional Planning Council. <http://www.uwf.edu/rsnyder/reports/Century.pdf>.
- Snyder, R.A.**, J. E. Lepo, M. Wagner, J. Allison, M. McAllister, J. McCauley, J.H. Baird, & D. Polk. 2003. An Assessment of Fecal Contamination of Coldwater and Pond Creeks. Final Report to West Florida Regional Planning Council. <http://www.uwf.edu/rsnyder/reports/coldpondcrks.pdf>.
- Snyder, R.A.**, J.E. Lepo, W. Huth, A. Nocker, K. Martin. 2004. Microbiological indicators of water quality in submerged karst caves of Northern Florida. Florida Geologic Service Special Report, Wakulla Springs Scientific Symposium, Tallahassee, FL, May 2004. 21 pp. <http://www.uwf.edu/rsnyder/reports/Wakulla%20micro.pdf>.
- Snyder, R.A.** 2006. Analysis of Fecal Loadings Into Bayous Grande, Chico, and Texar Pensacola Bay System, FL. Report to Escambia County Department of Health. <http://www.uwf.edu/rsnyder/reports/bayourpt.pdf>.
- Karouna-Renier, N., **R.A. Snyder**, & K.R. Rao. (2006). Preliminary striped mullet and largemouth bass report. Partnership for Environmental Research and Community Health (PERCH) Bioaccumulation Study. <http://www.uwf.edu/rsnyder/reports/bass-mullet.pdf>.
- Richard A. Snyder & Rayne Maisel. 2008. *Pre and Post-Ivan Assessment of Barrier Island Plant Community Dynamics in the Gulf Islands National Seashore Santa Rosa Island Fort Pickens area*. Final Project report (GUIS reviewed), 15 January 2008. 32 pp. <http://www.uwf.edu/rsnyder/reports/GUIS%20plants.pdf>.

Technical Reports continued

Richard A. Snyder & Ranga Rao. 2008. *Bioaccumulation of Chemical Contaminants in Fishes of Escambia Bay*. Submitted to UE EPA Region 4 and the Florida Department of Health. 12 February 2008. <http://www.uwf.edu/rsnyder/reports/EscBaybridgefish.pdf>.

Richard A. Snyder. 2008. *Analysis of Dioxin-Furan, PCB and trace metal levels in farmed catfish, Escambia County, FL*. Report to the Escambia County Soil and Water Board 12 March 2008. 7 pp. <http://www.uwf.edu/rsnyder/reports/catfishrpt.pdf>.

Miscellaneous Publications

Snyder, R.A. 1993. Oyster expenses. *BioScience* 43:74.

Snyder, R.A. 2002. Photographs of three estuarine fish species in: *National Audubon Society Field Guide to Fishes of North America*. Chanticleer Press.

Abstracts and Presentations

Snyder, R.A. and E.B. Small. 1984. The response of protists to spatial heterogeneity produced by a gradient culture technique. *J. Protozool.* 31:21A.

Small, E.B., R.A. Snyder and B.F. Hill. 1985. New marine Microthoracine species and ciliate phylogeny. *8th International Congress of Protozoology*.

Evans, A.D., Small, E.B., & Snyder, R.A. 1986. Investigation of ciliates collected from the baleen of Fin and Blue whales. *39th Annual Meeting Society of Protozoologists*.

Snyder, R.A. 1989. Chemosensory reactions to bacterial surface compounds mediate responses of a bacterivorous suspension feeding ciliate protist to its prey. *Abstracts of the 89th Annual Meeting of the American Society for Microbiology* Q 224.

Ohman, M.D. & Snyder, R.A. 1990. Immunochemical identification of ciliate protozoa. *EOS* 71:95.

Snyder, R.A. 1990. Chemical cues from prey affect feeding behavior of a bacterivorous ciliate protist. *EOS* 17:162.

Wicks, R.J., Snyder, R.A., Robarts, R.D., & Caldwell, D.E. 1990. Thymidine incorporation- a measure of bacterial growth or metabolism? *EOS* 17:110.

Tamplin, M.L., Martin, A.L., Capers, G.M., Snyder, R.A., & Casper, C.W. 1990. Ecology of *Vibrio vulnificus* in the estuarine environment. *Abstracts of the 90th Annual Meeting of the American Society for Microbiology*.

Snyder, R.A., Ohman, M.D., & Small, E.B. 1990. Allometric morphological changes in ciliates. *43rd Annual Meeting Society of Protozoologists*.

Snyder, R.A., Robarts, R.D., & Caldwell, D.E. 1990. Measuring heterotrophic bacterial production: validation of the 3H thymidine incorporation method using chemostat cultures and computer assisted image analysis. *Proceedings of the Rawson Conference Ecology of Aquatic Ecosystems Semiarid Regions*.

Snyder, R.A., Robarts, R.D., & Caldwell, D.E. 1991. Leucine, thymidine, and bacterial production in continuous cultures of *Vibrio* sp. *Abstracts of the 91st Ann. Meeting American Society for Microbiology*

Abstracts and Presentations, Cont.

- Snyder, R.A., Hoch, M.P. & Coffin, R.B. 1993. Steady state microbial parameters for northern Gulf of Mexico. *ASLO Annual Meeting*.
- Santavy, D.L., Jeffrey, W. & Snyder, R.A. 1993. Changes in the microbial community structure and productivity affiliated with the mucus of healthy and stressed corals. *Abstracts of the 93rd Ann. Meeting American Society for Microbiology*.
- Snyder, R.A., Massaro, J., LeThi, B.-U, & Sledjeski, D. 1993. Effects of a bacterial cell surface polysaccharide on the feeding of an amoeba, a flagellate, and a ciliate protist. *Abstracts of the 93rd Annual Meeting of the American Society for Microbiology*.
- Lawrence, J.R., Wolfaart, G. & Snyder, R.A. 1993. Influence of microbial trophic interactions on the architecture and exopolymer chemistry of a biofilm community. Canadian Society for Microbiology and Society for Industrial Microbiology.
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- Shields, M.S., R. Snyder, M. Reagin, R. Gerger, R. Campbell, C. Somerville, & P.H. Pritchard. 1993. Bioremediation of TCE: Monitoring the fate and effects of a microorganism used in a field bioaugmentation study. *US EPA Symp. Bioremediation of Hazardous Wastes: Research, Development, and Field Evaluations*, Dallas, TX. EPA/600/R-93/054
- Hoch, M.P., Cifuentes, L. & Snyder, R.A. 1994. Stable isotope dynamics of nitrogen recycled by protists. AGU-ASLO Annual Meeting.
- Winkler, J. & Snyder, R.A. 1994. Transport and survival of a TCE degrading bacterium in aquifer microcosms. 2nd International Conference on Ground Water Ecology.
- Santavy, D.L., Jeffrey, W.H., Snyder, R.A., Campbell, J., Malouin, P., & Cole, L. 1994. Microbial community dynamics in the mucus of healthy and stressed coral hosts. *Bull. Mar. Sci.* 54:1077-1078.
- Snyder, R.A., Shields, M.S. & Pritchard, H.P. 1994. Bioremediation of TCE: Risk analysis for inoculation strategies. *US EPA Symp. Bioremediation of Hazardous Wastes: Research, Development, and Field Evaluations, San Francisco*.
- Snyder, R.A. 1995. Tracking *Burkholderia cepacia* G4 5223 PR1 in aquifer microcosms. *Abstracts of the 95th Annual Meeting of the American Society for Microbiology*.
- Lawrence, J.R., Wolfaart, G.M., Hendry, M.J. & Snyder, R.A. 1995. Integration of *Burkholderia cepacia* (PR1) into a degradative biofilm community. Canadian Society for Microbiology
- Snyder, R.A., Lawrence, J.R., & Hendry, M.J. 1995. Release of *Burkholderia cepacia* G4 PR1 for Aquifer Bioremediation: Analysis of Physical and Biological Factors Affecting Transport and Survival. *Proc. 6th Symp. EPA Risk Assessment Res. Prog. for Environmental Releases of Biotechnology Products*.
- Snyder, R.A., Hendry, M.J., & Lawrence, J.R. 1995. In situ bioremediation of trichloroethylene with *Burkholderia cepacia* PR1: analysis of parameters for establishing a treatment zone. *US EPA Symp. Bioremediation of Hazardous Wastes: Research, Development, and Field Evaluations*, Rye town, NY. EPA/600/R-95/076.
- Snyder, R.A. 1996. Use of Statistics in Microbial Ecology. Symposium on Environmental Statistics, University of South Alabama, Mobile, AL, November 15-16, 1996. (INVITED)
- Snyder, R.A. 1997. Effect of polysaccharides in protist feeding reactions. Canadian Society for Microbiology, Quebec City. (INVITED)
- Nicola, P., H.T. Mayfield, & R.A. Snyder. 1998. JP-8 Solubility and Partitioning Into *Tetrahymena pyriformis* Biomass by SPME/GC. Pittsburg Conference, March 1998.

Abstracts and Presentations, Cont.

- Nicola, P., H. Mayfield, & R.A. Snyder. 1998. Effect of water-soluble components of JP8 on *Tetrahymena pyriformis* : Acclimation and Survival Via Membrane Phospholipid Retailoring. American Society for Microbiology, May 1998.
- Tomas-Cody, T. & R.A. Snyder. 1998. Response of *Tetrahymena pyriformis* to LPS of *Burkholderia cepacia*. American Society for Microbiology, May 1998.
- Snyder, R.A. 1998. Bacteria-protist interactions in bioremediation. Eighth International Symposium on Microbial Ecology. Halifax, Nova Scotia. August 1998.
- Snyder, R.A. & Lawrence, J.R. 1998. Response of aquifer microbial populations to allochthonous bacteria. American Water Resources Association Annual Conference on Water Resources, Point Clear, AL November 16-19.
- Snyder, R.A., M.M.D. Black & Lawrence, J.R. 1999. Surface feeding behavior in a hypotrich and a small amoeba. 52nd Annual Meeting of the Society of Protozoologists, Raliegh, NC.
- Pasko, Eva M., J. Kevin Summers, Richard A. Snyder, Virginia D. Engle, Michael C. Murrell, Guy T. DiDonato and John Macauley. 2000. The effect of precipitation on organic carbon components in Bayou Texar, FL. GERS Meeting.
- Snyder, R.A. & Breithoff, C.L. 2000. Plant community succession and stability Post-Hurricanes Erin and Opal (1995), Santa Rosa Island, FL. Gulf of Mexico Symposium, Mobile Alabama.
- Simmon, K.E., Johnson, R.W., Steadman, D.D., Sparks, J.L., Sharak-Genthner, B.R., Snyder, R.A., and Shields, M.S. 2001. Repetitive element DNA fingerprint of *Enterococcus* for source determination of fecal pollution. American Society for Microbiology, May 2001.
- Flaherty, K. E., and R. A. Snyder. 2001. The partitioning of lead and cadmium in two salt marsh molluscs. 16th Biennial Conference Estuarine Research Foundation, St. Petersburg, FL Nov 5-8.
- Sipura, J. R.A. Snyder, and E. Lores. 2001. Top down of the microbial loop in estuarine plankton. 16th Biennial Conference Estuarine Research Foundation, St. Petersburg, FL Nov 5-8.
- Pasko, E.M., J.K. Summers, V.D. Engle, M.C. Murrell, G.T. DiDonato, J. Macauley and R.A. Snyder. 2001. Rainfall and Runoff as a Source of Organic Carbon Additions in Bayou Texar, Florida. 16th Biennial Conference Estuarine Research Foundation, St. Petersburg, FL Nov 5-8.
- Snyder, R.A. & S. Lacina. 2002. Plant community analysis for Gulf Coast wet prairie restoration. Society for Ecological Restoration, Coastal Plains Chapter meeting Feb, 2002, Pensacola, FL
- Snyder, R.A., S.Lacina, S. Brown, & W. Cleckley. Restoration of Gulf Coast Wet Prairie Habitat from Slash Pine Plantation. THE FOURTH AGRO-ECOLOGY CONFERENCE: Ecosystem Restoration and Stewardship In Florida, Florida Center for Environmental Studies, St Augustine, FL January 2003. (INVITED)
- Snyder, R.A., Lepo, J.E., Nocker, A., Proctor, L., Pennington, L., Moss, J., Huggins, T. 2003. Microbial biofilms as indicators of estuarine condition. Estuarine Research Federation Annual Meeting Seattle, WA. September 14-18.
- Nocker, A., R.A. Snyder, J.E. Lepo, J.A. Moss, T. Huggins. 2003. Molecular analysis of habitat specificity in estuarine microbial biofilm community structures Estuarine Research Federation Annual Meeting Seattle, WA. September 14-18.
- Moss, J.A., R.A. Snyder. J.E. Lepo. 2003. Fluorescein diacetate hydrolysis as a surrogate for microbial heterotrophic activity in estuarine biofilms. Estuarine Research Federation Annual Meeting Seattle, WA. September 14-18.
- Pennington, L.J. R.A. Snyder, J.E. Lepo, M. Ederington-Hagy, A.N. Rondon, R.H. Davis. Habitat Fidelity of Estuarine Microbial Biofilms determined from analysis of phospholipids. Estuarine Research Federation Annual Meeting Seattle, WA. September 14-18.

Abstracts and Presentations, Cont.

- Proctor, L. M. S. MacAuley, J. E. Lepo, R. Snyder, A. Nocker. 2003. Characterization of N-Cycling Microorganisms in Biofilms from Estuarine Environments in the Gulf of Mexico. Estuarine Research Federation Annual Meeting; Seattle, WA. 14-18 September.
- Stevenson, C.T., R.A. Snyder, B.F. Ruth. 2003. Enhancement of recruitment and nursery function by habitat creation in Pensacola Bay, Florida. Estuarine Research Federation Annual Meeting Seattle, WA. September 14-18.
- Snyder, R.A., J.E. Lepo, J. Liebens, C. Briscoe. 2003. Agricultural Runoff, TMDLs and Water Quality: Field and Watershed Scale Studies, Science-Teacher Education, Agricultural Extension Activities. USDA-CSREES National Water Quality Conference, Tuscon AZ, January 2003.
- Snyder, R.A., & J.E. Lepo, & M.A. Lewis, 2003. Microbial Biofilms as Integrative Sensors of Environmental Quality. Estuarine Indicators Workshop, Sanibel Island, FL October 29-31. (INVITED)
- Snyder, R.A., J.E. Lepo, J. Liebens, C. Briscoe, L. Christenberry, M. Griggs, K. Collar. 2004. Agricultural Runoff, TMDLs and Water Quality: Field and Watershed Scale Studies, Science-Teacher Education, Agricultural Extension Activities. USDA-CSREES national Water Quality Conference, Clearwater, FL.
- Nocker, A., J.E. Lepo, L.L. Martin, J.A. Moss, A.D. Launder, & R.A. Snyder. 2004. Molecular analysis of microbial biofilm communities in a sewage outfall impacted environment in comparison with a reference site in Pensacola Bay, Florida. ASM Annual Meeting, New Orleans, LA, May 24-28.
- R. A. Snyder, A. Launder, A. Nocker, A. Rogerson, W. Huth, R. Dehan. 2004. Wakulla Microbiology. Wakulla Springs Scientific Symposium, Florida Geologic Survey. May 13 2004.
- Moss, J., A. Nocker, J.E. Lepo, and R.A. Snyder. 2004. Temporal dynamics of estuarine microbial biofilm community structure. International Society for Microbial Ecology, Cancun, Mexico, August 2004.
- Launder, A., A. Nocker, A. Rogerson, H. Castillo, W. Huth, & R.A. Snyder. Microbiological indicators of water quality in submerged karst caves of Northern Florida. International Society for Subsurface Microbiology/International Society for Environmental Biogeochemistry. Jackson, WY. August 2005. (Student travel award recipient)
- Allison, J. & R.A. Snyder. Importance of Microalgal Production at the Benthic Boundary Layer in an Estuarine Sand Bottom Habitat. Estuarine Research Federation biennial meeting, October, 2005. Norfolk, VA.
- Wagner, M. J. Allison, M. Hagy, J. Lepo & R. Snyder. 2005. Spatial Patterns of Periphyton Growth as Indicators of Estuarine Condition. Estuarine Research Federation biennial meeting, October, 2005. Norfolk, VA. (Student Presentation Award Recipient).
- Gibson, S., W. Patterson, & R.A. Snyder. 2005. Ciliate protozoa as food for Red snapper larvae. UWF Sea Stars.
- Sang Hyon Lee, Kristen N. Hellein, Alan Knowles, Hugo A. Castillo-Gonzales, Richard A. Snyder, and Joe E. Lepo 2006. Diversity of *nifH* in Microbial Biofilm Response to Added Nutrients Generated in Flow-Through Seawater Microcosms American Society for Microbiology Annual meeting.
- Karouna-Renier, N. K., S. M. Gibson, R. A. Snyder, K. R. Rao. 2006. Contamination Profiles in Largemouth Bass and Mullet Collected in Northwest Florida. SETAC Annual Meeting, Montreal, Canada, November, 2006.

Abstracts and Presentations, Cont.

- Snyder, R.A., J. Allison, S.H. Lee, J.E. Lepo, J. Moss, A. Nocker, M. Wagner. 2006. Responsiveness of microbial biofilms as indicators of estuarine ecosystem condition. Alabama-Mississippi Bays and Bayous Symposium, November 2006, Mobile Alabama. (INVITED)
- Snyder, R.A. 2006. Analysis of fecal loadings into Bayous Grande, Chico and Texar in the Pensacola Bay System. Alabama-Mississippi Bays and Bayous Symposium, November 2006, Mobile Alabama.
- Patterson, W.F., III, R.A. Snyder, K.R. Rao, S. Gibson, S. Jeffers, and A. Ren. 2007. Bioaccumulation of PCBs and mercury in marine fishes off northwest Florida. FL AFS Meeting, Jan 2007.
- Snyder Richard A. Science and its role in environmental management. UWF Earth Day Environmental Symposium April 22, 2008.
- Snyder, Richard A. PCBs and Hg in fish. NW Florida Regional Environmental Symposium. UWF, BARC, FAEP 5 October 2008.
- Patterson, W.F., III, R.A. Snyder, K.R. Rao, S. Gibson, S. Jeffers, and A. Ren. 2007. Bioaccumulation of PCBs and mercury in marine fishes off northwest Florida. FL AFS Meeting, Jan 2007.
- Lee, S.H. A. Knowles, K.N. Hellein, R.A. Snyder, and J.E. Lepo. 2007. Effect of Dissolved Oxygen on the Diversity of *nifH* in Microbial Biofilm Generated in Flow-Through Seawater Microcosms American Society for Microbiology Annual meeting.
- Snyder, Richard A., Natalie Karouna-Renier, Alexander Ren, Suzanne Gibson and K. Ranga Rao. 2008. PCBs in fish and shellfish in the Pensacola Bay system. ASLO- AGU- ERF Ocean Sciences Meeting Orlando, FL, March 2008.
- Patterson, W.F. III, R.A. Snyder, K.R. Rao, and S. Gibson. 2008. Bioaccumulation of PCBs and Mercury in marine fishes in the northern central Gulf of Mexico. ASLO- AGU- ERF Ocean Sciences Meeting Orlando, FL, March 2008.
- Joe Eugene Lepo* and Richard A. Snyder. 2008. Molecular Assessment of Estuarine Microbial Biofilm Community Response to Environmental Conditions. BIT's 1st Annual World Congress of ibio, Hangzhou, China, May 2008.

Professional Service**Invited Speaker**

- Dauphin Island Sea Lab, AL, Microbial Ecology Seminar, 1993
- US EPA Biotechnology Products Risk Assessment Meeting & Workshop, 1994, 1995
- US EPA Biosystems Technology Meeting, 1994
- Medical University of South Carolina, Bioremediation Seminar, 1995
- University of West Florida and University of South Alabama,
Environmental Problems: Issues, Statistical Models and Methods, 1996
- Canadian Society for Microbiology, 1997
- Biology Department Seminar, University of Southern Mississippi, 2000
- 4th Annual Agro-ecology Conference, Ecosystem Restoration and Stewardship January 2003
- Dauphin Island Sea Lab, AL, Microbial Ecology Seminar, 2005
- Alabama-Mississippi Bays and Bayous Symposium, November 2006 Mobile Alabama.

Convener for a seminar on Protistan Feeding Reactions at the 1990 American Society for Microbiology, 90th Annual Meeting.

Organizer and sponsor, NW Florida Regional Environmental Symposium 5 October 2007.

Grants Review Panel:

Mississippi/Alabama Seagrant Program 1997
UE EPA Graduate fellowships, 2006

Grants reviewer:

Maryland Department of Natural Resources, Tidewater Administration, Chesapeake Bay Research and Monitoring Division
US Department of Energy NABIR Program
Mississippi-Alabama Sea Grant Review Panel
Maryland Sea Grant program
Natural Environmental Research Council (UK)
Hudson River Foundation

Manuscript Reviewer (Scientific Journals):

Marine Ecology Progress Series
Applied and Environmental Microbiology
Journal of Eukaryotic Microbiology (Editorial Board Member)
Canadian Journal of Zoology
Aquatic Microbial Ecology
Coral Reefs
Kuwait Journal of Science and Engineering
Environmental Pollution
Process Biochemistry
Microbial Ecology
Water Resource
Environmental Research
Transactions of the American Fisheries Society (1)

Expert Witness

Superfund site impacts on Bayou Texar, 2002, 2003

University Service

Faculty advisor, Environmental Club 1997-1998

Faculty Search Committees

Environmental Studies Dept. (1997) Hydrogeologist

Environmental Studies Dept. (2000, 2003) Remote Sensing/GIS

(2 positions) Biology Dept. (1998) Wetlands Ecologist, Vertebrate Physiologist

Committee Chair, (2 positions) Biology Dept. (2000-2001) Biochemist, Plant Physiologist

Library (2001), Serials Librarian

General Studies Committee (1998-2000)

Library Committee Chairman (1999-2002)

UWF High School Science Seminar Convener, (2000)

College of Arts and Sciences Faculty Council (2000-20023)

Governance Committee, CAS Council (2000-2002)

University Health and Safety Committee (2000-)

Curriculum Committee, Biology Department (1997, 2000)

Graduate Program Admissions Committee Biology Department (1998-)

Diving Safety Control Board Member (2001-)

Environmental Studies Department Advisory Committee (2001-)

University Planning Council Facilities Planning Committee Environmental conservation and Beautification Committee (2003-2005)

University Growth and Development Committee 2005-2007

Marine Services Center Executive Committee 2005-

Animal Care and Use Committee 2007-

Faculty Advisor, UWF Optimist's Club 2008-

Community Service

Chairman, South Santa Rosa Utilities Advisory Board 1996-

Committee Member, Bay Area Resource Council (BARC) Technical Advisory Committee 1999-

Cooperator with Michael Palmer and Tina Bond, Pensacola Junior College, on the education grant:

“Integrating Algebra and Science Through Technology” 1999, 2000

Speaker for the Lunch & Learn Seminar Series, Leisure Learning Society

Speaker for High School Science Seminar Series

Judge, Regional High School Science Fair

Appointed, Santa Rosa County Commission Tree Ordinance Sub-Committee (1996).

Santa Rosa Shores Homeowners Association Canal Committee Member and Chairman (1994-1996)

TV Panelist: Marine Pollution Show, Sponsored by Escambia County NESD (1998)

WEAR TV 3 Interview on Water Quality Issues

NPR Radio Earth and Sky consultant for information on Red Tides.

Citizens Advisory Board to Santa Rosa County Commissioner W.A. "Buck" Lee (2000-)

Northwest Florida Legislative Delegation Natural Resources Advisory Committee 2000-

Tournament Official Biologist, Gulf Breeze Optimists Club Fishing Rodeo 2002, 2003, 2005, 2006)

Optimists Club of Gulf Breeze President elect

Saint Frances of Assisi Episcopal Church member

Featured article in Independent News

Radio interview on News Radio 1620 AM IN radio.

Science Fair Judge, Bailey Middle School

Science Fair Judge, Episcopal Day School

Seagrass field day, Oriole Beach Elementary School

Presentation on being a scientist to students at the Escambia County Judy Andrews Center

Interview for BLAB TV series “Pensacola a proud past, a better tomorrow” April-May 2008
