

TERRY W. SNELL**CURRICULUM VITAE**

SNELL, TERRY W. Professor and Chair
 Elizabeth Smithgall Watts Chair of Animal Behavior & Conservation
 School of Biology
 Georgia Institute of Technology

Educational Background:

B.S.	Biology	1970	Florida Southern College
M.S.	Ecology	1973	University of South Florida
Ph.D.	Population Biology	1977	University of South Florida

Employment History:

Post-doctoral Research Associate, University of South Florida	1977
Assistant Professor of Biology, Wright State University	1977 - 1978
Assistant Professor of Biology, University of Tampa	1978 - 1982
Visiting Research Scientist, Israel Limnology & Oceanography Institute	1981, 1983 (summers)
Associate Professor of Biology, University of Tampa	1982 - 1991
Visiting Research Scientist, University of Nagasaki, Japan	1993 (summer)
Visiting Research Scientist, University of Valencia, Spain	1995-1996, sum. 2003
Associate Professor of Biology, Georgia Institute of Technology	1991-1997
Professor of Biology, Georgia Institute of Technology	1997- present
Associate Chair of Biology, Georgia Institute of Technology	1998- 2009
Chair of Biology, Georgia Institute of Technology	2009 - present
Elizabeth Smithgall Watts Chair of Animal Behavior & Conservation	2011- present

Current Fields of Interest:

Aquatic chemical ecology, chemical communication among zooplankton, mate recognition, biology of aging, evolutionary ecology.

Aquatic toxicology: stress gene expression and use in biomonitoring, genetic adaptation to environmental stress, biomonitoring using aquatic invertebrates.

Teaching Experience (last 4 years):

semester	year	course #	title	# of students
F	2013	BIOL 4450	Senior Seminar	15
Sum	2012	BIOL 4803	Mediterranean Ecology (Spain)	10
S	2011	BIOL 4590	Research Project Lab	17
Sum	2010	BIOL 4803	Mediterranean Ecology (Spain)	11
F	2009	BIOL 4450	Senior Seminar	8
F	2009	BIOL 4590	Research Project Lab	16
S	2009	BIOL 4803	Urban Ecology (new)	22
F	2008	BIOL 4590	Research Project Lab	14
Sum	2008	BIOL 4803	Mediterranean Ecology (Spain)	12

Refereed Publications:

Already Published:

- Snell, TW, RK Johnson, B Rabeneck, C. Zipperer, S Teat. 2014. Joint inhibition of TOR and JNK pathways interacts to extend the lifespan of *Brachionus manjavacas* (Rotifera). *Experimental Gerontology* 52:55-69.
- Snare, DJ, AM Fields, TW Snell, J Kubanek. 2013. Lifespan extension of rotifers by treatment with red algal extracts. *Experimental Gerontology* 48:1420-1427. DOI 10.1016/j.exger.2013.09.007
- Jones BL, J VanLoozen, MH Kim, SJ Miles, CM Dunham, LD Williams, TW Snell. 2013. Stress granules form in *Brachionus manjavacas* (Rotifera) in response to a variety of stressors. *Comp Biochem Physiol A* 166:375-384.
- Verma, V, Rico-Martinez R, Kotra N, Rennolds C, King L, Liu J, Snell TW, Weber RJ. 2013. Estimating the toxicity of ambient fine aerosols using freshwater rotifer *Brachionus calyciflorus* (Rotifera: Monogononta). *Env Pollution*. 182:379-384.
- Rico-Martinez, R., TW Snell, TL Shearer. 2013. Synergistic toxicity of Macondo crude oil and dispersant Corexit 9500A® to the *Brachionus plicatilis* species complex (Rotifera). *Environmental Pollution*, 173:5-10.
- Edge, SE, TL Shearer, MB Morgan, TW Snell. 2013. Sub-lethal coral stress: Detecting molecular responses of coral populations to environmental conditions over space and time. *Aquatic Toxicology* 128-129:135-146.
- Smith, HA, TW Snell 2012. Rapid evolution of sex frequency and dormancy as hydroperiod adaptations. *Journal Evolutionary Biology*, doi: 10.1111/j.1420-9101.2012.02614.x.
- Shearer, TL, DB Rasher, TW Snell, ME Hay. 2012. Gene expression patterns of the coral *Acropora millepora* in response to contact with macroalgae. *Coral Reefs*, doi 10.1007/s00338-012-0943-7.
- Verma, V, Rico-Martinez R, Kotra N, King L, Liu J, Snell TW, Weber RJ. 2012. Contribution of water soluble and insoluble components and their hydrophobic/hydrophilic subfractions to the reactive oxygen species generating potential of fine ambient aerosols. *Environ. Sci. Technology* 46:11384-11392.
- Jones BL, Schneider DM, Snell TW. 2012. Thermostable proteins in the diapausing eggs of *Brachionus manjavacas* (Rotifera). *Comp Biochem Physiol A* 162:193-199.
- Smith, H.A., A.S. Burns, T.L. Shearer, and T.W. Snell. 2012. Three heat shock proteins are essential for rotifer thermotolerance. *Journal Experimental Marine Biology & Ecology* 413:1-6.
- Snell, TW, AM Fields, and RK Johnson. 2012. Antioxidants can extend lifespan of *Brachionus manjavacas* (Rotifera), but only in a few combinations. *Biogerontology*, DOI 10.1007/s10522-012-9371-x, PMCID: PMC3760418
- Snell, T.W. 2011. Contact chemoreception and its role in zooplankton mate recognition. Pgs 451-466, In: Thomas Breithaupt & Martin Thiel (eds.) *Chemical Communications in Crustaceans*. Springer.
- Serra, M., H.A. Smith, J.S. Weitz, and T.W. Snell. 2011. Analyzing threshold effects in the sexual dynamics of cyclically parthenogenetic rotifer populations. *Hydrobiologia*, 662:121-130.

- Snell, T.W. 2011. A review of the molecular mechanisms of rotifer reproduction. *Hydrobiologia*, 662:89-97.
- Smith, H.A., D.B. Mark Welch, and T.W. Snell. 2011. Molecular evolution of the membrane associated progesterone receptor within the *Brachionus plicatilis* (Rotifera) cryptic species complex. *Hydrobiologia* 662:99-106.
- Gribble, K. E., T. W. Snell and D. B. Mark Welch. 2011. Gene and protein structure of the mate recognition protein gene family in *Brachionus manjavacas* (Rotifera). *Hydrobiologia* 662:35-42.
- Lv, LL, Snell, TW, Yang, JX, Li, SG, Zhu, WG. 2010. Effects of fenitrothion on life history parameters of the rotifer *Brachionus calyciflorus*. *J Freshwater Ecology* 25:589-598.
- Yang, J. and T.W. Snell. 2010. Effects of progesterone, testosterone, and estrogen on sexual reproduction of the rotifer *Brachionus calyciflorus*. *Intl Review Hydrobiology* 95:441-449.
- Guo, RX, Snell, TW, Yang, JX. 2010. Studies of the effect of environmental factors on a rotifer predator-prey system in freshwater. *Hydrobiologia* 655:49-60
- Robles-Vargas, D. and T.W. Snell. 2010. Effects of desiccation on the toxicant sensitivity of rotifers. *Hydrobiologia*. 652:185-193.
- Snell, T.W., T.L. Shearer, and H.A. Smith. 2010. Exposure to dsRNA elicits RNA interference in *Brachionus manjavacas* (Rotifera). *Marine Biotechnology* DOI 10.1007/s10126-010-9295-x.
- Stout EP, La Clair JJ, Snell TW, Shearer TL, Kubanek J. 2010. Conservation of progesterone hormone function in invertebrate reproduction. *Proceedings of the National Academy of Sciences, USA*, 107:11859-11864.
- Snell, T.W. and D. Hicks. 2009. Assessing toxicity of nanoparticles using *Brachionus manjavacas* (Rotifera). *Environmental Toxicology*, doi: 10.1002/tox.20538.
- Snell, T.W., T.L. Shearer, H.A. Smith, J. Kubanek, D. Mark Welch, K. Gribble. 2009. Genetic determinants of mate recognition in *Brachionus manjavacas* (Rotifera). *BMC Biology* 7:60.
- Edge, S., M. B. Morgan, T.W. Snell 2008. Temporal analysis of gene expression in a field population of the scleractinian coral *Montastrea faveolata*. *J. Exp. Mar. Biol. Ecology* 355:114-124.
- Kubanek J, Snell TW 2008. Quorum sensing in rotifers. pgs 453-461, In: *Chemical Communication Among Microbes*, S.C. Winans and B.L. Bassler, eds. ASM Press, Washington, DC.
- Snell, T.W. and N. J.D. DesRosiers. 2008. Effect of progesterone on sexual reproduction of *Brachionus manjavacas* (Rotifera). *J. Exp. Mar. Biol. Ecology* 363:104-109.
- Snell, T.W. and C. Joaquim-Justo. 2007. Workshop on rotifers in ecotoxicology. *Hydrobiologia* 593:227-232.
- Snell, T.W. J. Kim, E. Zelaya, and R. Resop. 2007. Mate choice and sexual conflict in *Brachionus plicatilis* (Rotifera). *Hydrobiologia* 593:151-157.

- Shearer, T.L. and T.W. Snell, T.W. 2007. Transfection of siRNA into *Brachionus plicatilis* (Rotifera). *Hydrobiologia* 593:141-150.
- Kubanek J, Snell TW, Pirkle C. 2007. Chemical defense of the red tide dinoflagellate *Karenia brevis* against rotifer grazing. *Limnology & Oceanography* 52:1026-1035.
- Kubanek J, Prusak AC, Snell TW, Giese RA, Fairchild CR, Aalbersberg W, Hay ME 2006 Bromophycolides C-I from the Fijian red alga *Callophycus serratus*. *Journal of Natural Products* 69:731-735
- Suatoni, E., S. Vicario, S. Rice, T.W. Snell, and A. Caccone. 2006. Phylogenetic and biogeographic patterns in the salt water rotifer *Brachionus plicatilis*. *Molecular Phylogenetics & Evolution*, doi:10.1016/j.ympev.2006.04.025
- Snell, T.W., J.M. Kubanek, W.E. Carter, A.B. Payne, J. Kim, M. Hicks, C.P. Stelzer. 2006. A protein signal triggers sexual reproduction in *Brachionus plicatilis* (Rotifera). *Marine Biology* 149:763-773.
- Stelzer, C.P. and T.W. Snell. 2006. Specificity of the crowding response in the *Brachionus plicatilis* species complex (Rotifera). *Limnol & Oceanogr.* 51:125-130.
- Kubanek J, Prusak AC, Snell TW, Giese RA, Hardcastle K, Fairchild C, Aalbersberg W, Raventos-Suarez C, Hay ME 2005. Antineoplastic diterpene-benzoate macrolides from the Fijian red alga *Callophycus serratus*. *Organic Letters* 7:5261-5264
- Edge, S.E., M.B. Morgan, and T.W. Snell. 2005. Development of a cDNA array to examine gene expression profiles in coral exposed to environmental stress. *Mar Poll Bull*, 51:507-523.
- Morgan, M.B., S.E. Brogdon, and T.W. Snell. 2005. Profiling differential gene expression of corals along a transect of waters adjacent to the Bermuda municipal dump. *Mar Poll Bull*, 51:524-533.
- Marcial, HS, A Hagiwara, TW Snell. 2005. Effect of some pesticides on reproduction of the rotifer *Brachionus plicatilis* Muller. *Hydrobiologia* 546:569-575.
- Kotani, T, A Hagiwara, TW Snell, M Serra. 2005. Euryhaline *Brachionus* strains (Rotifera) from tropical habitats: morphology and allozyme patterns. *Hydrobiologia* 546:161-167.
- Snell, T.W. and C.P. Stelzer. 2005. Removal of surface glycoproteins and transfer among *Brachionus* species. *Hydrobiologia* 546:267-274.
- Serra, M., T.W. Snell, and J.J. Gilbert. 2005. Delayed mixis in rotifers: An adaptive response to the effects of density-dependent sex on population growth. *J. Plankton Res.* 27:37-45.
- Lapesa, S., T.W. Snell, D.M. Fields, M. Serra. 2004. Selective feeding of *Arctodiaptomus salinus* (Copepoda, Calanoida) on co-occurring sibling rotifer species. *Freshwater Biology*. 49:1053-1061.
- Marcial, H.S., A. Hagiwara, and T.W. Snell. 2003. Estrogenic compounds affect development of harpacticoid copepod *Tigriopus japonicus*. *Environ. Toxicol. Chem.* 22:3025-3030.
- Snell, T.W., S.E. Brogdon, and M.B. Morgan. 2003. Gene expression profiling in ecotoxicology. *Ecotoxicology* 12:475-483.
- Ting, J.H. and T.W. Snell. 2003. Purification and sequencing of a mate recognition protein from the

- copepod *Tigriopus japonicus*. Marine Biology 143:1-8.
- Stelzer, C.P. and T.W. Snell. 2003. Induction of sexual reproduction in *Brachionus plicatilis* (Monogononta, Rotifera) by a density-dependent chemical cue. Limnol. and Oceanogr. 48:939-943.
- Morgan, M.B., and Snell, T.W. 2002. Gene induction in reef-building corals by the mosquitoside dibrom. Marine Pollution Bulletin 44(11): 1204-1216.
- Lapesa, S., T.W. Snell, D.M. Fields, M. Serra. 2002. Predatory interactions between a cyclopoid copepod and three sibling rotifer species. Freshwater Biology. 47:1685-1695.
- Kotani, T., M. Ozaki, K. Matsuoka, T. W. Snell and A. Hagiwara. 2001. Reproductive isolation among geographically and temporally isolated marine *Brachionus* populations. Hydrobiologia 446/447:283-290.
- Snell, T.W., B.J. Dingmann and M. Serra. 2001. Density-dependent regulation of natural rotifer populations. Hydrobiologia 446/447:39-44.
- Araujo, A.B., A. Hagiwara, and T.W. Snell. 2001. Effect of unionized ammonia, viscosity and protozoan contamination on reproduction and enzyme activity of the rotifer *Brachionus rotundiformis*. Hydrobiologia 446/447:363-368.
- Morgan, M.B., D.L. Vogelien, and T.W. Snell. 2001. Assessing coral stress responses using molecular biomarkers of gene transcription. Environ, Toxicol. Chem. 20:537-543.
- Preston, B.L. and T.W. Snell. 2001. Full life-cycle toxicity assessment using rotifer resting egg production: implications for ecological risk assessment. Environmental Pollution 114:399-406.
- Preston, B.L. and T.W. Snell. 2001. Direct and indirect effects of sublethal toxicant exposure on population growth of freshwater rotifers: a modeling approach. Aquatic Toxicology 52:87-99.
- Preston, B.L. T.W. Snell, D. Fields, and M. Weissburg. 2001. Effects of fluid motion on toxicant sensitivity of the freshwater rotifer *Brachionus calyciflorus*. Aquatic Toxicology 52:117-131.
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- Gallardo, W.G., A. Hagiwara, and T.W. Snell. 2000. Effect of juvenile hormone and serotonin (5-HT) on mixis induction of the rotifer *Brachionus plicatilis* Muller. J. Exp. Mar. Biol. Ecol. 252:97-107..
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- Gallardo, W.G., A. Hagiwara, and T.W. Snell. 2000. GABA enhances reproduction of the rotifer *Brachionus plicatilis* Muller: application to mass culture. Aquaculture Research 31:713-718.
- De Araujo, A. B., T. W. Snell & A. Hagiwara. 2000. Effect of unionized ammonia, viscosity and protozoan contamination on the enzyme activity of the rotifer *Brachionus plicatilis*. Aquaculture Research 31:359-365.

- Preston, B.L., T.W. Snell, T.L. Robinson, and B.J. Dingmann. 2000. Use of the freshwater rotifer *Brachionus calyciflorus* in a screening assay for potential endocrine disruptors. *Environ. Toxicol. Chem.* 19:2923-2928.
- Ricci, C., M. Serra, T.W. Snell. 2000. Small, beautiful and sexy: what rotifers tell us about ecology and evolution. *Trends Ecol. Evol.* 15:220-221.
- Ting, J.H., L. Letteri, R. Gay, K. Sciera, T.W. Snell. 2000. The juvenile hormone analogue methoprene disrupts mate recognition in the harpacticoid copepod *Tigriopus japonicus*. *Scientiae Naturae* 3:27-39.
- Ortells, R., T.W. Snell, A. Gomez, and M. Serra. 2000. Patterns of genetic differentiation in resting egg banks of a rotifer species complex in Spain. *Arch. Hydrobiologie* 149:529-551.
- Ting, J.H., L.S. Kelly, and T.W. Snell. 2000. A surface glycoprotein in the marine copepod *Tigriopus japonicus* elicits male mate guarding. *Marine Biology* 137:31-37.
- Snell, T.W. and M. Serra. 2000. Using probability of extinction to evaluate the ecological significance of toxicant effects. *Environ. Toxicol. Chem.* 19:2357-2363.
- Cecchine, G.A. and T.W. Snell. 1999. Toxicant exposure increases threshold food levels in freshwater rotifer populations. *Environ. Toxicology* 14:523-530.
- McDaniel, M. and T.W. Snell. 1999. Probability distributions of toxicant sensitivity for freshwater rotifer species. *Environ. Toxicology* 14:361-366.
- Preston, B.L., T.W. Snell, and D.B. Dusenbery. 1999. The effects of sublethal pentachlorophenol exposure on predation risk in freshwater rotifer species. *Aquatic Toxicology* 47:93-105.
- Preston, B.L., R.A. Kneisel, and T.W. Snell. 1999. Effects of UV-B irradiation on the toxicant sensitivity of the rotifer *Brachionus calyciflorus*. *Environ. Poll.* 106:23-31.
- Gallardo, W.G., A. Hagiwara, Y. Tomita, and T.W. Snell. 1999. Effect of growth hormone and gamma-aminobutyric acid on *Brachionus plicatilis* (Rotifera) reproduction at low food or high ammonia levels. *J. Exp. Mar. Biol. Ecol.* 240:179-191.
- Preston, B.L., G.A. Cecchine, and T.W. Snell. 1999. Effects of pentachlorophenol on predator avoidance behavior of the rotifer *Brachionus calyciflorus*. *Aquatic Toxicology* 44:201-212.
- Snell, T.W., M. Serra, and M.J. Carmona. 1999. Population genetics and ecotoxicology of rotifers. In: *Genetics and Ecotoxicology*, V.E. Forbes (ed.), Taylor & Francis, Washington, pgs. 169-185.
- Araujo, A.B., W.G. Gallardo, T.W. Snell, and A. Hagiwara. 1998. Enzyme activity as a tool for assessing the culture condition of rotifers and fish larvae – a preliminary study. *Bull. Aquacult. Assoc. Canada* 98-4: 30-34.
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- Kelly, L.S. and T.W. Snell. 1998. The role of surface glycoproteins in mate guarding behavior of the copepod *Tigriopus japonicus*. *Marine Biology* 130:605-612.
- Rico-Martinez, R., B. Dingmann, and Snell, T.W. 1998. Mating behavior of eight rotifer species. *Hydrobiologia* 356: 165-173.
- Rico-Martinez, R. and Snell, T.W. 1997. Binding and blocking of mating in *Brachionus plicatilis* (Muller) and *Brachionus rotundiformis* (Tschugunoff) (Rotifera) females by an antibody against the mate recognition pheromone. *Hydrobiologia* 358:71-76.
- Gallardo, W., Y. Tomita, A. Hagiwara, K. Soyano, and T.W. Snell. 1997. Effect of some vertebrate and invertebrate hormones on the population growth, mictic female production, and body size of the marine rotifer *Brachionus plicatilis* Muller. *Hydrobiologia* 358:113-120.
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- Snell, T.W. and M.J. Carmona. 1994. Surface glycoproteins in copepods: potential signals for mate recognition. *Hydrobiologia* 292/293:255-264.
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- Snell, T.W., M. Childress, & B.C. Winkler. 1988. Characterization of the mate recognition factor of the rotifer *Brachionus plicatilis*. *Comp. Biochem. Physiol.* 89A:481-485.
- Snell, T.W., M. Childress & E. Boyer. 1987. Assessing the status of rotifer mass cultures. *J. World Aquaculture Society* 18:270-277.
- Snell, T.W. 1987. Sex, population dynamics and resting egg production in rotifers. *Hydrobiologia* 144:105-111.

- Snell, T.W. & F.H. Hoff. 1987. Fertilization and male fertility in the rotifer *Brachionus plicatilis*. *Hydrobiologia* 147:329-334.
- Snell, T.W. & M. Childress. 1987. The effect of age on male and female fertility in the rotifer *Brachionus plicatilis*. *J. Invert. Reprod. & Devel.* 12:103-110.
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- Snell, T.W. 1986. The reproductive response of sexual and asexual rotifers to extreme environments. *Marine Biology* 92:157-162.
- Snell, T.W. and F.H. Hoff. 1985. The effect of environmental factors on resting egg production in the rotifer *Brachionus plicatilis*. *Journal World Mariculture Society* 16:484-497.
- Snell, T.W. and B.C. Winkler. 1984. Isozyme analysis of rotifer proteins. *Biochemical Systematics and Ecology* 12:199-202.
- Snell, T.W. and K. Carrillo. 1984. Body size variation among strains of the rotifer *Brachionus plicatilis*. *Aquaculture* 37:359-367.
- Snell, T.W. and C.A. Hawkinson. 1983. Behavioral reproductive isolation among populations of the rotifer *Brachionus plicatilis*. *Evolution* 37: 1294-1305.
- Pourriot, R. and T.W. Snell. 1983. Resting eggs of rotifers. *Hydrobiologia* 104:213-224.
- Snell, T.W., B.L. Burke, and S.D. Messur. 1983. Size and distribution of resting eggs in a natural population of the rotifer *Brachionus plicatilis*. *Gulf Research Reports* 7:285-287.
- Snell, T.W., C.J. Bieberich, and R. Fuerst. 1983. The effect of green and blue-green algal diets on the reproductive rate of the rotifer *Brachionus plicatilis*. *Aquaculture* 31:21-30.
- Snell, T.W. 1980. Blue-green algae as selective agents in rotifer populations. *Oecologia* 46: 343-346.
- King, C.E. and T.W. Snell. 1980. Density-dependent sexual reproduction in natural populations of the rotifer *Asplanchna girodi*. *Hydrobiologia* 73:149-152.
- Snell, T. W. 1979. Competition and population structure in rotifers. *Ecology* 60: 494-502.
- Snell, T.W. 1978. Fecundity, developmental time and population growth rate. *Oecologia* 32:119-125.
- Snell, T.W. and C.E. King. 1977. Lifespan and fecundity patterns in rotifers: the cost of reproduction. *Evolution* 31:882-890.
- King, C.E. and T.W. Snell. 1977. Genetic basis for amphoteric reproduction in rotifers. *Heredity*

39:361-364.

King, C.E. and T.W. Snell. 1977. Sexual recombination in rotifers. *Heredity* 39:357-360.

Snell, T.W. 1976. Effects of density on seed size and biochemical composition. *Am. Mid. Nat.* 95:499-507.

Snell, T.W. and D.G. Burch. 1975. The effects of density on resource partitioning in *Chamaesyce hirta* (Euphorbiaceae). *Ecology* 56: 742-746.

Accepted for Publication:

Smith HA and TW Snell. 2014. Differential evolution of lifespan and fecundity between asexual and sexual females in a benign environment. *International Review of Hydrobiology* 99:1–8, DOI 10.1002/iroh.201301711

Snell, TW. 2014. Rotifers as a model for the biology of aging. *International Review Hydrobiology*, in press, DOI 10.1002/iroh.201301707.

In Preparation:

Shearer TL, TW Snell, ME Hay. 2014. Divergence and diversity in gene expression responses of corals to competition. In preparation.

Snell TW and RK Johnson. 2014. Glycerol extends lifespan of *Brachionus manjavacas* (Rotifera) and protects against stressors. In preparation.

Snell TW, RK Johnson, KE Gribble, and DB Mark Welch. 2014. Rotifers as experimental tools for investigating aging. *Invertebrate Reproduction and Development*, in preparation.

Non-Refereed Publications:

Already Published:

Serra, M. and T.W. Snell. 2009. Sex loss in rotifers. In: *Lost sex: The evolutionary biology of parthenogenesis*, K. Martens, I. Schön, P. van Dijk, eds., Springer.

Morgan, M. B., and T. W. Snell. 2006. Expression of a ceruloplasmin homolog in corals: An informative biomarker of stress. *Proceedings of the 10th International Coral Reef Symposium*. p.822-830

Snell, T.W. 2005. Rotifer ingestion test for rapid toxicity assessment of fresh and marine waters. In: *Small-Scale Freshwater Environment Toxicity Test Methods*, C. Blaise, J.F. Ferard (eds). Kluwer, Dordrecht, The Netherlands, Vol. 1, pgs. 323-335.

Serra, M., T.W. Snell. And C.E. King. 2004. The timing of sex in monogonont rotifers. A. Moya and E. Font (eds), *Evolution: From molecules to ecosystems*, Oxford University Press, pgs. 135-146.

Snell, T.W. 2000. The distribution of endpoint chronic values for freshwater rotifers. In: *New Microbiotests for Routine Toxicity Screening and Biomonitoring*, G. Persoone, C. Janssen, W. De Coen (eds.), pgs 185-190, Kluwer/Plenum Press.

- Snell, T.W. and C.R. Janssen. 1998. Microscale toxicity testing with rotifers. In: Microscale Aquatic Toxicology - Advances, Techniques and Practice, P.G. Wells, K. Lee and C. Blaise (eds.), CRC Lewis Publishers, Florida, pgs. 409-422.
- T.W. Snell, J.L. Mitchell and S. Burbank 1996. Rapid toxicity testing with microalgae using *in vivo* esterase inhibition. In: Techniques in Aquatic Toxicity Testing, G.K. Ostrander (ed.), CRC Publishers, Boca Raton, pgs. 13-22.
- Janssen, C.R., T.W. Snell, and G. Persoone. 1993. Recent advances in rapid toxicity assessment and their application to marine biomonitoring. Proceedings: Ecotoxicology Symposium, Perth, Australia.
- Snell, T.W. 1991. Designing optimal systems for the mass culture of rotifers. Pgs. 61-71, In: W. Fulks and K.L. Mains (eds.), Rotifer and Microalgae Culture Systems. Proceedings of a U.S. Asia Workshop. Honolulu, HI. The Oceanic Institute.
- King, C.E. and T.W. Snell. 1978. Culture media for Rotifera. In: Recheigl, M., Jr. (ed.). CRC Handbook of Nutrition and Food. CRC Press, Cleveland. Vol. II: 71-75.
- Snell, T.W. and C.E. King. 1977. Amphoteric reproduction in *Asplanchna girodi*. In: King, C.E. (ed.). Proceedings I. International Rotifer Symposium. Arch. Hydrobiol. Beih. 8:182-183.
- Snell, T.W. 1977. Lifespan of male rotifers. In: King, C.E. (ed.). Proceedings I. International Rotifer Symposium, Arch. Hydrobiol. Beih. 8:65-66.
- Snell, T.W. 1977. Clonal selection: competition among clones. In: King, C.E. (ed.). Proceedings I. International Rotifer Symposium, Arch. Hydrobiol. Beih. 8:202-204.

Books:

Already Published:

- Wallace, R.L. & T.W. Snell. 2010. Rotifera. In: Ecology and Systematics of North American Freshwater Invertebrates. Thorp, J.H. and A.P. Covich (eds.), Academic Press, NY. Third edition.
- Wallace, R.L., T.W. Snell, C. Ricci, and T. Nogrady. 2005. Rotifera. Volume 1. Biology, ecology and systematics. SPB Academic Publishing, The Hague, Belgium. Second edition.
- Hoff, F.H. and T.W. Snell. 2004. Plankton Culture Manual. 6th edition, Florida Aqua Farms, Dade City, Florida.
- Wallace, R.L. & T.W. Snell. 2001. Rotifera. In: Ecology and Systematics of North American Freshwater Invertebrates. Thorp, J.H. and A.P. Covich (eds.), Academic Press, NY. Second edition.
- Hagiwara, A., T.W. Snell, E. Lubzens, C. Tamaru (eds.) 1997. Live Food in Marine Larviculture. Hydrobiologia, vol 358.
- Nogrady, T., R.L. Wallace, and T.W. Snell. 1993. Rotifera. Volume 1. Biology, ecology and systematics. SPB Academic Publishing, The Hague, Belgium.

Wallace, R.L. & T.W. Snell. 1991. Rotifera. In: Ecology and Systematics of North American Freshwater Invertebrates. Thorp, J.H. and A.P. Covich (eds.), Academic Press, NY. Second edition, 2001

Ricci, C., T.W. Snell & C.E. King (eds). 1989. Proceedings: V International Rotifer Symposium, Hydrobiologia, vols 186/187.

Grants and Contracts:

Administered:

- | | |
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| 2010-2015 | National Institutes of Health , National Institute of Aging
" Monogonont Rotifers as a Model to Investigate the Biology of Aging"
Principal investigator, \$1.4 million, 5 years |
| 2009-2014 | National Institutes of Health, Fogarty Center, ICBG
"Ecological leads: Drugs from reefs and microbes in Fiji"
Co-Principal investigator, \$2.9 million 5 years |
| 2009-2014 | NASA Astrobiology Institute
"Georgia Tech Center for the Study of Ribosomal Evolution".
Co-PI, \$483,670, (total \$7.2 million) 5 years |
| 2005-2010 | National Science Foundation, Biocomplexity Program
"A biochemical, genetic, and genomic investigation of the evolution and ecology of sexual reproduction". PI, \$1.9 million, 5 years |
| 2004-2005 | National Science Foundation, Biocomplexity in the Environment
"A Biochemical, Genetic and Genomic Investigation of the Ecology and Evolution of Sexual Reproduction"
Principal Investigator, \$99,990 1 year |
| 2005-2009 | National Institutes of Health, Fogarty Center, ICBG
"Ecological leads: Drugs from reefs and microbes in Fiji"
Co-Principal investigator, \$2.8 million 4 years |
| 2006-2007 | Florida Water Environment Association Utility Council |

- " Field Characterization of Stress Gene Expression Patterns in Hermatypic Corals Exposed to Effluents from the Delray Beach Outfall "
- Principal investigator, \$50,000 1 year
- 2005-2006 US Environmental Protection Agency
"Gene expression profiling to diagnose sediment stress in corals"
Principal investigator, \$49,000 1 year
- 2004-2005 US Environmental Protection Agency
"Gene expression profiling to diagnose sediment stress in corals"
Principal investigator, \$68,000 1 year
- 2003-2005 National Institutes of Health, Fogarty Center, ICBG
"Ecological leads: Drugs from reefs and microbes in Fiji"
Co-Principal investigator, \$300,000 2 years
- 2000-2001 US Environmental Protection Agency
"Using gene expression as a biomarker of sediment stress in corals"
Principal investigator, \$48,000 1 year
- 2000-2003 Graduate Assistance in Areas of National Need (GAANN)
School of Biology Graduate Fellowships
Co-Director, \$500,000, 3 years (renewal)
- 1998-2001 US Environmental Protection Agency
"Using gene expression as a biomarker of stress in corals"
Principal investigator, \$298,000 3 years
- 1997-1998 National Science Foundation, ILI-IG Program
"Computer assisted data acquisition and processing in undergraduate laboratories"
Co-Director, \$29,476, 1 year
- 1997-2000 Graduate Assistance in Areas of National Need (GAANN)
School of Biology Graduate Fellowships
Co-Director, \$512,000, 3 years
- 1996-1997 COS Faculty Development Grant
"Using Differential Gene Expression as a Biomarker in Aquatic Toxicology"
Principal Investigator, \$11,800 1 year
- 1995-1998 National Science Foundation, International Program
"Sexual Communication in Marine Rotifers"
Principal Investigator, \$29,500 3 year collaboration with University of Valencia,
Spain
- 1995-1998 US Environmental Protection Agency
"Stress response biomarkers in anemones and corals"
Principal investigator, \$150,000 3 years
- 1995 - 1998 National Science Foundation, Biological Oceanography
"Chemical Communication in Marine Copepods"
Principal investigator, \$157,762 3 years

- 1995-1996 Spanish Government, Ministerio de Educacion y Ciencia
 "Reproductive Isolation in Marine Rotifers"
 Co-principal investigator, \$12,500 0.7 year at University of Valencia
- 1994-1996 National Science Foundation, SBIR Phase II
 "Heterotrophic Microalgae as an Inexpensive Feed for Rotifers"
 Co-principal Investigator, \$242,194 (\$81,743 to Ga. Tech), 2 years
- 1993 Japan Society for the Promotion of Science
 "Rotifers in Aquaculture"
 Japanese government fellowship to perform collaborative research at Nagasaki University, summer 1993
- 1992 Research Advisory Council Seed Money for Interdisciplinary Research
 "Application of laser-light immobilized organisms to environmental monitoring"
 Co-principal investigator, \$20,000, 1 year
 Co-principal Investigator, Ken Hughes, School of Chemistry
- 1992 National Science Foundation, SBIR Phase I
 "Heterotrophic Microalgae as an Inexpensive Feed for Rotifers"
 Co-principal Investigator, \$49,500, 1 year
 Co-principal Investigator, Ray Gladue, Martek Corporation
- 1992 Water Resources Institute
 Environmental Resources Center, Georgia Tech
 "Rapid toxicity assessment of sediments using *in vivo* fluorescent assays"
 Principal Investigator, \$12,500, 1 year
- 1991-1993 National Science Foundation, Biological Oceanography
 "Sex Pheromone Communication Among Marine Zooplankton"
 Principal Investigator, \$100,000, 2 years
- 1990 Earthrise Corporation
 "Mass culture of the rotifer *Brachionus plicatilis* using microalgae"
 Principal Investigator, \$15,800, 6 months
- 1989-1991 United States Army Medical Research and Development Command
 "New Rotifer Bioassays for Assessing Aquatic Toxicity"
 Principal Investigator, \$110,400, 2 years
- 1988-1990 National Institutes of Health
 National Institute of Environmental Health Sciences
 "Models for assessing aquatic toxicity: detoxification capability of rotifers"
 Principal Investigator, \$73,200, 2 years.

1987-1988 Florida Department of Agriculture
"A new live food for freshwater aquaculture"
Principal Investigator, \$17,400, 1 year.

1986-1988 National Science Foundation, Biological Oceanography
"Regulation of Marine Rotifer Life Cycles"
Principal Investigator, \$83,000, 2 years

1984 - 1986 National Science Foundation, Biological Oceanography
"Regulation of Marine Rotifer Life Cycles"
Principal Investigator, \$102,000, 2 years

1980 - 1983 Binational Research and Development Fund (BARD)
"Rotifer Resting Eggs and their Application to Marine Aquaculture"
Joint United States - Israel project, co-principal investigator, \$147,000, 3 years

1979-1980 National Science Foundation
"Investigation of Hatching and Sexual Cues in Natural Populations of Rotifers" \$5,400,
1 year

Recent Meetings and Symposia:

International Congress on Invertebrate Reproduction and Development
Detroit, MI
T.W. Snell
"Joint inhibition of TOR and JNK pathways interacts to extend the lifespan of *Brachionus manjavacas* (Rotifera)"
June, 2013 – invited

Astrobiology
Atlanta, GA
BL Jones, J Vanloozen, S. Miles, CM Dunham, LD Williams, and TW Snell
Stress granule formation in *Brachionus manjavacas* (Rotifera)
April, 2012 - contributed

Committees - Georgia Tech:

12- SoB Chair

09-11 SoB Interim Chair

08-09 SoB Associate Chair

GT Institute Tenure and Promotion Committee, substitute member

International Plan Committee, member

International Plan Executive Committee

SoB Teaching Assignment Committee

07-08 SoB Associate Chair

GT Institute Tenure and Promotion Committee, member
Ad hoc Search Committee to hire a junior Ecology faculty
Institute Undergraduate Curriculum Committee (elected)
International Plan Committee, Chair
Study Abroad Committee, member

Membership in Professional and Honor Societies:

American Association for the Advancement of Science
American Society of Limnology & Oceanography
Society of Environmental Toxicology & Chemistry

Editorial Boards:

2008-present International Review of Hydrobiology – IGB, Berlin
2008-present Journal of Marine Biology – Hindawi Publishing
1996- 2007 Environmental Toxicology - John Wiley & Sons
2002- 2006 Environmental Pollution - Elsevier

2011 Reviewer:

National Science Foundation	Hydrobiologia	Aquatic Toxicology
Marine Biology	Mar. Ecology Progress Series	Environ. Toxicology
Environ. Pollution	Env. Toxicology & Chemistry	Limnology &
Env Protection Agency		Oceanography

Graduate and Undergraduate Students Supervised:

Current Graduate and Undergraduate Students:

Leilani Barry	B.S.
Shelby Rittweger	B.S.
Julie Wilson	B.S.
Lambros Tassoulas	B.S.
Jonah Burgin	B.S.

Graduated 2012-2013:

Joan Chung	B.S.	Biology
Corey Rennolds	B.S.	Biology
Jane Kim	B.S.	Biology

Graduated 2011-2012:

Hilary Smith	Ph.D.	Biology
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Graduated 2010-2011:

Ashleigh Burns	B.S.	Biology
Katherine White	B.S.	Biology
Jarrett Smith	B.S.	Biology
Daniel Hicks	M.S.	Biology

Graduated 2009-2010:

Daniel Hicks	B.S.	Biology
Laura Courser	B.S.	Biology
Emily Weigel	B.S.	Biology
Josh Cone	BS	Biology
Sonny Patel	BS	Biology
David Krapf	BS	Biology
Monica Huynh	BS	Biology

Graduated 2008-2009:

Sohee Park	B.S.	Biology
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Graduated 2007-2008:

Sara Edge	Ph.D.	Aquatic Toxicology
Joseph Bear	BS	Biology
Lee Echerd	BS	Biology
Jaclyn Arpin	BS	Biology
Danielle Hubard	BS	Biology
Michael Cray	BS	Biology

Graduated 2005-2006:

Jerry Kim	B.S.	Biology
Kirk Grubbs	B.S.	Biology

Graduated 2004-2005:

Will Carter	B.S.	Biology
Audra Payne	B.S.	Biology

Graduated 2003-2004:

Kristen Marhaver	B.S.	Biology
Clark Montague	B.S.	Biology
Diana Alba	B.S.	Biology

Visiting Researchers Supervised:

Dr. Roberto Rico-Martinez Fullbright Fellow, Univ. Aguascalientes, Mexico, Sept 11 – May 12
Daniel Robles Visiting Ph.D. student, Univ of Aguascaliente, Mexico, Mar 09 – Mar 10
Dr. Jiaxin Yang Visiting Scientist, Nanjing Normal University, April 09 – Mar 10
Dr. Manuel Serra Visting scientist, University of Valencia, Spain, Jan-May 08
Dr. Tonya Shearer Research Scientist, Georgia Tech, Jun 04-present
Dr. Celia Joaquim-Justo Fullbright Fellow, University of Liege, Belgium, Jan - Nov 06
Dr. Claus-Peter Stelzer Max Planck Institute for Freshwater Biology, Jan 01-Jan 03
Dr. Danny Gleason Georgia Southern University, Department of Biology, Jan-Dec 01
Dr. Kathy Hajek GIFT teacher, Summer 2001, Salem High School, Rockdale
Dr. Gene Mesco Savannah State University, Faculty Development Program, Jan-June 00
Dr. Dale Vogelein Kennesaw State University, visiting researcher -Summer 1998, 99
Noah DesRosiers NSF REU student, Summer 2007, U Miami
Sherry Wang NSF REU student, Summer 2006, Dartmouth
Rachel Resop NSF REU student, Summer 2005, Ripon
Claire Baldorf NSF REU student, Summer 2004, UCLA
Roger Gay GIFT teacher, Summer 1999, Dunwoody High School, Atlanta
Katie Sciera Howard Hughes Undergraduate Research Assistant, Summer 2000
Richard Kneisel GIFT teacher, Summer 1998, Dunwoody High School, Atlanta
Tish Robinson Howard Hughes Undergraduate Research Assistant, Summer 1998
Tomonari Kotani University of Nagasaki, June-Dec 1997
Allison Keltner Technician, Jan-Oct 99
Sara Lapesa University of Valencia, March - June 99, Jan 2003